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First draft of social needs based research programme scenarios

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Visuals: Strategic Design Scenarios (based on the Cimulact Picture set)

CIMULACT
CITIZEN AND MULTI-ACTOR CONSULTATION ON HORIZON 2020

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Introduction

CIMULACT stands for 'Citizen and Multi-Actor Consultation on Horizon 2020' (the EU Framework Programme for Research and Innovation). CIMULACT is engaging citizens, along with a wide range of other actors, in redefining the European Research and Innovation agenda and thereby make it relevant and accountable to society.[1]

This report outlines forty eight research programmes within twelve domains to be considered for implementation in Horizon 2020 or national research and innovation agendas.

These research programme scenarios were developed within a unique co-creation process between citizens and experts:

- The process began in the end of 2015 with *National Citizen Workshops* in *30* European and neighbouring countries involving a total of *1088 citizens* selected according to a strict set of criteria to achieve an optimum diversity of backgrounds. In each of these workshops the same methodology was followed to develop six visions outlining desirable futures from the citizen perspective. This process resulted in a set of *180 Citizen Visions*.[2]

- In a next step, the CIMULACT consortium together with 10 external "challengers" analysed the citizen visions within a *Synthesis Workshop* in Paris in March 2016. Jointly the participants extracted *29 Social Needs* each underpinned by several citizen visions from different countries. These social needs are presented in Part 2 of this document.

- From this material an *exhibition of social needs* was developed with an image representing the need surrounded by supporting "original voices" from the citizens.[3]

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[1] More Information on: http://www.cimulact.eu/

[2] http://www.cimulact.eu/wp-content/uploads/2016/06/D1.3final.pdf

[3] http://www.cimulact.eu/wp-content/uploads/2016/04/Cimulact_ALL_POSTER_SOCIAL_NEEDS_reduced.pdf

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- This exhibition was the starting point of the *Co-Creation Workshop* in Milano in April 2016 where *30 citizens* – one from each national workshop - together with *30 experts* from the fields related to the social needs and *35 CIMULACT researchers* from 30 countries worked for two days co-creating the 48 research programme scenarios.

This report documents the outcomes of the full process to date.

Part one gives the outcomes of the Milano co-creation process, whereas part two documents the twenty nine "social needs" elaborated in the Paris synthesis workshops. We have kept close to the original texts produced in the workshops so readers should not expect perfectly smoothed phrasings. Operational details such as lists of participants and workshop agendas will follow in a separate Annex document.

PART 1: The CIMULACT Research Programme Scenarios

Part 1 of this document presents the research programme scenarios co-created by the citizens and experts in the CIUMLACT Milan co-creation conference. The suggested programmes are addressing 12 domains of social needs that emerged from the work of the 1088 citizens within the 30 National Visioning Workshops in 30 countries.

The 12 domains of social needs are as follows:

1. Equality
2. Unity and Cohesion
3. Citizenship Awareness and Participation
4. Holistic Health
5. Sustainable Food
6. Life Long Processes
7. Strenghts-Based Education and Experiential Learning
8. Harmony with Nature
9. Personal Developments
10. Green Habitats
11. Sustainable Economy
12. Sustainable Energy

During the co-creation workshop in Milano, for each of these 12 domains of social needs, 4 individual research programme scenarios were created by the combination of project partners from 30 countries, experts from each country and a citizen from each county. What is presented below in Part 1 of this document is the results of this Milano workshop, giving for each of the 12 Social Need Domains, 4 different 'Research Programme Scenarios' which give 4 potential areas for Horizon 2020 (or other EU or national) Research Programmes.

For each of these possible research programmes, we present the results in the following structure:
1. The Aspiration: The overarching goal the research programme aspires to achieve
2. The research direction: The overarching direction of the proposed research

3. the possible research questions: Concrete research questions to be addressed in this programme
4. State of play (experts view): The current state of play and best available knowledge in this area as seen by the experts from this working group at the Milan meeting
5. State of play (citizens view): The current state of play in this area as seen by the citizens from this working group at the Milan meeting
6. Concerns: Concerns of both the citizens and the experts related to this research programme
7. Impacted Citizen Visions: Excerpts from the original citizens visions that are addressed by these research programme scenarios

The vision citations stem from the original material elaborated in the 30 citizen workshops. The citations were selected by the Milan working groups from the exhibition posters. Some additional CIMULACT citizens' visions that were obviously fitting this realm were added by the editor.

All other texts have been jointly developed by the citizen/experts working groups in the Milano conference. Only minor editing was carried out to clarify the ideas for readers who have not been involved in the process.

In the next section we present the forty-eight research programme scenarios that were developed in this process for each of the 12 need domains.

In the beginning of each chapter we give a brief overview over the need domain including the original CIMULACT citizens' visions and social needs on which this domain is based. Also we indicate how the domain relates to the grand challenges addressed by the European Commission's Horizon2020 Programme.

1. Equality

a. Digital inclusion
b. Balanced work-life model
c. Empowering diversity in communities
d. Social Economy

1_Equality

We need measures to reduce economic and social inequality and in particular to enable equal and affordable access to high quality services in healthcare and education.

Based on

CIMULACT social needs (as listed in Part 2 of this document)
- Equal and Open Access to the Health Care System [1]
- Accessible Education [8]
- Social Justice [22]

CIMULACT Citizen Visions (from the 30 Citizens Visioning workshops)
SVK6; FR4; CHE2,3; NL6; CYP2; DE3; ESP2,3,4; BGR3,4; PORT1; MAL4; SWE1; HRV2,3; MAL5,6; SVK1; CHE5; NL1; FIN2; CYP2,3; HRV2; ROU5; BGR6; GR6; LAT6; CZE2

Related Challenges addressed by Horizon2020
- Health demographic change and well-being
- Europe in a changing world - inclusive, innovative and reflective societies
- Secure societies - protecting freedom and security of Europe and its citizens.

Research Programme Scenarios:

a. Digital Inclusion

ASPIRATION:

The on-going digitalization of every-day life provides great opportunities to enable equal conditions for all. To achieve that it is important to ensure equal access to information and tools for all citizens by providing access to digital education material for all. Lifelong learning as well as people from minority groups and people with special needs can be supported individually in the future. All these will empower the people to take care of their education and perhaps become digital producers themselves.

RESEARCH DIRECTION:

Research should explore ways to implement a fully distributed information and communication system model. By this, we mean a digital architecture for

an information and communication system that covers everybody in an equal way. Every node of the net has similar possibilities and opportunities. That potentially gives more equal distribution of possibilities, power, knowledge and money to the citizens, communities and local stakeholders. This way the system will ultimately become an effective platform for a more equal society.

RESEARCH QUESTIONS:
- How can we enable equal access to educational resources for all citizens independent of geographic and language restrictions?
- How can we better understand what is really happening in the digital transformation?
- What are suitable institutional procedures to avert the dominance of huge players and monopolies?
- How can we create a more favourable environment for a really distributed information-communication system?
- How can we implement (basic) education in the essential skills for active participants in the digital society (i.e. coding and data analytics) for all students in Europe?

STATE OF PLAY - EXPERTS VIEW (Scientific research):
There is an agreement on digital inclusion. But there are two main approaches and clusters of stakeholders: Big companies on one side, people connecting on the other side. They differ in their view of how digital information is shared/accessed: As consumer or as citizen/prosumer.

STATE OF PLAY - CITIZENS VIEW (Everyday life):
There are a few good practices such as:
- Laboratory primary school
- Intergenerational digital teaching
- Start ups founded by users
- Online classes
- Digital platforms that facilitate mutual learning

CONCERNS:
- Prosumers might be too involved in digitalization → face to face life would suffer.
- How to control the content of the internet without affecting freedom (e.g. protecting children and how they use internet versus censorship)?
- Big players might monopolize the new communities also for bad, unethical criminal purposes.
- The "acting" people, groups and institutions are "transparent", the produced data can be used against the people (e.g. wearables and the use of data by insurance companies and public health services).
- The leaders of the new communities can get out of control. If they work for good, it is ok, but what if they work for own profit or to exploit or damage society?

IMPACTED CITIZENS VISIONS:

[FIN] Vision 1: VALUES - immateriality and minimalism
"Information belongs to all: data communication is a basic right and data/interfaces open to citizens."

[CHE] Vision 3: Harmony between the social and the global
"Online education, shared values / ethics
- Pacifism, solidarity, mutual aid"

[CYP] Vision 2: A just society oriented towards human rights
"a society where justice is prevailed and is oriented on the basis of human rights. A society that provides equal opportunities for all EU citizens, as well as direct access to a secure health and education system."

[MAL] Vision 4: Sustainable and Equitable Society
"In 2050, all members of society have equal access to quality education and opportunities to engage and contribute equitable to fair-decision making and all other processes that affect their lives. Family units in their various forms are accepted and supported to ensure that each individual is embedded in a nurturing social system. Children are introduced to sports/exercise at an early age."

[CYP] Vision 3: Human rights
"The vision is referred to better living conditions, to equal access to issues that we take for granted, such as health, education and retirement.
Also, the right opportunities have to be provided to younger people in order to have a proper job school counselling in order to ensure proper career perspectives."

[SWE] Vision 1: Equality between women and men
"- That all parents shall have the possibility to a fair division of parental leave"

[GR] Vision 1: Humanity - Environment – Justice
"Schools fully equipped with the latest technology. For example, all schools shall have digital libraries and the ability to host video conference for remote learning."

b.   Balanced work-life model

ASPIRATION:

In the future it will be important to distribute work flexibly throughout life and also flexibly shift between employed (paid) and unemployed (volunteer) work. This will enable people in every moment of life to define the time they are available for work. Thereby people will be able to take care of their loved ones when needed, pursue personal fulfilment and/or follow multiple careers and slowly shift into retirement. This will improve the overall quality of life and help balance the demographic gap.

RESEARCH DIRECTION:

Research should rethink the definition of "work" and develop approaches that permit to recognize and reward as "work" all different kinds of human activities including socially valuable daily life activities such as domestic work, childcare, caring for the elderly and social work.

RESEARCH QUESTIONS:
- Is it possible to measure this type of work?
- How will we value such work? Could the virtual coin be a starting point?

- How can the legislator design/think a law that is comprehensive of the different needs/chances and at same time efficient?
- How to increase flexibility at work without increasing precariousness?
- In the education field: how can we rethink spaces, time, criteria of evaluation, and contents, considering this new model of work?

STATE OF PLAY - EXPERTS VIEW (Scientific research):

Traditional paradigms of work (5x8 until retirement) have long been challenged. Diverse social movements (e.g. womens rights') have raised the question of how work is defined, valued and paid and called for multiple career options. Another driver is the rising demand for care.

STATE OF PLAY - CITIZENS VIEW (Everyday life):

Currently, knowledge is very poor in this field but there are a few examples of interesting practices:
- Family friendly companies (flexible time for parents)
- Intergenerational centres – retired offer their skills

Time banks where people do not pay in cash but pay with their time.

CONCERNS:

- Overproduction of labour
- Hyper flexibility demanded by enterprises for their own profit may lead to self-exploitation of the employees (see for example the Uber commercial model)
- Workers might not work sufficiently (concern from the side of the boss)

IMPACTED CITIZENS VISIONS:

[LAT] Vision 5: Work as a means of expression
"Job is 100% flexible: work at home and elsewhere, choice of working hours, a possibility to adapt and choose responsibilities and tasks; appropriate reward. One life – a lot of roles – continues development."

[HUN] Vision 2: The rise of a backward region
"They declared their satisfaction with the shorter and flexible working hours (6 hour workdays), the higher wage that provides well for their livelihood, and the healthy working conditions."

[FR] Vision 5: Living in a balanced society
"Our working time (around 20h/week) allow us to participate to citizen actions and to be radiant in our family life and leisure time. Our free time allow us for instance to be involved in volunteering and educational fields."

[DE] Vision 6: The future of work
*"Flexible work models are par for the course
More working from home /also half days and quarter days"* [...]
"flexible annual working time"

[LUX] Vision 4: Technology at society's service
"I work 4 hours. This allows me to have lunch with my children and my partner in the community kitchen in our participatory house. Then I spend some time with my daughter in the surrounding wood. I started to get involved in participatory life in various forms […]"

[SVN] Vision 6: Equality and Human Rights – A driver of Social Development
" Intergenerational cooperation - the transfer of knowledge and traditions, care for the elderly after working active age
[...] Fair society of responsible people who act for the common good."

[SVN] Vision 5: Prosperity and work activity of citizens
"optimization of labour, shorter working hours, efficiency""- optimization of labour - situation today: flexibility today means working + 8 hours and a lot of working overtime;
- emphasis on individualization, rather than on the importance of taking care for the community."

[FR] Vision 4: Sharing common values to live better together
"- Reflection of feasibility of a minimum income or unconditional income or basic income, financed through local currency
- Education"

[IRE] Vision 3: Relationships with one another and the environment
"Work / life balance will be different. More time for relationships, culture, society e.g. look at Danish model."

[PORT] Vision 4: Culture with all for development
"In 2050 we do not concentrate on productivity (which means ultimately aiming at profit) but on everybody's individual happiness index. That will feed the happiness of the collective."

c. Empowering diversity in communities

ASPIRATION

Nowadays individuals and specific interest groups (NGO/LGBT [4]/Patients…) are quite influential. Institutions (central, regional, local) could provide the tools and the framework for training programmes for "successful" management of the diversity in communities (e.g. neighbourhoods). The local communities plus associations/NGOs could provide the contents and can assume the responsibility in the establishing a new diversity culture.

RESEARCH DIRECTIONS:

Research should investigate approaches for empowering diversity in communities. A particular focus could be on cooperative platforms that are

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[4] Lesbian, Gay, Bisexual, Transgender

managed by the communities themselves. A starting point could be analysis of existing successful practices.

STATE OF PLAY - EXPERTS VIEW (Scientific research):
There is a shift from a view on homogenous society to a multi-diversity view (gender, social, migration…). We see several lines of discussions on isolated topics.

STATE OF PLAY - CITIZENS VIEW (Everyday life):
Current knowledge is too poor in this field, progress is required.
There are glimpses, but those few existing politics are not implemented enough e.g. in the case of same sex marriage the situation is very different in countries/communities. Furthermore there is a need for social accommodation (minorities carefully placed in the local community) and quotas (gender…) in politics and business.

RESEARCH QUESTIONS:
- What are success factors for establishing diversity in communities? (Case studies)
- How should a platform look like in order to attract very different actors for collaboration (Function as a socio-cultural attractor)?

CONCERNS:
- If interventions are target-group specific this will reinforce the silos. In the worst case the groups might turn against each other and fight (e.g. for resources and services, money, work etc.)
- New media could de facto change the organization of society → this could - again - result in a reinforcement of silos or promote fights between groups against each other.
- The speed of change might be much quicker than the velocity of finding and implementing responses;

IMPACTED CITIZENS VISIONS:

[IRE] Vision 2: Expression of quality
"There are equal opportunities, access to services, job opportunities, solid quality enhancements, and equal rights for all (such as senior positions of power for: women, people of disability, people of ethnic minorities, LGBTQ, elderly…)"
"People have become more politically engaged in comparison to today, differences have become embraced and attitudes towards minorities have also changed. Ageism has been eliminated or addressed, and people have become "colour blind" towards race, in the sense that people no longer discriminate due to race."

[HRV] Vision 3: The preservation of human health and nature for the generation XYZ
"These communities will be examples of sustainable oasis

based on truth and acceptance of the people's diversity."

[DE] Vision 3: Diversity and self-determination
"There should be no dress code based on cultural or religious regulations.
Equality for all, independent of sex, religion, ethnic origin and solidarity
Same wage for same job.
Same educational opportunity for all
Free to plan your future
A terminally ill person is free to decide to terminate
his/her life with medical help"

[FR] Vision 1: Sociability over technology
"Respect will be a core value. Respect of laicity, of human being, of
differences and of religions."

[DE] Vision 6: The future of work
"Complete equality of men and women at work + inclusion"

[HUN] Vision 1: Naturally
"real equality for women"

[DE] Vision 5: Dream school 2050
"In 35 years' time, even more cultures will interact in Germany than is the
case today and we hope that our children are taught to be tolerant and
open to others and can experience this firsthand every day in the
community."

[NOR] Vision 1: A work life for all
"Unexploited resources in parts of the population, such as women, migrants,
disabled, elderly etc. must be made active and included."

[SWE] Vision 1: Equality between women and men
"That all children are born with the same rights regardless of gender
- That all parents shall have the possibility to a fair division of parental leave
and child care is available for all
- That all have the same rights to a good education regardless of gender
- That all (even girls) should be able to go home alone from a night out
without being afraid
- That employers shall make hiring and salary decisions with regard to
competence and not gender
- That retirement pensions do not differ between men and woman"

[BEL] Vision 1: Foundations for respect, equality, diversity through education
"Our vision of 2050 is : the childhood education will allow us to reach an ideal
of respect, an awareness to sustainable development, a better wealth

distribution and an openness to social mix because diversity and interactions bring richness."

d.   Social Economy

ASPIRATION

The "for profit" (classic) economy does not answer the new emerging social needs. In the future a new way of economic collaboration will be necessary. Governments/institutions could catalyse the energy and strength coming from different stakeholders (citizens, enterprises, associations NGO) from different sectors and promote a new way of networking as well as a new way of recognizing the social values in order to find proper economical answers.

RESEARCH DIRECTIONS:

Research should explore promising economic models that answer societal needs and investigate supporting infrastructures.

RESEARCH QUESTIONS:
-   What would a platform look like where new actors of a social economy can cooperate and share their resources (time/experience/skills/money…). On/In what kind of public squares will people gather in the social (instead of silicon) valley?

- What kind of environment (economical, institutional, social, and cultural) would enable new ways of economic collaboration to flourish and spread?
- How can we establish a good equilibrium between state services and social economy activities?
- How to ascribe value to the social sharing economy, which is really based on community (cooperative platforms)? And how to distinguish it from the "on demand economy"?

STATE OF PLAY - EXPERTS VIEW (Scientific research):
Mainstream economy has problems coping with current challenges (ageing, poverty, youth unemployment). New economic models are emerging and include different kinds of economies (gift, exchange, rent, sharing...)

STATE OF PLAY - CITIZENS VIEW (Everyday life):
There are several examples of the emerging social economy:
- Social housing, Co-working spaces
- Sharing services (time bank etc.),Sharing goods and transport
- Microcredits, Social enterprises
- Food banks, recycling.

CONCERNS:
- The Social economy is highly relational and not as formalised as the traditional economic model. Therefore, it is not as transparent. There is a danger that corruption, nepotism and neo-mafias rise.
- Social economy is good and develops well for the urban way of life. In rural environments it might be costlier and difficult to be organised.
- Self-exploitation of the participants in the social economy may emerge
- Take care that the new models establish a good equilibrium. Equality has to be guaranteed. If the state is "depowered", social services must be guaranteed

IMPACTED CITIZENS VISIONS:

[HRV] Vision 1: New age
"Prosperity, mutual respect, equality, solidarity and equal opportunities for all these are the goals that will be achieved by the "Man of the new era". A different system created by the man of the new era will have the following values: modesty, global solidarity, empathy."

[AUT] Vision 3: Work and the economic world: worth living
"Small-scale, non-profit-oriented businesses.
- Socially just!
- Fairly promoted!
- Reduced pace!→The economy does not always have to grow more!"

[UK] Vision 1: The 2020 Economy

"The most important difference is what constitutes a successful economy. We want as much value to be placed on the positive impact companies have on the economy as financial growth[...]
Economic development and growth that benefit the many and not the few, within a framework of sustainability and equality of wealth and opportunity, underpinned by the principles of trade justice and accountability and transparency."

[NOR] Vision 4: The environmental Citizen in a «short travelled» and «mega local» city in 2040

"3. Culture of sharing: People work together, share and exchange useful things; for instance: gardening tools, robot lawn mowers, snow blowers, cars, bicycles, clothes… 4. The work café: In the new work life in the mega global city, a need for a new type of café, the work café will be developed. It is more aimed at business meetings, office spaces than Starbucks or … The work café will have small simple meeting rooms, AV-equipment… Only few days of meetings at work."

[LUX] Vision 5: From Zombies to communities/Coexisting in solidarity and working for the well-being of all citizens

"Our vision ´From Zombies to communities´ foresees that in 2050 the following will exist:
- an unconditional basic income for each citizen
- a new local/regional monetary system without interest and banks of "well-being" for a local economy"

[DE] Vision 1: Sustainability implemented

"• Economy serves the people, not people serving the economy
• Growth is not the main motivation/indicator for economic success (post-growth society)
• Orientation towards common good (community economy)
• Technological progress does not automatically result in more production, but the time obtained can also be used elsewhere (8 hour day may no longer be necessary)"

[IRE] Vision 2: Expression of quality

"We envisage a world where:
There are equal opportunities, access to services, job opportunities, solid quality enhancements, and equal rights for all"

[IRE] Vision 1: Community Enrichment through Education

"Tolerance, moral obligations based economy"

[SVN] Vision 1: Society of Sustainable Balance

"Not-for-profit, circular economy, respect of social actors' mutual interests"

2 . Unity and cohesion

a. Basic universal income so nobody is left behind
b. Community building development
c. Evidence-based community building
d. Alternative economic model

2_Unity and cohesion

This is about a society with room and respect for all, where closely knit local communities share resources, traditions and knowledge and cooperate with a high degree of solidarity and responsibility.

Based on

CIMULACT social needs
- A society with room for all [19]
- Community Development [25]
- Community Building [26]
- Education by the Community/Shared Learnings [6]

CIMULACT Citizen Visions

HRV3, IRE1,2; CZE4; BEL1; SKV3; GR1; DK1; EST4; HUN2; DE3; SWE1; MAL5; HRV5; FR1; BGR5; CHE3; FIN6; HUN3,6; PORT5; UK4; FR3,4; LUX5; EST3; ITA3,5; HRV5; LIT5; MAL5; BGR3, UK5; SVN2; ITA2; NL2; ITA4; SWE5; DE4; LUX1; CHE6; PL4; SVN5; PORT6; FR1; LUX4; ITA2; UK6; LIT3; ITA3; CZE4; PL4; LIT2; ITA1; HUN4; ROU4; LIT5; MAL6; ITA5; PL5

Related Challenges addressed by Horizon 2020
- Health, demographic change and well-being;
- Europe in a changing world - inclusive, innovative and reflective societies;
- Secure societies - protecting freedom and security of Europe and its citizens.

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Research Programme Scenarios:

a.   Basic universal income so nobody is left behind

ASPIRATION

Introducing a basic universal income promises huge benefits:
- We will have more equal societies and less of a poverty issue
- More people will be happy and fulfilled with their work because they can take their time looking for their job.

In addition it will provide the new forms of distribution of value required for dealing with digital labour.

RESEARCH DIRECTIONS

We need theoretical and empirical research investigating ways to successfully implement a universal basic income.

RESEARCH QUESTIONS
- What are the best available models of a universal basic income?

- What are the implications of introducing a universal income model in different European regions?
- What possible models of a universal income could be adapted to the contexts of different countries?
- What are the implications for the contract between citizens and the state?
- What is the current perspective/viewpoint of the different stakeholders on this issue?

CONCERNS:
- Countries don't have the budget to supply every person with a fixed income
- It is a very radical approach.

STATE OF PLAY - EXPERTS VIEW (Scientific research)
The topic is discussed by economists e.g. in the context of digital labour analysis and peer to peer production models. Several countries are experimenting with related concepts (e.g. Finland and France).

STATE OF PLAY - CITIZENS VIEW (Everyday life):
No country at the moment has a fixed universal guaranteed basic income policy. What does exist are the remnants of various welfare states and they are set to be reduced in the future leaving too many behind.

IMPACTED CITIZENS VISIONS:

[DE] Vision 3: Diversity and self-determination
"Every person can freely determine their own life"

[HUN] Vision 2: The rise of a backward region
"They declared their satisfaction with the shorter and flexible working hours (6 hour workdays), the higher wage that provides well for their livelihood, and the healthy working conditions, [...]"

[SWE] Vision 1: Equality between women and men
"all children are born with the same rights"

[LIT] Vision 5: Sustainable Family Policy
"support is provided for each family not only those which are at risk"

[NL] Vision 2: Together for one another
"Citizens spend more time to do activities in and for the neighbourhood"

[HUN] Vision 4: The annual evaluation speech of the female CEO in 2050
"Our elderly colleagues pass on their knowledge and experience even after becoming pensioners"

[AUT] Vision 6: We are one community!
"When I grow up, I can work whatever I want, like my parents. Because we have a basic income from the state, which covers our basic needs (food, drink, housing, clothing, care, health)."

[PORT] Vision 2: Cooperation
"In 2050, our society is based on cooperative values and in a systemic vision of the reality. There is now an unconditional basic income to ensure the basic needs of citizens (in terms of food, health care, housing, education and training)."

[FR] Vision 4: Sharing common values to live better together
"Reflection of feasibility of a minimum income or unconditional income or basic income, financed through local currency."

[LUX] Vision 5: From Zombies to communities/Coexisting in solidarity and working for the well-being of all citizens
"An unconditional basic income for each citizen"

b. Community building development

ASPIRATION
- By building activities, actions, platforms of engagement it is possible to create a sense of place and belonging
- Through the use of new technologies and sharing experiences it is possible to identify people's needs and possible solutions
- People will be in control of their life instead of the state

RESEARCH DIRECTIONS:
We need theoretical and empirical research on infrastructures that could underpin inclusion, cohesion and collaboration within hybrid and diverse populations in the long term.

RESEARCH QUESTIONS:
- Build and evaluate digital tools for collaboration, collective intelligence and collective action. Evaluate and generalise good practices with an aim to scaling solutions.
- Build and evaluate new physical/social spaces for collective action and collaboration. Both should allow inclusion across generations and

skills. Evaluate and generalise good practices with an aim to scaling solutions.

CONCERNS:
- Communities don't just happen on their own – How do we enable their development?
- It is too expensive to maintain public spaces to be used for collectives.

STATE OF PLAY - EXPERTS VIEW (Scientific research):
Many community building initiatives are emerging. Examples are time banking, social streets, sharing economy initiatives, community gardens e.g. at Polimi campus, human cities etc.. Related research is under way on social innovation, governance, social networks and social capital. Digitalisation is enabling the growth of social movements. The question is how to ensure the permanence of these communities?

STATE OF PLAY - CITIZENS VIEW (Everyday life):
Currently we feel that the existing platforms are exclusive and their access is restricted to those fortunate enough. Empowering people to use these new technologies should help us to identify their needs and find appropriate solutions via their chosen communities. We need accessibility of the tools used to build online communities.

IMPACTED CITIZENS VISIONS:

[PORT] Vision 5: We build the future now
"We cultivate relationships of closeness and affection, listen and help all the generations of family, friends, neighbours and the community (local, national and international)"

[LUX] Vision 7: On the way to a participatory community
"communication tools which are adapted to the needs of people such as social com-munity networks and management tools for an inclusive and participatory society."

[FIN] Vision 6: Community as an asset
"The community is more than the sum of its parts. It creates security to and empowers its members."

[DE] Vision 4: Living together – shared homes in 2050
"Additionally, there are also communal rooms and shared gardens (partial self-sufficiency, place for relaxing, barbecues, entertaining etc.). Prerequisite for a successful housing project is the shared "sense of community""

[HR] Vision 3: The preservation of human health and nature for the generation XYZ
"We imagine year 2050 as a year in which people live happily in pleasant communities"

[IRE] Vision 2: Expression of quality
"People have become more politically engaged in comparison to today"
[FR] Vision 1: Sociability over Technology
"Exchange and dialogue are developed regarding the shared building's resources (washing machine, shared gardens, recuperation, recycling etc.)."

"Everyone is connected without any modern technology; respect of human"

"Respect will be a core value. Respect of laicity, of human being, of differences and of religions."

[BEL] Vision 1: Foundations for respect, equality, diversity through education
"Foundation for respect, equality, diversity through education"

[CZE] Vision 4: Upbringing and education towards tolerance
"People closer to each other; [...]more interest in sharing public space"

[UK] Vision 6: Citizen empowerment
"All services should be community led"

c.   Evidence-based community building

ASPIRATION

We suggest using policies that are based on evidence and behavioural insights in order to make our society more welcoming and inclusive. This should reduce biases of communities towards those who are not (yet) part of them and therefore improve unity and cohesion. Access to public data needs to be extended to citizens, communities, researchers and policy makers so they can use it to develop communities.

RESEARCH DIRECTIONS:

This requires theoretical and empirical research on how can communities can be transformed by knowledge.

RESEARCH QUESTIONS:

- What are successful practices of evidence-based community building?

- What were the tools and enabling practices used in these processes and how could they be scalable and replicated?
- On which particular issues were these practices focused on?
- How were citizens and policy makers involved in these processes?

CONCERNS:
- Policy Makers and professional politicians are too focused on short term results
- This is a waste of money. Some citizens will not see the benefits of this approach because of the pressure of fulfilling their primary needs.

STATE OF PLAY - EXPERTS VIEW (Scientific research):
Evidence based policy making often involves setting up of randomized control trials. Experiments are first set up on a small scale and then scaled up. Behavioural economics is researching behavioural biases i.e. prejudices with undesired effects on human behaviour. The UK government has established the behavioural insights team consisting of behavioural economists with the aim of basing policies and public services "on more realistic assumptions of human behaviour".[5]

STATE OF PLAY - CITIZENS VIEW (Everyday life):
When policies are based on evidence, results are to the advantage of citizens:
- Speeding kills, 20 m.p.h. speed limits in towns in UK are introduced
- Alcohol and driving kills, low blood/alcohol limits when driving affect road deaths positively.
- Despite proven benefits of needle exchange for drug users, governments refuse to sponsor this effective way to reduce drug use health concerns, thus affecting communities negatively.

IMPACTED CITIZENS VISIONS:

[GR] Vision 1: Humanity - Environment - Justice
"Democratic coexistence of all people regardless of; gender, ethnicity, appearance, age, etc.;"

"creating spaces for worship of all religions;"

"providing medical care to all people"

[SVK] Vision 3: Unlimited Possibilities of the Future: Transportation, Healthcare and Dissemination of Ideas
"Equality in opportunities and possibilities"

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[5] The group is now independent http://www.behaviouralinsights.co.uk/
It was also called the Nudge Unit

[IRE] Vision 1: Community Enrichment through Education
"Well integrated local community, with respect"

[PORT] Vision 5: We build the future now
"People/citizens will have more voice and weight in decision making"

[ITA] Vision 4: A school beyond times - a new education model
"The sense of belonging to the community is strong and it is a common feeling among all citizens"

[FR] Vision 1: Sociability over technology
"True news is displayed; social codes"

[PL] Vision 5: I've Got Talent
"Everyone has talents worth discovering, appreciating and developing; training programs in accordance with the results of the analysis;
"Training programs will be personalized in accordance with the results of the analysis of pupils' aptitudes and interests."
"Creating and promoting skills and talents will be correlated with the needs of the economy."

d.   Alternative economic model

ASPIRATION

In the current situation, the competitive culture resulting from our growth-based economic system hinders the inclusion of the most vulnerable members of our society. This has to change. We want alternative holistic economic models and approaches that focus on happiness and cooperation. This will support new forms of communities that will provide room and respect for all.

RESEARCH DIRECTIONS:

Research should investigate alternative economic models that promote sustainable ways of living. It needs to monitor, promote and expand the most relevant and efficient models so policies can maintain the best possible catalogue of indicators.

RESEARCH QUESTIONS:

-   What are the existing alternative economic and governance models?
-   What are indicators of citizen involvement in these models?
-   How can these models be evaluated?
-   What would be needed to scale these models up to the European level?

CONCERNS:
- Influence of lobbies (financial and "agenda owners")
- History of communism in the eastern part of the EU
- Revolutionary changes are scary
- Reluctance of those in charge, because they benefit from the current situation

STATE OF PLAY - EXPERTS VIEW (Scientific research):
Several researchers (eg. at Arizona State University, ASU) are thinking along these lines. Economics Nobel laureate Elinor Ostrom has researched ways to govern the "Commons". Other important contributions are happiness economics, degrowth theory and work on cooperatives. Amartya Sen's philosophy of development suggests that governments should measure what their citizens can do, not just what they own (capability approach).

STATE OF PLAY - CITIZENS VIEW (Everyday life):
We feel like we as a society are heading in the wrong direction, valuing material gain over happiness. This affects everyone and primarily the most vulnerable members of our society and we feel excluded of important decisions that affect us all. eg: TTIP, corporate lobbying.

IMPACTED CITIZENS VISIONS:

[LIT] Vision 3: Harmony between Human and Nature
"Economic performance indicators have reached its peak and new technologies have been developed so they practically disappeared and it has freed us from excessive production and industry"

[ITA] Vision 3: Return to via Gluck
"Exchange and sharing practices are the basis of this diffuse serenity"

[LUX] Vision 1: On the way to a participatory community
"The community development, characterized by involvement of people in projects aiming at cohabitation (e.g. production of energy, production of food) … Cooperative systems, cooperative living in Zurich"

[UK] Vision 4: Untitled
"Co-op living: Land community trust, provision for self-builds. Citizens decide on spending priorities"

[SWE] Vision 5: Family, personal development and value system –
"Much of what we own is common property, for example technical equipment such as vehicles, lawn mowers and tools"

[PORT] Vision 4: Culture with all for development
"In 2050 we do not concentrate on productivity (which means ultimately aiming at profit) but on everybody's individual happiness index. That will feed

the happiness of the collective. Education is the main vehicle for the realization of this vision."

3. Citizenship awareness and participation

a. Data for all – Share the power of data
b. "Snakes and Ladders". Connecting scales of issues and actors
c. The transparency toolbox
d. Empowered citizens

3_Citizenship Awareness and Participation

Citizens need to be empowered to take more active responsibility for society and nature. This requires suitable participatory decision making procedures and education, infrastructure for co-creation and access to knowledge and data.

Based on

CIMULACT social needs
- Education for Citizenship [9]
- Personal freedom and responsibility [29]
- Control and Influence through participation in governance [21]

CIMULACT Citizen Visions

DK2; MAL2,3; SWE2; PL2,3; IRE2; DK2; AUT6; ITA2; ESP3,6;NL2; FR2,3; DE4;BEL4; LUX2; HUN5; MAL5; BGR5; FR5; GR5; SVN5; CHE5

SVN3; EST3; CZE6; NL3; LAT3,5; FIN4; PORT5; DK2; DE3

HUN1; IRE4; FR2; ROU5; UK4,6; PORT5,6; ITA5; CYP3; EST2; AUT1; ESP4; CHE2; SVN4; CZE5; LUX5; MAL5; UK1; ESP4; FR1; PORT2,3

Related Challenges addressed by Horizon 2020
- Europe in a changing world - inclusive, innovative and reflective societies;
- Secure societies- Protecting freedom and security of Europe and its citizens;

CIMULACT

a. Data for all – Share the power of data.

ASPIRATION

Today's data-driven economy and society can exclude people from knowledge and decision-making. We want to reverse that by empowering people to create data, make sense of data, use data to their own individual or collective ends and discuss data and data-based decisions.
This will allow citizens to participate more in the production of knowledge and have more meaningful discussions on common issues.

This agenda calls for policies on: literacy, mediation (on helping non-specialists to take part), open tools and data (train the people who develop the data and train the people who use the data)...

RESEARCH DIRECTIONS:
Research should aim at finding ways of sharing the power of data with non-specialists and individual citizens for use in their own lives and for participating in collective decisions. Two sets of challenges need to be considered:
- People-centred challenges: data literacy, privacy, co-production of data
- Data-centred challenges: the risk of over quantifying issues and the fact that data themselves are the results of production-processes with mechanisms that should also be open to investigation.

Research projects should include citizens.

RESEARCH QUESTIONS:
- How can data become assets and tools to allow non-specialists to take more active part in decision making as well as in the design and production of public services?
- What are barriers of open data on the side of supply as well as demand?
- What are the risks and limitations of data-driven collective decision making? Can there be too many data? How can desirable social goals result in the production of new data? Should data diversity become an explicit policy objective?

CONCERNS:
- Do we really have the data to produce these indicators?
- Do we need qualitative rather than quantitative data? Are we turning everything into numbers?
- Belief that data can be produced easily, cheaply by everyone, can result in poor quality data.

STATE OF PLAY - EXPERTS VIEW (Scientific research):
The following issues are being researched in this context:
- Open Data (opening up licenses, open use of data).
- Self Data (an emerging field on the use of personal data by individuals, VRM[6] quantified self data ownership).
- Big Data (Advanced methods to extract information from huge datasets generated from diverse sources).
- Data Literacy / Data Visibility.
- Social Mapping (Analysis of human networks, discussion dynamics etc. for recognition of behaviour and preferences).

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[6] VRM stands for Vendor Relationship Management. VRM tools provide customers with both independence from vendors, and better ways of engaging with vendors. (Source: Wikipedia)

STATE OF PLAY - CITIZENS VIEW (Everyday life):

- Vilnius (Lithuania): Open access data at municipality level → trying to find ways to process them and make them
- Data are not yet ready to be released in a way that citizens can use them /understand them.
- Databases at European level are difficult to use. It is hard to reach data in a filtered and organized way.
- Simplified platforms that allow people to find the information.
- Need to produce and disseminate the knowledge about new ways/ opportunities to access data.

IMPACTED CITIZENS VISIONS:

[NL] Vision 3. Freedom
"There is no manipulation of your thoughts by media."

[CZE] Vision 6. Back to the roots
"Balance between technologies and personal values".

[UK] Vision 4. Untitled.
- Citizens decide on spending priorities (e.g. taxes, referendum, participatory budgets)
- WIDENING PUBLIC DEBATE/VOTING MECHANISMS – organising more workshops like this, electronic referendum, public debates including more political parties, groups of interest.

[FR] Vision 2. Collective Project.
"Direct democracy is possible and citizen consultations are held frequently"

[CZE] Vision 5. Open Civil Society.
"Make useful information instead of information ballast".

[AUT] Vision 1. Finally a true European community.
"It is not possible to hack into digital systems anymore, so that the online voting cannot be manipulated."

"Direct elections and standardised voting systems are State of play in Europe and the Member States."

[BEL] Vision 4. Citizen-centred vision
"Citizens will become aware of their responsibilities about the information they diffuse and receive."

[CZE] Vision 3: Free citizens in the secure world of data
"100% security of personal data against abuse – it will be achieved by an advanced technology."

b. "Snakes and Ladders". Connecting scales of issues and actors.

ASPIRATION

We need to connect actors from marginalized individuals to global decision makers across issues and scales from local to global in order to enable diverse exchange of knowledge, experience and evidence and distributed actions in response to shared challenges. One approach could be a role swap scheme between representative of local actors and global players. Representatives could be nominated by a council of their peers. This would enable citizens to have influence on global level and global players to have experience on local level. Thus the agency of local actors and empathy of global players would both be strengthened.

RESEARCH DIRECTIONS:

Research should explore possibilities for exchanging knowledge and for taking joint actions in response to shared challenges between actors on diverse scales.

RESEARCH QUESTIONS:
- What are the effective (new and existing) models and mechanisms for exchange of knowledge and evidences across scales and issues between citizens and powerful global players?
- How do we connect distributed actions in response to shared challenges?
- How do we evaluate the impact of such activities?
- What can be the role of education and other forms of learning in catalysing and supporting those processes.

STATE OF PLAY - EXPERTS VIEW (Scientific research):
Non-conventional mechanisms of scaling:
- Large-scale, open, collaborative (wikipedia, open street map)
- P2P commons (P2P foundation)
- Open source hardware
- Open innovation ecosystems
- Platform economies (Blabla car, Airbnb, etc.)
- Existing knowledge exchange (academic existing models, public/private existing models, but there are less models involving citizens and other actions)
- Innovate UK fellowship and placement (knowledge catalyst)
- Empathy development (Baron Cohen and Roman Krznaric are the main researchers on empathy).

STATE OF PLAY - CITIZENS VIEW (Everyday life):
- Example in Lithuania, "National Democracy Day" – University, national and local governments. A day where students take over the institutional role (although there are no real impacts on learning outcomes on decision making).
- Example in Portugal, "Kidzania", a "playing ground" that is a simulation of a city where children can assume professional roles and have to live for a period in the playing ground with the consequences of their decisions.
- Practice of donating money to a specific child in a specific situation (which raises awareness about global issues because you can choose who to donate to).

CONCERNS:
- Long-term commitment can produce more results (if you do just for a year it can be useless).
- Nobody is ready to be active / or to care about some decisions, they really do not feel competent.
- Prepare the environment for participation.

IMPACTED CITIZENS VISIONS:

[HUN]Vision 1: Naturally.
"This decision making process is made by a globally existing direct participatory democracy".

[ITA] Vision 5: Personal Growth within Collective Growth and vice versa.
"In 20150, inside a green city – square – district the community has built an organization in which collective decisions are discussed."

[PORT] Vision 2: Cooperation.
"In 2050 citizens participate actively and consciously in governance".

[SWE] Vision 2: Education – A Standardised education system in the EU.
"Through the creation of a common basic curriculum within the EU we achieve increased understanding for other cultures and people, and better integration in the EU."

[FR] Vision 2: Collective project:
"There is a new worldwide equilibrium, there is an awareness of our common and shared planet."

c. The transparency toolbox

ASPIRATION

We need to make governance processes accessible for all and increase transparency of decision making. To this end the transparency tool box provides methods, tools and an interactive exhibition of decision-making processes showing where participants can join the journey and how their contribution /participation has /has not influenced the outcomes.

RESEARCH DIRECTIONS:

Research should explore pathways towards transparency in diverse societal contexts and ways to transform processes of governance so they can be accessible to all. Secondly we need to understand under which conditions citizens' power, agency and influence impact upon outcomes of decision making processes.

RESEARCH QUESTIONS:

- What drives people to participate and to continue this participation?
- What role do education and other forms of learning have in supporting citizen awareness and participation?
- What are the barriers, enablers, benefits and problems of transparency in diverse society contexts? (empirical research)
- Developing and testing methods and tools to articulate, visualise and communicate processes of governance so they can be accessible to all (participatory action research)

- What are metrics and methods to measure and evaluate the impact of citizens' participation on decisions made and the effectiveness (or not) of methods for communicating these outcomes to participants.
- Where, how and under what conditions power, agency and influence of actors impact outcomes of processes of governance? How can this impact be measured and evaluated? How can it be communicated to citizens? How can we know that this communication was effective in raising citizen's awareness?

CONCERNS:

The transparency tool box could be misused by governments for showing off participation without actually implementing it (fake participation).
The transparency tool box could be used as a form of "advertising".

STATE OF PLAY - EXPERTS VIEW (Scientific research):

The following topics are currently being researched:
- Transparency in itself (including critical work), political philosophy, digital spaces for transparent government.
- Co-designing policy (visualization of decision making processes)

STATE OF PLAY - CITIZENS VIEW (Everyday life):

There is a will to take action, people are talking about this e.g. through social media but these activities are being blocked by the existing power. Top decision makers do not integrate these bottom-up actions.

IMPACTED CITIZENS VISIONS:

[CZE] Vision 6: Back to the roots.
"Balance between technologies and personal values".

[ROU] Vision 5: The socio-political structure of a global citizen.
"- We have online platform where we can upload and make suggestions for future laws;
- The Government takes in consideration the citizen's opinion when it decides the resources allocation;"

[PORT] Vision 6: My day in 2050.
"There will be cooperation among citizens and between them and the societal institutions in order to solve concrete social problems. It will be of no interest who started the initiative. In this sense, the involvement of individuals is larger and also more sincere. The institutions and the state create the conditions for that, which means that citizens can assume this role supported by active public institutions and a state that did not give up its duties."

[UK] Vision 1: The 2020 economy.
"Eradication of corrupt and anti-competitive practices".

[LUX] Vision 5: From Zombies to communities / coexisting solidarity and working for well-being of citizens.
"A transparent information and communication of decision making processes."

[BEL] Vision 4: Citizen-centred vision.
"Technological innovations will make a better transparency of politicians and leaders' speech possible."

[UK] Vision 1: The 2020 Economy
"Full transparency and accountable processes for lobbying and funding of political and corporate relationships and systems to hold bodies to account."

[ESP] Vision 4: Our ideal society: thoughts create realities
"- Access to politics regulated by formative and ethical criteria.
- People have the power to remove the bad governments.
- Greater citizens' involvement in decisions which concern
them

d. Empowered citizens

ASPIRATION

The digitization of resources and services must only be one element of a broader agenda whose goal is to empower people to become more active and autonomous citizens of a society where digital tech changes the rules of the game. We want to build people's capacity to jointly learn, choose, experience, make and contribute autonomously through digital and other channels. This also means that non-digital channels remain indispensable, even if they may have to be reinvented.

RESEARCH DIRECTIONS:

Understanding the dynamics and challenges of citizen empowerment and participation in a diverse, digital society and exploring, in empirical and/or experimental ways, how citizens could play an active part in designing, producing or running public services as well as democratic processes. This research should take into account how this redesign can improve both the inclusiveness and the outcomes of public services and democratic processes. It should give citizens an active part in its own methodology.

RESEARCH QUESTIONS:
- What drives people to participate and to continue this participation?
- What role education and other forms of learning have in supporting citizen awareness and participation?
- What are the barriers, enablers, benefits and problems of empowerment in diverse society contexts?
- Who benefits or loses from digitization of public services and processes of decision-making and what are the contextual factors that affect this? How does this digitization change the conditions and which individuals feel empowered as citizens?
- How does citizen empowerment challenge the current public system and democratic process and how we can design accordingly? And how can be this redesign fully inclusive?

CONCERNS:
- Digital=control by others?
- This may lead to more disconnection
- This may just be a way to cut costs.

STATE OF PLAY - EXPERTS VIEW (Scientific research):
There is a lot of ongoing research on:
1. Digital inclusion with 3 different focuses: access /use focus; public service access; empowerment.
2. Design of public services (co-design, re-design, user-centred design).
3. Needs of disenfranchised (communities, citizens, NGOs) digital or not access to essential services, mediation (by public servants, NGOs, etc.)

All these three levels are not well interconnected.

STATE OF PLAY - CITIZENS VIEW (Everyday life):
Digitization can make the gap bigger, namely between different generations and social groups (market-driven approach vs. national policy).
Examples of promising practices:
- Public wi-fi (open access);
- Informal decision making platforms to evolve to formal ones (Hungary);
- Participatory budgeting – people have information sessions and can use on-line tools to present their proposals for the neighbourhood to vote on the ones to be implemented (Lisbon).

IMPACTED CITIZENS VISIONS:

[LAT] Vision 3. Responsible lifestyle.
"Each citizen's personal responsibility in decision making"

[DK] Vision 2. A democratic society with REAL equal opportunities.
"Education in democratic culture in elementary school."

[...]"Agnes participated in a lot of debates through social media. She eagerly used her freedom of speech within the "responsibility of speech."

[PORT] Vision 5: We build the future now.
"I participate every day in the construction of my future, my family and my community, in a similar way as is my participation in CIMULACT today. Individual freedom to choose and participate in continuing education and training, politics and citizenship is paramount, as is the study of fundamental rights.

[UK] Vision 6: Citizen empowerment.
"All services should be community-led, geared towards maximum empowerment of groups and individuals, where all feel they have choices and access, and they are listened to."

[UK] Vision 4: Untitled.
"- Citizens decide on spending priorities (e.g. taxes, referendum, participatory budgets)
- WIDENING PUBLIC DEBATE/VOTING MECHANISMS – organising more workshops like this, electronic referendum, public debates including more political parties, groups of interest."

[SWE] Vision 2: Education – A Standardised education system in the EU.
"Project work, as well as virtual classes and lessons over national borders are a reality."

[CHE] Vision 5: Together for one world.
"An attractive educational system (…) promoting the transfer of knowledge."

[PORT] Vsion 3: E.U. – We are
"A responsible society with an aware, active, deliberative and cooperative (public) participation"

4. Holistic health

a. Quantitative person-centred health
b. Access to equal and holistic health services and resources for all citizens
c. Finding a balance in a fast-paced life
d. Promoting well-being through relating environments

4_Holistic health

We need an efficient healthcare system that treats people as a whole, equally addresses physical and mental health and supports people to take care of themselves. It should provide cutting edge treatments including natural ones and equally stress prevention through healthy lifestyles. Advanced technologies should contribute to healthier lives without invading patients' privacy.

Based on

CIMULACT Social Needs
- Holistic and Preventive Healthcare System [2]
- Healthier Living provided by Technology [3]

CIMULACT Citizen Visions

SWE3; SVN3; HUN3; GR4; SVK3; SVN1; MAL4; DK1; ITA4; EST6; ROU6; ROU1;SVK5;LIT4;ROU4; CZE3; LAT2; PL1; AUT2;

FIN2; BGR6; ROU4; ROU6; CZE2; GR4; NOR3; HRV2; PL6; LIT4; PL1;

Related Challenges addressed by Horizon 2020
Health, Demographic Change and Well-being

a. Quantitative person-centred health

ASPIRATION

We envisage the evolution of a human and technology based healthcare system that ultimately enables innovative, personalised and human-centric services for health promotion, prevention, treatment and rehabilitation.

RESEARCH DIRECTION:

In order to achieve personalised holistic data-based health services, reliable user lifestyle profiling is required. For this purpose, large amounts of data provided by miniaturised environmentally friendly (wearable or distributed) systems could be combined with existing data from other sources (e.g. EHR[7],

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[7] Electronic health record

insurance data). Research should explore ways to make health-related data from diverse sources and destinations interoperable, and to investigate new processing techniques for personalised analysis and reporting.

RESEARCH QUESTIONS:
- How to overcome fragmentation of data by involving citizens, experts, professionals and policy makers?
- Which models can be used to manage, process and interpret large data sets that enable:
- health issues identification,
- integrated knowledge about human health (physical, mental, social, environmental),
- personalization of healthcare interventions and health promotion, according to a set of qualitative/quantitative data,
- data access for health professionals following authorization of citizens?
- How can we implement these approaches in different countries taking into account their cultural differences?

CONCERNS:
- There are ethical, legal, business, privacy, data protection and security concerns
- Some citizens don't want to share data, but want a second opinion
- Doctors don't want to be monitored
- Doctors don't have statistical expertise
- Need to constantly monitor trends and knowledge in technology

STATE OF PLAY - EXPERTS VIEW (Scientific research):
- Fragmented data hinders linkages across countries/sectors/systems.
- Data protection, ethical, legal concerns, admin privacy all require protocols for informed consent (not just authorisation).
- Gap of knowledge, some stakeholders see only disadvantages
- Issue of the level of accuracy from technology (wearables/insideables[8])
- Need for common policy and guidelines.

STATE OF PLAY - CITIZENS VIEW (Everyday life):
Datasets are available from groups of people who are already under medical treatment and need to be constantly monitored. This data is not openly available to these people but only the involved doctor has access to it. Almost everyone gets a "standard" treatment for a specific symptom and not a personalized one.

IMPACTED CITIZENS VISIONS:

[ITA] Vision 4: A school beyond times – a new education model
"The social security system uses smart watches both to monitor the health status and to help individuals to take care of themselves"

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[8] Swallowable, injectable, implantable, dissolvable medical technology

[CZE] Vision 3: Free citizens in the secure world of data
"Effective use of data on personal health"

"100% security of personal data against abuse it will be achieved by an advanced technology"

[ROU] Vision 1: Let's be humans through technology
"Advanced technology for health and education"

[ROU] Vision 6: The mind of the future, in a healthy body
"Nanotechnology…innovation"

[HRV] Vision 3: The preservation of human health and nature for the generationXYZ
"Technology does not alienate people and does not endanger their health."

[FIN] Vision 2: Predictive health tracking
"Developments in technology and medical sciences have prolonged people's lives and improved their quality of life. Technology is utilized in basic health care and maintenance, in the diversification of treatments and, for instance, in the prediction of different kinds of seizures."

b. Access to equal and holistic health services and resources for all citizens

ASPIRATION

Develop a common standard of health care across Europe that guarantees equal access to the same optimal evidence-based health care services, resources and knowledge as well as support for adopting healthy lifestyles. Build up a global community of diverse people practicing social responsibility and supporting each other.

RESEARCH DIRECTIONS:

The new EU healthcare strategy should promote an equal distribution of resources and knowledge and a Pan-European dimension. A kind of unique European health care system should be built through actions dedicated to:

- Education of citizens and healthcare professionals to promote awareness and homogeneous
- Knowledge and data distribution with open access and guidelines agreed upon by all stakeholders (policy makers, medical associations, citizen associations)
- Promotion of social responsibility i.e. individual participation at a local level to reach a global community taking care of all individuals and their needs of all the different ages (i.e. children, adolescent, adults, elderly)

RESEARCH QUESTIONS:
- What kind of strategy/regulation could be implemented to adopt and develop a common standard of care across Europe that guarantees equal access to high quality health care for all citizens?
- How to integrate administrative and clinical data, standards of care and scientific and clinical knowledge across Europe?
- How to implement the vision of an EU health care system including promotion of health and expertise of all health professionals for the integration of:
  o Administrative and clinical data
  o Standards of care
  o Scientific and clinical knowledge

STATE OF PLAY - EXPERTS VIEW (Scientific research):
EU citizens do not receive the same standards of health. There are huge differences in EU countries regarding:
- Knowledge access and education of health professionals
- Health promotion and healthcare
- Availability of drugs and non-pharmaceutical interventions
- Access to rehabilitation and nursing.

STATE OF PLAY - CITIZENS VIEW (Everyday life):
- No open access to health services
- No equal access to many medicines (but you can get it somehow illegally or with high costs)
- Current education concerning social welfare/social responsibility is inadequate
- Citizens are not properly educated on healthy ways of living

IMPACTED CITIZENS VISIONS:

[PL] Vision 1: Healthy Family, Healthy Society (Flower of life)
"Available, effective and innovative healthcare"

[BGR] Vision 6: Evolution in health care
"… Advanced health-care [...] and minimized spread of diseases"

[HUN] Vision 3: Snapshots - Fragments of conversation in a community house
"Epidemic prevention: hygiene, lifestyle, awareness-raising, not just through vaccination"

[DK] Vision 1: Physical and mental health
"… healthy as whole – both lifestyle, mental and physical health"

[CYP] Vision 3: Human Rights
"[...] to equal access to issues that we take for granted, such as health, education and retirement."

[FIN] Vision 2: Predictive health tracking
"One's authority over his or herself as well as one's wellbeing increases and all have equal access to health services."

[GR] Vision 6: Five Pillars for human development
"Health: access to health facilities with medical coverage regardless of economic background"

[CYP] Vision 2: A just society oriented towards human rights
"A society that provides equal opportunities for all EU citizens, as well as direct access to a secure health and education system."

[BGR] Vision 6: Evolution in health care
"Health care is free and generally accessible."

[PL] Vision 1: Healthy Family, Healthy Society (Flower of Life)
"Our vision concerns available, effective and innovative healthcare which is at the heart of a healthy family and society."

c. Finding a balance in a fast-paced life

ASPIRATION

We now live in a world where work has taken over our lives. We are expected to be ever more productive and juggle this with our caring responsibilities in the home, at the expense of a meaningful personal life. Fast paced living is endangering our health (heart problems, mental health problems, burnout, break down of our immunological system etc.). Citizens should be enabled to manage their daily lives in a balanced way by valuing relationships, taking breaks and creating opportunities for recreation.

RESEARCH DIRECTIONS:

Large scale intervention studies are needed to create a framework of measures for well-being and stress management for a better life.

RESEARCH QUESTIONS:
- How can we identify practices within cultural traditions that would empower citizens to take on board healthy lifestyles?
- How can precarious work be better regulated to protect vulnerable members of society?
- How do different people cope in managing work responsibility at a managerial level that entails long hours of work?

- How can work cultures create relating environments that also respect workers caring responsibilities and nourishing relationships with significant others on the home front?
- How does the rise of virtual relationships affect physical and mental health?

STATE OF PLAY - EXPERTS VIEW (Scientific research):
- Many people experience ill health due to fast paced life. Companies push staff in a competitive manner
- Limited time for social life – electronic relationships
- Some companies offer employee benefits but demand long working hours (and even colonize staff leisure time).

STATE OF PLAY - CITIZENS VIEW (Everyday life):
- Pressure for continuous and increased productivity
- Longer working hours (even on a felt/subjective basis)
- Possible salary cuts due to the ongoing economic crisis
- All these to result in less personal, social and family time.

IMPACTED CITIZENS VISIONS:

[ROU] Vision 6: The mind of the future, in a healthy body
"We will be healthy and able to work properly and we will have a longer and harmonious life"

[SVN] Vision 1: Society of Sustainability
Centres around a *"Society of sustainable balance i.e. a society of balanced co-existence, high quality of life fairness and responsibility"*

[DE] Vision 1: Sustainability implemented
"Less hectic, friendly approach to each other. Deceleration / slow down the pace of life"

[LUX] Vision 6: I am satisfied with what I am doing! (Do what you love, love what you do!)
"I am satisfied and I am serving society. My pace of work is being respected; I can combine my social, family and associative commitments and I have time for myself. Every moment of life is well lived. I try, I am wondering, I am experimenting, I am changing, I am building, I live free of my choices, respected by others."

[AUT] Vision 3: Work and the economic world: worth living
"Reduced pace!"

[PL] Vision 1: Healthy Family, Healthy Society (Flower of Life)

"We try to maintain a healthy balance between work and everyday life, even after a lousy day, a stressfree and pleasant atmosphere awaits us, as the intelligent apartment block we live in adjusts to our mood."

[IRE] Vision 3: Relationships with one another and the environment
"Work / life balance will be different. More time for relationships, culture, society e.g. look at Danish model."

[SWE] Vision 3: Ecological sustainability and health
"It is also easier for the individual to make choices about the distribution of their working time and free time to improve the work-life balance."

d. Promoting well-being through relating environments

ASPIRATION

We want to promote well-being by installing environments that promote both mental and physical health. By environment we mean both the pyscho-social environment which has to do with the quality of the relationships amongst people (e.g. constructive styles of dealing with conflict, good team work) and the physical environment which we inhabit (e.g. spaces, buildings, gardens).

RESEARCH DIRECTIONS:

We need to explore what are the "relating environments" that best promote physical and mental health and how they can be build up in workplaces and beyond.

RESEARCH QUESTIONS:
- What technologies could underpin a responsive environment that identifies and matches user needs in real time?
- What are good practice used by companies to promote the physical and mental health of their employees through relationships at work and the creation of physical environments that are mentally and physically relaxing?

- How can relating environments be achieved outside of big organizations (or corporations) eg. in SME's?
- What are methods and strategies to achieve engagement and motivation in healthcare interventions and promotion in the workplace and on the home front?
- Is it possible to create a model of social responsibility for the implementation of self sustaining health communities?

CONCERNS:
Some relating environments exist only at service of business interest i.e. keeping employees well for long working hours

STATE OF PLAY - EXPERTS VIEW (Scientific research):
- Problems at work impact on happiness and thereby on mental and physical health
- Working groups can produce motivation for health promotion, social influence increases cooperation
- Wearables also encourage a healthy lifestyle.
- There are cultural differences in social initiatives i.e. different attitudes towards sharing apartments
- Gamification can help to motivate healthy lifestyle, but not everyone uses it.
- Responsive environments for anticipation and complying for users' needs are being researched
- If companies provide such environments this would encourage workers to socialize at work rather than spending time with their families.

STATE OF PLAY - CITIZENS VIEW (Everyday life):
Currently environments promoting well-being are rare. Our experience shows that this kind of comprehensive/inclusive concepts is actually lacking from our everyday lives.

IMPACTED CITIZENS VISIONS:

[GR] Vision 4: Improving quality of life - a weapon to fight cancer
By creating environments promote: *"healthy lifestyle", "reduced stressed" thus "improving quality of life"*.

[SVN] Vision 3: Green Future
"To improve the quality of life to achieve mental and physical health", "Raising awareness and concern for the management of the (workplace) environment!"

[DK] Vision 1: Physical and mental health
"Healthy as a whole i.e. both lifestyle, mental and physical health"

[SVN] Vision 3: Green Future
"Life in and with nature → mental and physical health"

5. Sustainable food

a. Good food research
b. Good quality food for all
c. Responsible use of land
d. Evolving food culture in growing cities

5_Sustainable food

We need to ensure that everybody has equal access to sustainable and healthy food and that the production and distribution of food is carried out in an ethically responsible manner that does not harm our natural environment.

Based on

CIMULACT social need
Sustainably Produced, Healthy, Clean and Responsible Food [23]

CIMULACT Citizen Visions

PL1,2; SVN1; IRE3,4; EST1,4,5; BEL1,5; ITA4; FIN4,5; CHE1,4; LUX1,5; NOR6; ROU2; HRV3,6; EST5; NL5; DK4; SVK4; SWE5; ESP5; FR1;

Related Challenges addressed by Horizon 2020
- Health, Demographic, Change and Well-being;
- Food security, sustainable Agriculture and Forestry, Marine, Maritime and inland water research and the bio economy;
- Climate Action, environment resource efficiency and raw materials.

a.   Good food research

ASPIRATION

Food is the most basic need for human beings. Therefore it is impacting both mental and physical health in the most direct way. We have to continuously research and explore nutrition quality of the food we eat and – if required – change the way we deal with food. Knowledge on nutrition is evolving continuously. Consumers encounter conflicting nutritional information from various sources ranging from the private sector, academics, governments or media. Information must be more accessible, transparent and user-friendly and tailored to users' needs…in order to allow consumers to make more informed food choices for both individual health and society.

RESEARCH DIRECTIONS:

Research needs to explore ways to guarantee the provision of sustainable and nutritious food. Secondly we need to identify impacts of new research

driven food paradigms (e.g. biotechnology) on health, economy, environment and sustainability in a comprehensive and systemic way.

RESEARCH QUESTIONS:
- What is the impact of food control standards on economic and local level development, quality standards and sustainability?
- What are social-economic and environmental impacts of the application of results of biological research?
- What are the health impact as well as socio-economic impact of pathogens and pesticides remaining on our bodies?
- How can we close the information gap between results of research, consumers, governments and producers?
- What is nutritious food for the individual, the community and the society?

STATE OF PLAY - EXPERTS VIEW (Scientific research):
Bio-economy: There is a lot of biological research on food that is conducted yet we do not have enough results on the economic consequences of this research ... (antibiotics, breeding, pesticides, disease resistance, etc.)The economic consequences of results of biological research are missing. Meat-heavy diets are multiplying risks of heart problems. Nutrition recommendations can be provided (vitamins, fats) but the knowledge is incomplete.

STATE OF PLAY - CITIZENS VIEW (Everyday life):
The public has ideas of some healthy food and unhealthy food (fast food for example). We have conflicting information (eggs eating - is ecological food necessarily good for my health, milk is good and not good anymore, red meat…). We know eating too fat, too salty, too sweet is not good. The same confusion applies to the question of what is sustainable or not.

CONCERNS:
We aim at analytical kinds of research rather than normative research and /or prescriptive research.

IMPACTED CITIZENS VISIONS:

[IRE] Vision 4. Decision-making for a Sustainable Future.
"We live in a world where cultivation is 100% sustainable. Our laws ensure that we protect and preserve our environment because carbon neutrality is the cornerstone of all our legislation. Carbon trading must have a deadline for elimination with penalties for excess carbon production thereafter. Cultivation should be local as much as possible and sustainable by reducing air miles. International trade agreements (such as TTIP) must be transparent at all stages and must prioritise sustainability and the personal well-being of citizens and communities. Food should be unpolluted, safe and nutritious. All food cultivation should be produced using green energy (100% renewable). All actions will have been given targets for compliance and will have been

achieved by 2050. Farmers and citizens have the power to make decisions about agriculture and how we grow our food."

[IRE] Vision 3. Relationships with one another and the environment
"Food production done ethically. Work with nature."

[ITA] Vision 4. A school beyond times - a new education mode.
"Everybody takes care of the urban territory and respects it: bike paths, green areas and solar panels are widespread around the city.
Nutrition is governed by laws that make it organic, sustainable and accessible to all. The social security system uses smart watches both to monitor the health status and to help individuals to take care of themselves."

[NOR] Vision 6. Ensuring sustainable use of natural resources.
"To contribute in covering the global food demand (due to population growth) in such a way that the resources may be reused
- We have more knowledge about nutrition (and therefore are more conscious of consequences) and throw away less food."

[PL] Vision 2. Vision of a Healthy Life "From Kindergarten to Seniors."
"Our vision of a healthy life in Europe is based on the usage of natural resources in the production of food, and their balanced and ecological management. Sales of unhealthy food are prohibited and junk food is replaced with a healthy alternative. Only natural ingredients are used in animal husbandry. Examples of how these ideas can be implemented include apiaries set up on the roofs of apartment blocks, aquariums in each city, and serving fish and sea food in every school canteen. Biology lessons would be connected with degustation of healthy food in accordance with the principle of - "I know what I eat"."

b. Good quality food for all

ASPIRATION
Equal access to food can be considered as a basic human right.
This provides both social and economic benefits. We contribute to bridging the gap between developed and underdeveloped regions and promote social and economic cohesion.

RESEARCH DIRECTIONS:

Unequal access to food has a strong local and global impact in both urban and rural areas. This is expected to become even worse in a changing climate. It is therefore important to take an interdisciplinary approach to understand and assess the processes generating food inequalities and examine how this affects social and economic cohesion locally and globally.

RESEARCH QUESTIONS:
- What are the mechanisms generating food access inequalities in a sociological, behavioural and economical perspective?
- What are the impacts of globalization on access quality food?
- How can access to quality food facilitate social and economic cohesion in a local and global perspective?
- What is the impact of climate change on the access to quality food?
- Is access to quality food a human right?

STATE OF PLAY - EXPERTS VIEW (Scientific research):
We know that pricing is not the only limiting criteria to good food access. Education and culture levels are also sources of limitations. There is limited research on the global consequences of unequal access to food. The export of EU overproduction to developing countries has perturbed local producers' businesses. There is policy research on the validity of using unsold products to give to the poor. There is too little research on good practices on dealing with food excess or availability of food.

STATE OF PLAY - CITIZENS VIEW (Everyday life):
- We know that there is a diversity of standards for quality among countries.
- We know about the socio-economic disparities in food choices.
- We know that there are discrepancies in food quality and quantity.
- We know we need more information to make sustainable + healthy choices.
- We know there are price differences between organic and non – organic.

IMPACTED CITIZENS VISIONS:

[CHE] Vision 4. Less is more.
" The number of children born in 2050 will not exceed the number of people dying. Less food will be produced and it will be handled more responsibly. There will be a decision-making system permitting to extract or use natural resources in a sustainable and economical manner and, at the same time, give a bigger share to the global south.
Schools will not only educate in view of the needs of the job market, but give more room to creativity. There will be less monoculture and more biodiversity. "

[EST] Vision 6: Life in your age

"healthy fast food and different snacks are easy to find and consume"

[IRE] Vision 3: Relationships with one another and the environment
"Food production done ethically. Work with nature."

[HRV] Vision 3: The preservation of human health and nature for the generation XYZ: *"People will grow healthy food for themselves, with minimal or no ecological footprint."*

[ITA] Vision 4: A school beyond times - a new education model
"Nutrition is governed by laws that make it organic, sustainable and accessible to all."

[PL] Vision 1: Healthy Family, Healthy Society (Flower of Life)
"We all eat healthy because we have easy access to organic food produced locally"

c.   Responsible use of land
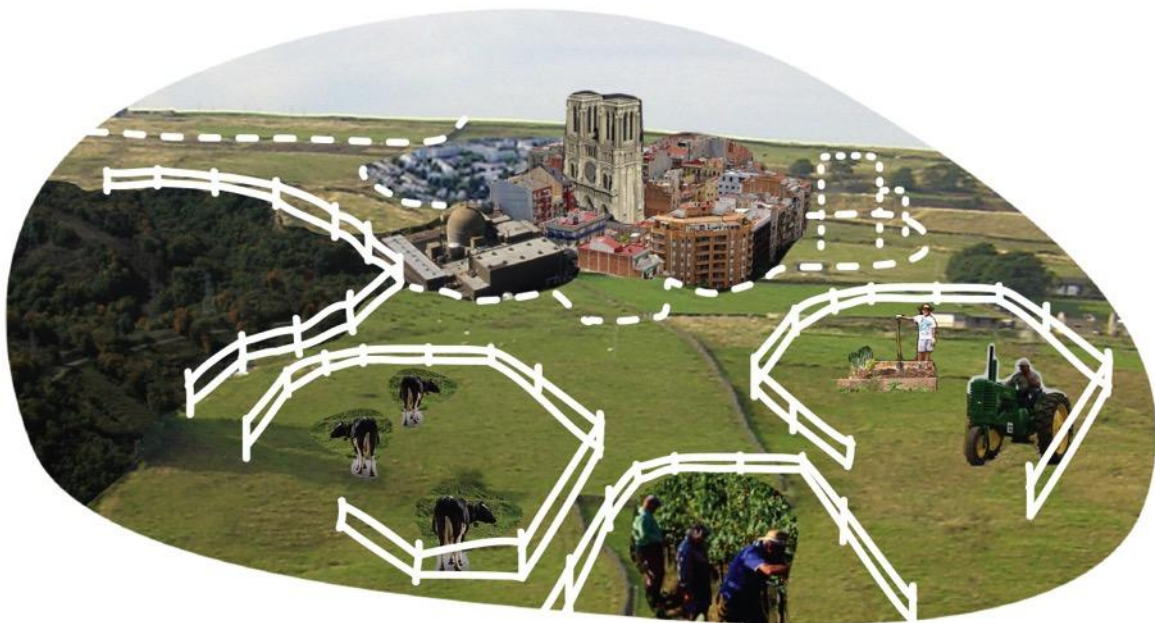
ASPIRATION

We need to develop efficient systems for governing and utilizing land, and for using resources responsibly for sustainable agricultural production. Multilevel governance is required to solve resource use conflicts and produce synergies.

RESEARCH DIRECTIONS:

We need to manage the confrontation between a growing demand for high quality food, and declining land space for agricultural production. Therefore we need to have an efficient system of territorial land use management, and an activity impact assessment. This will allow changing land use more flexibly and thus create a buffer. We need to develop methods and tools to improve the appreciation of costs and benefits of resources that are not economic goods such as ecosystems for more effective and responsible land use management through the conduct of qualitative and quantitative social, environmental and economic research.

Meanwhile climate change has a huge impact on land use patterns and production processes. Therefore it is important to adapt these processes in order to develop and maintain: sustainable and responsible production, fertility and quality of soils, as well as the quantity and quality of water. Understanding the climate change impact, and developing innovative sustainable production processes can be approached through soil-land-water research and through responsible research and innovation.

RESEARCH QUESTIONS:
-   How could land use and management embed a reversibility character of land use for various/evolving activities (food production)?
-   How can we adapt production processes in regard to climate change?
-   How we can sustain quality and fertility of soils?
-   What is the role of territorial governance for responsible use of land and resources?
-   How to improve evaluation of non- commodities benefits for more effective and responsible land use management?

STATE OF PLAY - EXPERTS VIEW (Scientific research):
We know the data / statistics of the loss of land for food production, but we know little on the consequences of this continuous loss. We have data on the food stock capacity and the lack of resilience of urban areas, but we do not know the consequences of an actual food shortage. We have socio-economic data of the interdependency of urban and rural areas.

We know the economic advantage of urban extension over lands but not the economic loss of fields being eaten (built on) by cities. We have few studies on the loss of biodiversity.

STATE OF PLAY - CITIZENS VIEW (Everyday life):
We know we are losing agricultural land for housing, transport, infrastructure and other primary sectors. We have problems with water quality and quantity. We know that eating less meat has a favourable impact on the environment. We see little efforts from the government to address and solve these problems.

IMPACTED CITIZENS VISIONS:

[BEL] Vision 5. Moving sustainably.
"Food is local (less transports, less costs, better quality, less CO2, less pesticides, ...). I share a plot with others. I'm a fair consumer: I know my coffee, tea, milk producer. I pay a fair price! They send me their products by train and/or boat. Farms are ecological, methane gas reduction, CO2, (ecological footprint), fertilizer reduction, H2O consumption.

[IRE] Vision 3: Relationships with one another and the environment
"Food production done ethically. Work with nature".

[FIN] Vision 4: The future of responsible consumption
"There is an increase in the consumption of protein from insects together with organic and locally produced food. An ecological way of life has become mainstream".

[EST] Vision 1: Human-friendly and safe environment
"Food safety (drinking water, control over the production process and raw material)."

[SWE] Vision 5: Environmentally and socially adapted living spaces
"We live in a multiple-family dwelling in a small town; everyone has their own apartment and a plot of land to cultivate. Much of what we own is common property, for example technical equipment such as vehicles, lawn mowers and tools. We have many common areas such as a greenhouse, a chicken coop, an orchard and areas for various purposes. We grow everything ecologically and we have retained older plant varieties and species of animals".

[LUX] Vision 1: On the way to a participatory community
"The biological garden would be an integrated part of that co-living and represents the food base for all of us."

[NOR] Vision 6: Ensuring sustainable use of natural resources
"Green and local food production"

[IRE] Vision 4: Decision-making for a Sustainable Future
"Food should be unpolluted, safe and nutritious. All food cultivation should be produced using green energy (100% renewable). All actions will have been given targets for compliance and will have been achieved by 2050. Farmers and citizens have the power to make decisions about agriculture and how we grow our food."

[SVN] Vision 3: Green Future

"Locally produced food, reduced import routes, access and care"

d.   Evolving food culture in growing cities

ASPIRATION

We want to ensure more sustainable food production and consumption by taking into account urbanization and the rapidly increasing mix of food cultures and habits.

RESEARCH DIRECTIONS:

Understanding the character of the mixture and evolution of food cultures in ever growing "cosmopolitan" cities as well as assessing the socio-economic impacts and challenges of this phenomenon is key to effectively provide more sustainable food options. Challenges may be arising eg if a city hosts Italian, Portuguese, Greek, African and Chinese food cultures which are not necessarily locally grow-able.

RESEARCH QUESTIONS:
- What are the socio-economic impacts and challenges of evolving and mixing food cultures when aiming at more sustainable food provision?
- What is the character of the mixture and evolution of food cultures?
- What are future scenarios on mixing food cultures?

CONCERNS:
It is important not to make value judgments on cultural diversity questions.

STATE OF PLAY - EXPERTS VIEW (Scientific research):
We know nothing but we think this is an urgent issue to investigate. Brussels' unique highly cosmopolitan situation could be a research pilot to see the impact of the cultural mix on food consumption.

STATE OF PLAY - CITIZENS VIEW (Everyday life):
- We know that there is an intimate relationship between food and culture.
- We know that sometimes new food cultures are accepted and sometimes are met with scepticism.
- We see urbanisation happening and that local production is difficult.
- We know that newcomers want access to their cultural food ingredients.

IMPACTED CITIZENS VISIONS:
[LUX] Vision 1. On the way to a participatory community.
"Economy has changed a lot, it has become participatory and is considered as a common good, part of which would be the unconditional basic income. Children are raised and integrated into the community and nobody is excluded from society. Thus the basic income allows each person to take chances based on their motivations, their competence and capacities. The biological garden would be an integrated part of that co-living and represents the food base for all of us."

[LUX] Vision 5. From Zombies to communities/ Coexisting in solidarity and working for the well-being of all citizens.
"Healthy food due to sustainable and social production."

[NOR] Vision 6. Ensuring sustainable use of natural resources.
*"- To contribute in covering the global food demand (due to population growth) in such a way that the resources may be reused
- We have more knowledge about nutrition (and therefore are more conscious of consequences) and throw away less food
- More knowledge on consumption and the consequences this will entail
- Green and local food production
Private and commercial food production."*

[ESP] Vision 5 Always young: It is within our reach
" We will eat healthy and sustainable food (products from organic farms, local cooperative and fair trade). This will enable us to know and supply ourselves with everything we have near. We will enjoy a better quality of life, also when we become old. We imagine a longer and active old age in a jointly responsible society in order to make life better and with dignity for all at any age."

CIMULACT

6 . Life-long processes

a. Health empowerment through « Everyone's science »
b. Deconstruction of age
c. Here, there and everywhere
d. I'm empowered to lead my changes

6_Life-Long Processes

In order to enable all citizens to unlock their full individual and societal potential we need concepts for healthy lifestyles and learning that evolve through all phases of life right into old age.

Based on

CIMULACT social needs

- Healthy Life from Childhood to Old Age [4]
- Life Long Learning [11]

CIMULACT Citizen Visions

UK5,6; LAT6; FR4; ROU4; MAL3; PL2,6; SWE5; CYP1; EST6; SVN6; ESP5; GR6; UK2; ITA6; IRE1; NOR1; HRV3; HUN5; NL5; DE5; NL6;

Related Challenges addressed by Horizon 2020
- Health, demographic change and well-being
- Europe in a changing world.

Research Programme Scenarios:

a. Health empowerment through "Everyone's science"

ASPIRATION

Empower citizens to look after their health and well-being themselves, through open and early dialogue between scientists and citizens on health-related research and innovation and its consequences for people's lives.

RESEARCH DIRECTIONS:

Research needs to explore options for setting up such science - society dialogues based on an in-depth investigation into the effects and dynamics of such processes and their effects on society as well as suitable formats and tools.

RESEARCH QUESTIONS:

How to communicate the results of validated scientific research to the general public?

- What kind of information should be communicated and how do we select sources?

- What methodologies, infrastructures and programs are needed to make an efficient communication?
- What is an easy to access platform, personal and virtual infrastructure, as also other, yet unknown media, which are secure and reliable to provide effective spreading and access of knowledge.
- How to guarantee usability for the community?
- How to create interpreted education processes able to bridge between the scientific/non scientific world?
- What quantitative index is needed to validate the liability of sources of information (in the dissemination to the public), as a disseminator are you measured?

What are the effects of active communication of health relevant topics for citizens and health care professionals? In particular effects on
- Health (nocebo/placebo...)?
- Structure of a communities
- Everyday healthy lifestyles/Individual and collective awareness (learning versus unlearning)
- happiness and capacity to act in the "right" way?

CONCERNS:
- Liability of the sources of information
- The health of people should be the priority (not economical, political interests first)

STATE OF PLAY - EXPERTS VIEW (Scientific research):
- Some positive examples of communication such as science cafe, science research night "you tube", TED talks, TV shows (real human), but little assessment of the effectiveness.
- Scientists are trained to produce scientific outcomes, not to talk and engage public.

STATE OF PLAY - CITIZENS VIEW (Everyday life):
- We experience a delay and lack of communication of publishing scientific acknowledgments and studies to the public and the experts. Data is not always referred to in a reliable empirical way.
- Scientist see themselves sometimes as the keepers of the truth.

IMPACTED CITIZENS VISIONS:

[UK] Vision 6: Citizen Empowerment
"People feel empowered to look after their health and well-being themselves. **[...]***The highest levels of available health/care/education/resources are available for all"*.

[MAL] Vision 3: Education leading to a new way of life
"With education come healthier lifestyles"

[ITA] Vision 6: Technology at the service of man

"An easier access to advanced technologies, with more intuitive and functional interfaces"

[IRE] Vision 1: Community Enrichment through Education
"More effective education leading to more engaged, active citizens. How to think?"

[ITA] Vision 4: A school beyond times - a new education model
"The social security system uses smartwatches both to monitor the health status and to help individuals to take care of themselves."

[EST] Vision 6: Life in your age
"People can live up to 100 years old without any problems because they are taught from childhood to make the right choices concerning their health."

b. Deconstruction of age

ASPIRATION

We envisage that in the future all ages are equally capable and appreciated. People have health, skills and capacities to perform different activities regardless of their age. The phases of work, education and retirement are fully blurred. Education programs are tailored according to talent and personal interests.

RESEARCH DIRECTIONS:

- Developing a more complete understanding of neurobiological underpinnings of learning throughout life-time, with the final goal of individuating the key life-style factors and tools with the higher probability to promote neuroplasticity and neurogenesis.
- Deepening our knowledge of the fundamental biological and psychological processes involved in the ageing process, both physically and cognitively. A more comprehensive understanding of these mechanisms will us to overcome the limitations induced by ageing process in learning and health, while keeping the advantages earned through experience.

- Advancing the understanding of the conditions promoting inter-generational relationships, and how educational programs can effectively impact integration between individuals of different ages.
- Analysing the societal and economical impact of the melting of socio-cultural borders between different ages
- Increase the understanding of how the valuable and effective adoption of healthy life-styles as well as lifelong learning, can impact employment, innovation, change and social asset.

RESEARCH QUESTIONS:
- How to promote neuroplasticity of all ages? What type of activities have a major impact on the brain flexibility?
- Which forms of ageing? Reverse ageing, no-ageing reverse ageing? Ageing as accumulation of cells and experiences?
- Which educational processes enable integration among generations?
- Does informal and experienced based education contribute to lower the barriers in educational programmes?
- Stereotypes of old age: which are the effects of collective and individual perception of ageing? Personal and collective identities.
- What scenarios/trajectories choices of development of societal value do we imagine? How will society produce social relations?
- Which cultural and generational conflicts may occur in a scenario in which people live and keep active for longer time? How does society deal with these conflicts?
- Unemployment/longer employment: Which are the effects of owning brain capacity for long time? Are we envisaging a jobless society or a super-work society? What are economic issues and models?
- Innovation and change: In a society of aging population how will innovation be produced? Who is the innovator? Young or old?

CONCERNS:
- Unpredictability of social construction of age.
- Unemployment/jobless society vs overload work day/career
- Balance of generational mix and conflicts "Quaenquado" (France) = old people behaving like adolescent.
- New perceptions of young people as innovators/old as burned out.

STATE OF PLAY - EXPERTS VIEW (Scientific research):
- Social science needs to take into account age in its studies
- Research on neuroplasticity has demonstrated that in older age new brain cells are generated if you act and learn as young people

STATE OF PLAY - CITIZENS VIEW (Everyday life):
- Life patterns are divided in their values. Active life is seen as meaningless. Free time is to achieve things and working time is a burden. Young are dynamic, old are slow and ineffective. We live one life waiting for "the other part". We are slow to get aware of the importance of living the present moment.

IMPACTED CITIZENS VISIONS:

[ROU] Vision 4: The Golden Age
"The life expectancy will have increased considerable by 2050, and the quality of life will have improved tremendously for senior citizens"

[UK] Vision 6: Citizen Empowerment
"The highest levels of available care/education/resource are available to all"

[CYP] Vision 1: Pension System
"Qualitative and dignified way of living… to be able to maintain comfortable lifestyle."

[DE] Vision 5: Dream school 2050
"Children work together with older people
We want change/improvement in education for all generations [...] we want the opportunity for lifelong learning at every age, tolerance, and general openness in society."

c. Here, there and everywhere
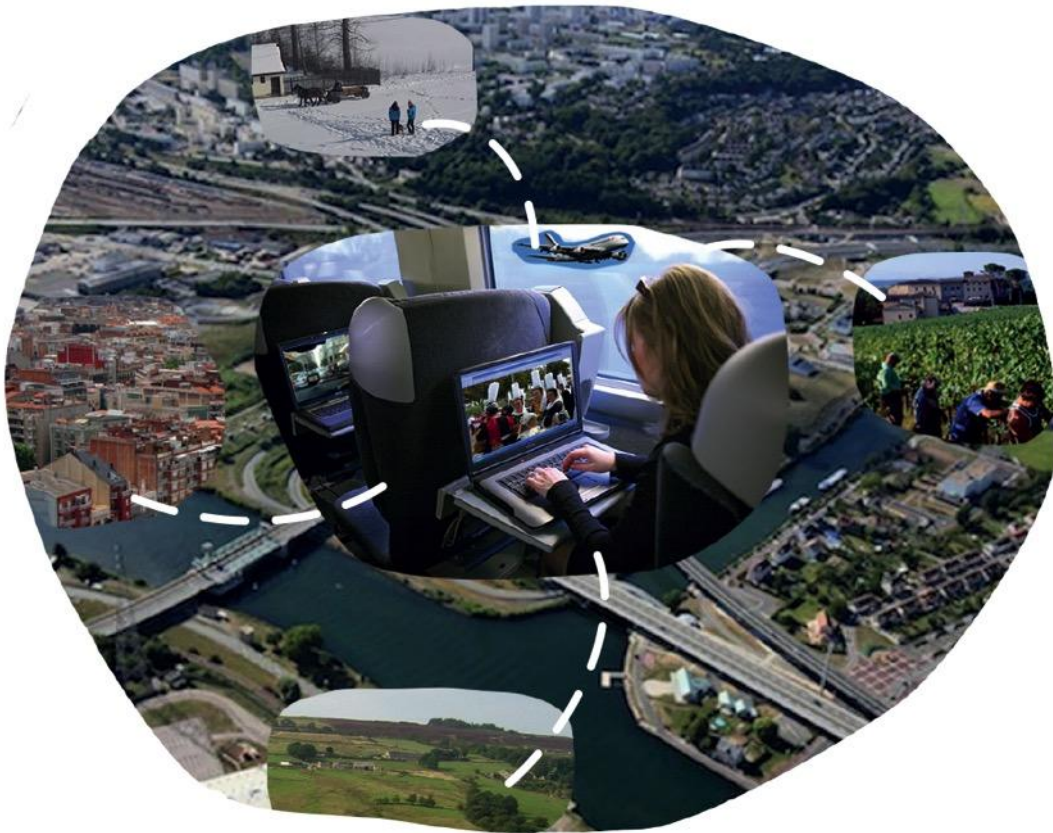
ASPIRATION

In the future individuals will be encouraged to move from their current context (here), to different contexts (there), and ultimately to acquire a global view (everywhere). This mobility will be driven by exchange programs, transcultural trips, visiting of places and connection with other individuals using physical and virtual reality tools. This experiential learning will promote information exchange and connectedness, ultimately smoothing the borders between nationalities, gender, cultures etc., giving more choices to the individual identity and raising the acceptance of diversity.

RESEARCH DIRECTIONS:

Research in this topic should study interactions between the virtual and the physical life along the whole life-continuum thereby addressing issues of lifestyle, quality of life, health, social interactions and identity. It will require a multidisciplinary approach combining experimental and longitudinal basic research with significant expertise from: neuro-cognitive science, psychology, neuromedicine, medicine, sociology, economy, environmental science.

RESEARCH QUESTIONS:

- What are the effects of virtual mobility on our individual and social identity, intimacy, etc.?

- What are the long-term effects of virtual mobility (the use of virtual reality) on brain and body?
- How will the physical and virtual mobility interact?
- What will be the sustainability (in all possible aspects) of virtual mobility?
- What are the limits of our capacity for virtual life? (addiction, emotional, affectional)

CONCERNS:
- Attention capacity
- Emotional capacity
- Addiction to virtual mobility
- Sustainability (environmental, social, economical) of physical mobility (and virtual)

STATE OF PLAY - EXPERTS VIEW (Scientific research):
- Most research is on physical mobility, but almost no research on the effects of virtual reality
- Identity itself is modified by using virtual reality. Virtual reality is freely accessible
- We are opening very powerful reality and we do not know how it will affect self-identity

STATE OF PLAY - CITIZENS VIEW (Everyday life):
Even when flights and travelling are getting affordable for money, they are still time and resources consuming. Real travel is not affordable for everyone. Although virtual connection is still limited; owning devices is expensive. We experience this progress but not in its full potential.

IMPACTED CITIZEN VISIONSON THE ORIGINAL CITIZENS VISIONS:

[ITA] Vision 6: Technology at the service of man
"Technologies at the disposal of education, in order to enable a learning process which is continuous and not limited to school classes."

As a challenge to the sentence:
"A technology that fosters face-to-face relationships instead of virtual ones, empowering actual sociality".

[DE] Vision 5: Dream school 2050
"National borders in our minds are abolished and friendships are made across different languages"
[ESP] Vision 2: Small changes are powerful
"More scholarships at all educational levels and promotion of the international student's mobility."

d. I'm empowered to lead my changes

ASPIRATION

At every state, moment and situation of my life, I have the possibility to change the direction of my personal and professional life. I live my full potential because I have at my disposal all the tools available to follow my passion of the moment. Age, gender and origin become unimportant, because society sees every person as someone who can add value to the community.

RESEARCH DIRECTIONS:

The topic will require a multi-disciplinary approach, combining: 1) Analysis of work requirements, as well as capacity of individuals to use/go alternative educational paths towards an effective work fulfilment (psychology, sociology, educational theory) 2) the changing structure of labour portfolios due to 3) accelerated scientific and technical innovations (science, engineering, forecasting). The topic will also require 4) an analysis of possible approaches to quality control of the alternative educational instruments (is an "institutionalised" quality control needed? If yes, in what form?) (system analysis) 5) assessment of effectiveness of the alternative educational paths (longitudinal empirical research). Finally, 6) Analysis of possible models for sharing responsibilities for introducing alternative pathways in education-role of state, private sector, civil society (governance analysis, political science).

RESEARCH QUESTIONS:

- How will the portfolio of human labour develop, mainly taking into account the acceleration of innovations and educational needs?

- If alternative paths to education/skills will be introduced, how will quality control work?
- If yes, why, how…
- How can the effectiveness of the alternative paths to education/skills be assessed?
- What are the possible models for sharing responsibilities for introducing alternative pathways in education?

CONCERNS:
- Quality control - "automatic" - will it work sufficiently?
- Change of paradigm from state authority to "crowd"

STATE OF PLAY - EXPERTS VIEW (Scientific research):
Research on unemployment is mostly from the point of view of economy: little of any psychology knowledge on barriers for changing life-job-education paths, flexibility...

STATE OF PLAY - CITIZENS VIEW (Everyday life):
The education system is still a system where de-valorisation creates limitation within children and people. Cultural and religious premises inhibit programs in this matter. We see opportunities emerging like online courses, e-learning, life-long learning programmes. Yet people express desire to learn or change their lives but lack the courage to do it.

IMPACTED CITIZEN VISIONSON THE ORIGINAL NEEDS QUOTING THE CITIZENS VISIONS:

[UK] Vision 2: Community Empowered Learning for the 21st Century
"There is freedom of choice about whether to use life-long learning [...] education is not age based on result dependant. Qualifications are elective. Access to these resources is unlimited throughout a person's life"

"Every person has the right to be educated in a way that allows them to reach a full potential"

[NOR] Vision 1: A work life for all
"Qualitative change in employment"

[HUN] Vision5: Education in the world of transforming work:
"lifelong learning has been accepted as an important value"

7_Strenghts-based education and experiential learning

Education needs to address a broader set of skills, adopt personalised approaches and new methods in order to empower people to add value to societal development in a meaningful and self directed manner.

Based on

CIMULACT Social Needs
- Enhance Quality of Education [5]
- Hands-On Applied Learning and Actionable Knowledge [10]

CIMULACT Citizen Visions

EST4 ; LUX6 ;AUT4 ;SWE6 ;ITA4 ;GR1 ;ESP2 ; HUN5; MAL6; SVK1; DE5; PL5; NL6; SVK6;

HUN3; IRE3; CYP3; ROU3; HUN2; LIT1; CYP6; HUN5; DE5

Related Challenges addressed by Horizon 2020
Europe in a changing world - inclusive, innovative and reflective societies

CIMULACT
CITIZEN AND MULTI-ACTOR CONSULTATION ON HORIZON 2020

Research Programme Scenarios:

a. Educational ecosystem as a driver of social innovation and local development

ASPIRATION

Educational systems are one of the most capillary diffused networks on the territory and this is why they should assume the role of "hubs" to reconnect educational agencies: learning institutions, families and territorial stakeholders that. Greater focus on local communities and their needs can bring about continuous social innovation, strengthen regional social capital and foster local development (economy and business). This is will improve the attractiveness of small and disappearing communities and help their survival.

RESEARCH DIRECTIONS:

- Developing models for improved learning initiatives, ecosystems and processes designed to recover the centrality of the schools and capitalize on their capillary diffusion on the territory.
- Foster cooperation among educational agencies (schools, families, territorial stakeholders), to satisfy individual and community needs and expectations (including personalized and practical education), promote cohesion and inclusion, and support capacity building and the increase of social capital.
- Finding ways to connect the hubs into an integrated network in order to equalize education throughout Europe and to favour a harmonious and equal growth all over Europe.

RESEARCH QUESTIONS:
- How could local hubs foster a stronger cooperation among the educational agencies (schools families, territorial stakeholders), and satisfy individual and community needs and expectations (including personalized and active practical education), foster cohesion and inclusion, support capacity building and the increase of social capital?
- How could cooperation boost collective intelligence, counteract the deterioration of the social value of learning and foster critical thinking?
- How could hubs be integrated into a network to develop a superior level of cooperating collective intelligences to favour a harmonious and equal growth all over Europe, where access to resources like data, physical places, competences etc. is open to everyone? And how to provide awareness on a critical and optimized use of resources across the network?

CONCERNS:
- Pay attention to avoid bureaucracy and excessive centralized power
- Need good schools to train planners, managers, and teachers
- Integration rather than competition between virtual communities

STATE OF PLAY - EXPERTS VIEW (Scientific research):
- Fragmented networking at local level with other institutions (distributed and connected intelligence)
- Lack of leadership and development models
- Critical views on new social models of education
- Weak tech support and awareness
- Lack of collaborative and cooperative attitude (sharing, mediation)
- Critical views on access and use of OER[9] and MOOCs[10] and other resources

Case studies:
- EDUTOPIA (www.edutopia.org)
- Regional development in Sacramento – USA

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[9] Open education resources

[10] Massive Open Online Courses (free online courses)

STATE OF PLAY - CITIZENS VIEW (Everyday life):

- No interconnection between local realities. Best practices are not shared
- There are geographical barriers/difficulties to reach different regions/localities where there are relevant institutions
- Many students go abroad to study and they just establish there without feeding the local development
- At the beginning of their careers people are sometimes asked to start their jobs somewhere else than their original place

EXPECTD IMPACT ON CITIZENS VISIONS:

Schools as experiential settings and multi thematic hubs embedded in a wider network of connected and cooperative intelligence, both at a local and larger scale to promote a holistic education (whole person development), as well as professional skills. Additional benefits include: developing awareness about social, individual and everyday needs, motivating actors of the educational processes (putting an end to what has become known as "teacher bashing"), reducing quick professional turn over and student drop out, including NEETs and enhancing hob placements.

In particular the following visions will thereby be addressed:

[ITA] Vision 4: A school beyond times - a new education model
"In 2050 the traditional school will be replaced by multi-thematic hubs dedicated to education and collaboration among citizens of all ages. Every hub is as integrated as possible with the human context (…) Every hub consists of pavilions for specific subjects (…)"

[HUN] Vision 5: Education in the world of transforming work
"Education today does not only happen within the confine of school rooms, but also at external venues such as, for example, demonstration sites, visitor centres, organic farms, waste management plants etc. "

[IRE] Vision 3: Relationships with one another and the environment
"Children will be educated in a well-rounded manner i.e. educated in trades/environment/etc. a holistic approach."

[SVK] Vision 1: Popularization of Science and Technology
"There are many centers of scientific information around the country. The general public is regularly involved in scientific activities and research. The quality of science education at kindergartens, primary and secondary schools improved considerably."

b. Rethinking (the new) "job market needs"
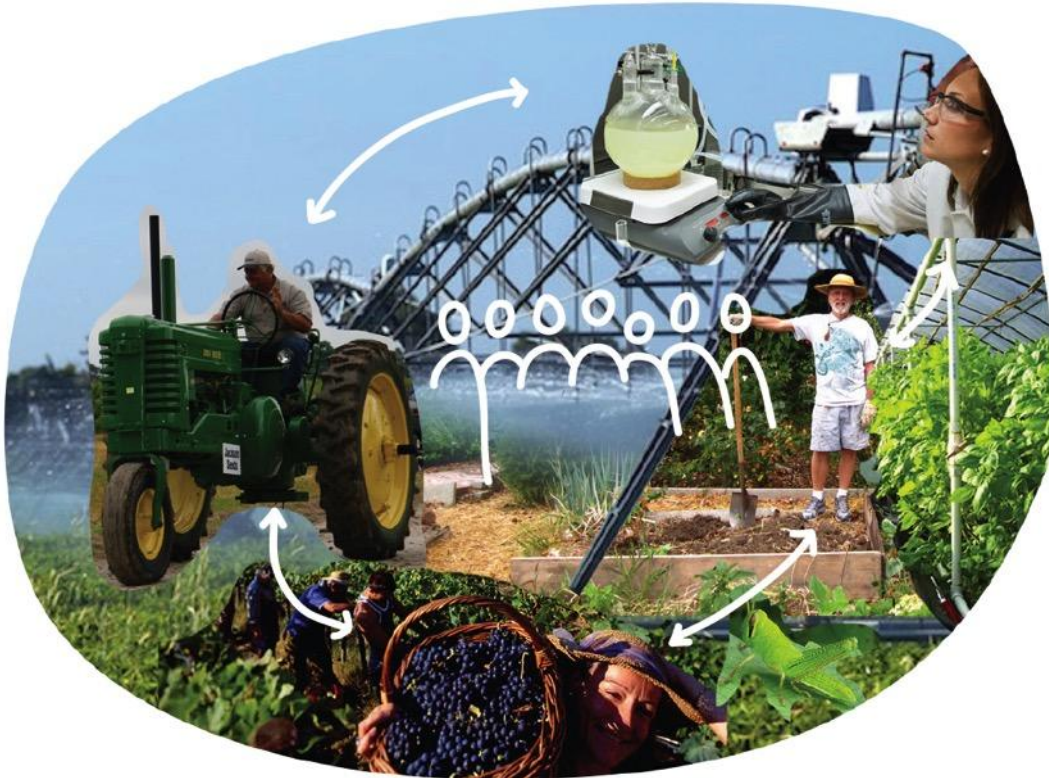
ASPIRATION

A society where theoretical and applied knowledge are not separated, and where reflective practitioners and mindful entrepreneurs work together to add value to the collective good and well-being for the benefit of all.

RESEARCH DIRECTIONS:
- Investigate models of resilient educational ecosystems capable of responding in a reasonable time to the ever-changing demands of the job market and foster the acquisition of an up-to-date knowledge, ethical skills/competences and social accountability.
- Develop models of sustainable growth that allow for upward social mobility (status, remuneration), inclusiveness, personal fulfilment and societal well-being.

RESEARCH QUESTIONS:
- How can the educational ecosystem be reconciled with the ever-changing demands of the job market to produce up-to-date knowledge, ethical skills/competences and social accountability?

CONCERNS:
- Who benefits from partnerships between academia and industry? And between educational institutions and professional organizations? Is it the student, the corporation? How to enable win-win situations?
- Lack of professionalism on both parts of the spectrum. The educators and the learners lose personal contribution (because of the rapid changes of the market).

STATE OF PLAY - EXPERTS VIEW (Scientific research):
- Lack of multi-disciplinary and trans-disciplinary approaches
- Lack of integration of local initiatives
- Lack of team work and open-minded attitude for networking
- Lack of vision in promoting the need for a new breed of reflective practitioners and socially-responsible entrepreneurs
- Lack of ethical and social accountability in business (new relation between businesses and agencies)
- Need to reflect on who is sponsoring what for the benefit of whom

STATE OF PLAY - CITIZENS VIEW (Everyday life):
- What people are learning in Universities doesn't match with the competences and skills needed for the job market
- There is no qualification framework [no recognized criteria of excellence, measures of success, trophies or prizes, or "academic" rewards] for practical knowledge, and informal education.
- There are some dedicated periods to gain practical experiences (for example a week a month going to work in a company)
- Practical jobs are disappearing while ever more jobs will require technical skills as well as new forms of "STREET SMARTS" (also referred to as soft skills)

IMPACTED CITIZEN VISIONS:
Research in this domain will:
- favour the acquisition of practical updated knowledge through custom-made educational training thus complementing theoretical knowledge, with the aim of responding to a continuously evolving job market.
- Raise awareness of the SWOT of technology in supporting job placement.

Accordingly it will contribute to the following needs expressed in the citizens visions:

[PL] Vision 5: I've Got Talent
"Creating and promoting skills and talents will be correlated with the needs of the economy."

[HUN] Vision 2: The rise of a backward region

"They have jobs that are appropriate for their skills and interests. This has been made possible by tailor-made vocational training."

[HUN] Vision 5: Education in the world of transforming work
"Lifelong learning and the development of skills and creativity are guaranteed for economic recovery and unfolding of a happier society."

[SVK] Vision 6: School of the Future
"Change of the form, content and processes of education, usage of the latest technology in education, more creativity and out-of-the-box thinking, possibility of virtual education. Greater attention to cognitive processes of students."

[NL] Vision 6 Education is the foundation of civilisation
"The training college for teachers has become must and is better equipped to the new developments in the future.
Education is not only focused on knowledge and on economic thinking but also on art, culture, science of nutrition, appropriate social behaviour (good manners), ethics, sport, values and norms, environment and multiculturalism."

[DE] Vision 5: Dream school 2050
"For the future in 2050, we want to change and improve the educational concept for our children and our children's children. In 35 years' time, even more cultures will interact in Germany than is the case today and we hope that our children are taught to be tolerant and open to others and can experience this firsthand every day in the community. Ways to solve conflicts are revealed, "national borders in our minds" are abolished and friendships are made across different languages. School is a place where being together in a small space is possible in a sheltered, protected way. Learning happens as a group and can be subjectively shaped."

[CYP] Vision 3: Human Rights
"Development of a career guidance system and creation of an environment which allows practical profession application. Society should make available practical training even from school age."

[HUN] Vision 3: Snapshots - Fragments of conversation in a community house
"useable knowledge; security; supporting one another; satisfaction; tranquillity; peace; neighbourhood communities; security of social care; epidemic prevention: hygiene, lifestyle, awareness-raising, not just through vaccination; charity; volunteering: more engagement from people; more equal distribution. [...] Today we provide lexical knowledge to the young generation, in the future they will receive practical knowledge. Life expectancy just as well as the quality of life today are lower. Today fossil fuels predominate [energy] use."

c. Design literacy and life skills for all
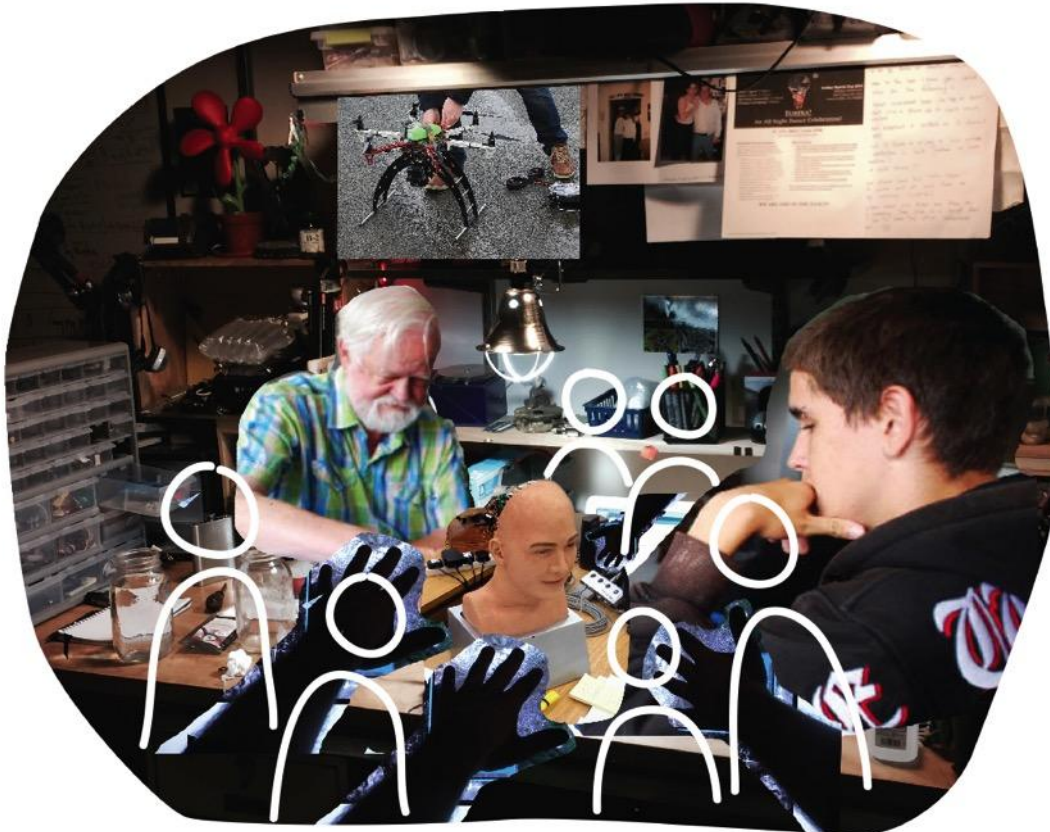
ASPIRATION

We want to foster design literacy in people and organisations based on the following considerations. Design thinking and inquiry are increasingly valued— and practiced— among visionaries, and enlightened practitioners, across sectors who seek to innovate. Focus on design education helps achieve a set of life skills needed to come up with practical and creative solutions to so-called wicked problems a whole lifetime.

A solid design literacy education is useful:
- At individual level: to develop the practical, creative, and soft skills required to compete in the 21st century workplace;
- At organizational level: to set up a virtuous cycle of continuous and creative innovation, and build the expertise need to ensure a more human-centred / sustainable technology-enabled future

Meta-design skills enable people to re-define processes on the fly in response to changing framework conditions and foster self-development to get ready for the life.

RESEARCH DIRECTIONS:

- Investigating the power of design thinking / design inquiry as a mean to foster creativity and innovation and boost learners' abilities to think "out of the box" (set and solve the so called wicked or "ill-defined" problems).
- Adopting a system's approach (systemic) in studying the scaling up and potentialities of design thinking from individual to communities' organizations (learning ecosystem).

RESEARCH QUESTIONS:

- How to design learning activities, settings and processes to foster the acquisition of design literacy and life skills.
- How to integrate them in the curricula and, simultaneously, rethink limitations of existing curricula? Design thinking is more than STE(A)M![11]
- How to integrate evaluation and co-design to manage and improve the learning ecosystem and learning processes with a special focus on individual interests, abilities, and preferences?

CONCERNS:

- It is important to pay attention not to develop a fragmented education (and missing basic knowledge)
- There could be sustainability problems related to this business model
- Teacher motivation

STATE OF PLAY - EXPERTS VIEW (Scientific research):

- Too much "teacher bashing": can't improve education by holding teachers responsible for societal ailments they can't fix
- No design literacy in schools (design thinking and inquiry)
- No knowledge of competence framework
- No transformation of knowledge to competences
- Lack of focus on how to support self-directed learning
- Confusion between purpose and process of design versus artistic creations.

STATE OF PLAY - CITIZENS VIEW (Everyday life):

- Differentiated teaching is not achieved because one teacher cannot cater for the needs of all children in class
- No common standard among different realities/territories. No equal educational conditions for all
- Very little continuous professional development for teachers
- Rigid silos of academic fields and funnelled [non-bridgeable] educational tracks, leaving no room for flexibility
- Current curricula are conservative and linear: not "à la carte".

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[11] *Note:* STE(A)M stands for Science/ Technology/ Engineering/ (Arts)/ Mathematics. A better model for teaching design is the "atelier" or studio, with its tradition of desk-crits, reviews, pin-ups

- No practical activities to ground theoretical knowledge, not enough job shadowing. Mistaking success for understanding,
- Not enough exposure to different experiences which broaden students' horizons. Less and less time to think, dwell, explore
- Tension between historically fundamental subjects and an updated common curricular core which reflects societal needs

EXPECTED IMPACT ON CITIZENS VISIONS:

Research in this field will:
- foster "out of the box" yet concrete thinking, creative innovation and attitude i.e. design thinking and acting, based on experiential learning process and encouragement to diverge and experiment
- develop individual "talents", attitudes and life skills to increase job placement rates, career development and self regulation
- enable professional development of educators, planners and school managers.

Thereby it will contribute specifically to addressing the following needs expressed in the citizens' visions:

[LIT] Vision 1: Freedom to Create – Responsibility. Sustainable Future
"- Education (practical, unlimited, experiential)"

[CYP] Vision 6: Future Experiential School
"Development of an experiential school without closed structures."

[LUX] Vision 6: I am satisfied with what I am doing! (Do what you love, love what you do!)
"Skills evaluation: as a student, I study at my own pace; I am being encouraged to try / to experiment."

[ITA] Vision 4: A school beyond times - a new education model
"The education of the child is continued and structured in order to strengthen his real aptitudes."

[ESP] Vision 2: Small changes are powerful
"There will be more teachers training and restructuring of the educational content."

[EST] Vision 4: A united world
"Work and school: personal satisfaction. Learn to do what you love and you shall be rewarded for the created value"

[AUT] Vision 4: Education means freedom
"Citizen X finalises his/her studies in Austria and goes on studying in France, Italy, ... it will be approved throughout Europe!!
In addition to the standardized basic knowledge the individual talents are

promoted in special facilities → musically, artistically, socially, technically, craftsmanship, ...”

[SWE] Vision 6: An expanded view of human competencies
“In our vision people are assessed on the basis of their talents and abilities, rather than just their documented knowledge (for example school grades). The school system is adapted to the individual; for instance it is possible that each person learns at their own pace and that studies can be done from home, through e-training , etc.”

[PL] Vision 5: I've Got Talent
“The premise of our vision of the future is the conviction that everyone has talents/aptitude worth discovering, appreciating and developing. On this, an education system of the future should be based. Training programs will be personalized in accordance with the results of the analysis of pupils' aptitudes and interests. Creating and promoting skills and talents will be correlated with the needs of the economy.”

[NL] Vision 6: Education is the foundation of civilisation
“The training college for teachers has become a must and is better equipped to the new developments in the future. Education is not only focussed on knowledge and on economic thinking but also on art, culture, science of nutrition, appropriate social behaviour (good manners), ethics, sport, values and norms, environment and multiculturalism.”

[MAL] Vision 6: Education and Society (community)
“Holistic education is not a reality today (just technical today)”

[DE] Vision 5: Dream school 2050
“For the future in 2050, we want to change and improve the educational concept for our children and our children’s children. In 35 years’ time, even more cultures will interact in Germany than is the case today and we hope that our children are taught to be tolerant and open to others and can experience this firsthand every day in the community. Ways to solve conflicts are revealed, “national borders in our minds” are abolished and friendships are made across different languages. School is a place where being together in a small space is possible in a sheltered, protected way. Learning happens as a group and can be subjectively shaped.”

d. SWOT (Strengths, Weaknesses, Opportunities, Threats) Technological empowerment

ASPIRATION

We envisage a society where Strengths, Weaknesses, Opportunities and Threats of technology are identified and taught. Instead of "smart technologies" we need technologies designed to make us "smarter". Instead of "smart cities", we need liveable cities! In our desired future the term "smart" has been redefined and includes concepts like wisdom, young children's urge to socialise and abilities as self-directed learner, and the psycho-biological-social-motivational "needs" (Maslow pyramid) without which no one can grow or thrive!

RESEARCH DIRECTIONS:
- Investigating the role of technologies to support students' self-directed learning and develop critical thinking and creative adoption of effective technologies for learners' benefit.
- Investigating the dimensions of human "smartness" and put them in relation with "smartness" or lack of thereof of technologies and infrastructures in order to improve the educational ecosystem as viable, attractive, sustainable, human-centred settings for enabling individual and collective well-being and development.

RESEARCH QUESTIONS:
- What if technologies will be used to support students' self directed learning?
- How to foster understanding of differences between tech and human "smartness" (intelligences) and use the latter to boost student development and school improvement?
- How to develop critical thinking and foster penetration [adoption] of effective technologies for learners' benefits?

CONCERNS:
- Access to technology is not enough to develop technological literacy
- How is technology affecting social interaction and participation?
- Is technology been used to replace experts and education?

STATE OF PLAY - EXPERTS VIEW (Scientific research):
- Lack of awareness of the WOW effect: the relevance of a tool should be measured as a factor of its "holding power" (Papert) or ability to elicit interest over time, beyond the novelty factor.
- Lack of a critical adoption of tech models and tech-based methodology
- Insufficient understanding of the relation between "smart" tech and human intelligence.
- Lack of nuance in the generally polarized debates between technophobes and techno-fetishist. Technologies are tools! It is what we make of them that matters
- Lack of awareness of the potential of tech for didactics and learning. Digital technologies can be stifling or empowering depending on "who uses them to control what". In other words, it is not the same to use computers to track and control student outcomes, to use a word-processor, Photoshop (or other authoring tools) to write a report, or to search for resources online

STATE OF PLAY - CITIZENS VIEW (Everyday life):
- Parental control systems allow parents to control and supervise technological/digital accessibility
- Schools have varying amounts of technologies but in cases teachers are not sufficiently "trained" on how to use them
- There are free classes that teach digital literacy to seniors
- Not everyone has access to tech devices for education
- Maslow's theory of needs is being addressed in some cases; in Malta breakfast clubs ensures some physiological needs of students are satisfied so they can move on to satisfying their educational needs

IMPACTED CITIZENS VISIONS:
Research in this domain will:
- Raise awareness about SWOT of technology in supporting job placement and individual self and life-long learning.
- Enhance quality and smartness of the educational ecosystem.

Accordingly it will contribute to the following needs expressed in the citizens visions:

[GR] Vision 1: Humanity - Environment – Justice
"Schools fully equipped with the latest technology."

[SVK] Vision 6: School of the Future
"Change of the form, content and processes of education, usage of the latest technology in education, more creativity and "out of the box" thinking, possibility of virtual education. Greater attention to cognitive processes of students."

[ROU] Vision 3: Back to (our) roots
"Technology will develop in harmony with the environment and individuals' needs."

8_Harmony with nature

We need to co-exist with nature in a smart and integrative way and

systematically consider the environment through policy regulations and

sustainable, responsible technologies.

Based on

CIMULACT social needs
- Education for green living [7]
- For a livable planet, nature is respected, preserved and restored [24]
- Ensure more balance with nature [20]

CIMULACT Citizen Visions

LIT3; SVN2,3; BEL6; MAL1; DE1; SWE2,3; CZE1: CHE2; FIN4; HRV6; CYP6; HUN5; NL5; CYP5; DE5; SVN5

CIMULACT
CITIZEN AND MULTI-ACTOR CONSULTATION ON HORIZON 2020

FIN1; EST5; LIT1,3; DE1; PORT3; CYP5; SVN1; PORT1; LIT2; DK1,3,4,6; IRE5; AUT5; SVN2,3,4; GR4; EST2; HUN4; SWE3,4; ESP1,3; AUT5; DE5 ; IRE4 ; CHE6,4 ; LAT1,3; SVK4; BEL6; BGR2;

Related Challenges addressed by Horizon 2020

- Health, demographic change and well-being;
- Food security, sustainable agriculture and forestry, marine and maritime and inland water research, and the bioeconomy;
- Climate action, environment, resource efficiency and raw materials
- Secure, clean and efficient energy
- Europe in a changing world - inclusive, innovative and reflective societies.

a.   Top trending: at one with nature

ASPIRATION

In Europe consumerism exploded post World War II, and it is now part of culture, identity, values, and considered part of economic and national progress. In order to change perspectives towards ecological futures, sustainability must become trendy and desirable.

Examples for such measures could be:

- Everybody fosters a tree
- Everybody grows fruits and vegetables (food)
- Award for most ecological living ("Harmony with nature award"), Nobel Prize, e.g. for small-footprint living (i.e. for those who have a small ecological footprint/low environmental impact)
- Swapping activities at festivals and culture activities
- More support to the arts that promote sustainability
- Develop media campaign to showcase examples of excellence

- Ecological civilization included in constitutions

RESEARCH DIRECTIONS:
- The social, psychological, cultural and environmental impacts of so-called "green" initiatives and social innovation require serious and fundamental research to establish an evidence base for transitioning towards more sustainable futures.
- Research should also be an agent for legislation that reflects changing social norms; Research on the social and environmental effects of environmental legislation should be conducted to inform future development, looking to examples of excellence etc. In this the increasing concern about the prospect for future generations should be taken into account.

RESEARCH QUESTIONS:
- How to switch perception from consumption being trendy to ecological living being trendy? How are social media being used to make sustainability trendy?
- What are the social, cultural and environmental impacts of the "so-called" green initiatives and social innovation? E.g. clothes swapping, car sharing, urban community gardening, local exchange systems, etc.
- Which countries included nature rights to the constitution? What are the effects on nature and society of these clauses? Can examples of excellence be identified to be transferred to European states? What might be the relationship with developing global initiatives such as the proposed law of "ecocide"?
- What might be the limits for the rights of future generations in different countries?
- How to reward low-impact lifestyles? What kind of examples already exists and what was their impact on behavioural change?

CONCERNS:
- Unemployment: where will the new jobs come from?
- Lack of involvement fostering nature and growing trees and food.
- Lack of space for people to grow their own food and trees
- Safety concerns of contaminated soil and water if people grow their own food.

STATE OF PLAY - EXPERTS VIEW (Scientific research):
Research exists on sustainable consumption, low-carbon lifestyles and behaviour change, on social marketing of sustainability and lifestyle changes, and also on social innovation for sustainability (e.g. TRANSIT project)[12].
But lack of knowledge about:
- media showing positive examples (i.e. of low-carbon living, sustainable consumption, environmentally-friendly living, etc.)

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[12] Transformative Social Innovation Theory: http://www.transitsocialinnovation.eu/

- grassroots activities (e.g. clothes swapping parties, rise of small social business)
- Need for more engagement with artists (drawing, novels and poetry) in research projects and related dissemination and communication activities.
- comparative studies of giving nature rights in constitution and the impact of this?
- How does social media help to make the ecology trendy?

STATE OF PLAY - CITIZENS VIEW (Everyday life):

Only 10% (or less) of population is planting food: to be green is not trendy. The awards for ecological programs are not sufficient, art projects for ecological thinking and political protests are not regular and get no money. Very little media coverage of "sustainable art project" they lack funding and are not trendy. Charity shops and some swapping exist but too little. Not enough swapping of goods in schools. In Bulgaria there are eco-farms, but small production.

IMPACTED CITIZENS VISIONS:

[CYP] Vision 5: Environmental Conscience
"Environmental conscience shall be introduced"

[LIT] Vision 3: Harmony between Human and Nature
"Restored forest, fresh water available for everyone, stabilized climate change problem, suspended biological extinction; green energy (renewable sources). Nature friendly technology."

[IRE] Vision 4: Decision-making for a Sustainable Future
"We live in a world where cultivation is 100% sustainable. Our laws ensure that we reserve and protect our environment."

[CHE] Vision 6: Social living space: *"…a new form of equitable coexistence of people between age 0-100, animals and plants."*

[SWE] Vision 4: A healthier Europe
"We have fewer dioxins and less pollution. For instance there are alternatives to plastics and new substances and products are launched only after they are made safe for the environment and health."

[LIT] Vision 2: Human and Environment
"Pure barter; generation of non-consumerism…"

[HRV] Vision 3: The preservation of human health and nature for the generation XYZ
"we imagine year 2050 as a year in which people live happily in pleasant communities, as a part of nature. These communities will be examples of sustainable oasis based on truth and acceptance of the people's diversity. The development of new technologies, in accordance with the laws of

nature, will lead to the improved quality of life. People will grow healthy food for themselves, with minimal or no ecological footprint."

b.　Urban-rural symbiosis

ASPIRATION

We want to develop and support cooperation between cities and countryside, linking rural and urban culture and land-use planning to improve living environments.

RESEARCH DIRECTIONS:

- Linking human use of the space of the city and the countryside: right of access to culture for rural dwellers; right of access to countryside for city dwellers
- Encouraging cultural exchange and mutual respect and appropriation of these spaces, to explore in your own way, reviving local studies.
- Bring growing and agri-leisure tourism into the city, with planning for urban wildlife, spaces/niches (e.g. housing and design)
- Supporting cultural activities in the rural area, making niches.
- Exploration of cities and countryside for study, pleasure and innovation.

RESEARCH QUESTIONS:

- How do we integrate urban and rural planning at different levels? How do we update the smart city concept? To link the urban and the rural?
- How do urban and rural links of citizens in different European countries compare with each other?

- What are the material and energy flows of past, present and future cities – and how do they feed from and impact the rural hinterland?
- Does urban gardening foster social cohesion? What are the benefits? Which unused urban spaces can be used to encourage and foster urban gardening? How and why?
- Does agri-tourism have any beneficial effects on the behaviour of urban dwellers?

CONCERNS:
- Does urban gardening foster social cohesion?
- Concern of the growth: if everybody in the city has a garden, is there enough "natural" space left (or the cities become too big, spread too much)? Or do we have to think to other different form of gardening, e.g. vertical gardening?
- Separation of decision taking between urban planning and rural planning
- Need for interdisciplinary planning.

STATE OF PLAY - EXPERTS VIEW (Scientific research):
- Urban studies (Habitat UN) separate from UNEP and UN Sustainable Development work.
- In academia rural studies separate from urban studies.
- Studies of agri-tourism?
- We suspect that the contribution of smaller rural producers is under-researched compared with corporate funding for agri-business survival in the country. Lack of research that crosses one city and country, and bio-regional themes. Gap between NGO- sponsored research in e.g. urban wildlife.
- Unsure about (linked to advocacy) existence of comparative studies about the links of city dwellers to the countryside (e.g. small holdings)

STATE OF PLAY - CITIZENS VIEW (Everyday life):
- More public space and green spaces needed to explore in the city.
- New planning does not ensure balconies and yards for every resident. This would allow people to grow more food.
- Some exchanges: Austria – some urban gardening and green spaces. Should plant more food in these spaces rather than ornamental plants?
- Bulgaria – some people grow their own food in their yards in cities, but there is need for more.
- Ireland – some green spaces, not much community gardening in cities

IMPACTED CITIZENS VISIONS:

[DK] Vision 4: The nature city of the future
"The composition of the apartments allow spaces and terraces for common activities, city is car-free."

[AUT] Vision 5: Smart living with nature

"Intelligent living with nature…"

[SVN] Vision 3: Green Future
"Green oasis in the urban areas, in cities garden."

[HRV] Vision 4: Erasing the borders
"• A balanced urban and rural development
• EU Member states are self-sustaining in terms of food production
and utilization of renewable energy sources, demographic representation will
be equal in the city and in the countryside. The racial, economic, ethnic,
gender and politi-cal equality is present in the societies
• Planet Earth is a desirable place to live. By taking care of the Earth - we take
care of ourselves"

[SVN] Vision 4: Clean Environment – Common Sense
"Europe 2050 will be a society of balanced citizens taking care of their
environment."

[DE] Vision 1: Sustainability implemented
"Smart nature" creating ecological cycles (fish: excrement leads to plant
growth in water), cradle to cradle (complete material cycle without residual
products/waste)."

c.   Ecological future education

ASPIRATION

Current education focuses too much on the past and the present, with insufficient attention to ecological futures thinking. Current patterns of learning are not capturing the imagination of people whose consciousness is formed in the digital age. At the same time policy systems tend to reflect disciplinary silos. There is a gulf between academic knowledge relevant to ecological futures and citizens' knowledge. There is a lack of robust evidence and longitudinal research on the long term effects of current provision and practices in learning for ecological futures. Effective training and knowledge transfer systems need to be designed, piloted, implemented, and evaluated together with stakeholders. More emphasis on futures education and the impact of future generations is imperative for a healthy planet and healthy people.

RESEARCH DIRECTIONS:

Research should focus on developing efficient eco-learning concepts such as teaching the value of ecosystem services. A special emphasis could be on fostering a foresight attitude and providing spaces for futures thinking that considers the rights of future generations. The use of innovative learning methods such as serious gaming should be investigated. Training material for all civil servants + policy-makers should be developed and translated into all

European languages. Mentoring + support e.g. through trained facilitators should be provided.

RESEARCH QUESTIONS:
- What is the best way / best method to reach and teach the technology infused generation?
- What is the best way to translate and transfer academic knowledge (e.g. about future thinking) to citizens and policy makers? How do we do this fast?
- How do we ensure that sustainability and future thinking education has a long-term and lasting impact on key stakeholders?

STATE OF PLAY - EXPERTS VIEW (Scientific research):
There is a body of research on education for sustainability – but not much focus on policy makers, e.g. where such studies and programmes exist and are they effective? There is very little funding for evaluation and impact studies of programmes. Studies of computer gaming exist but they are limited for sustainability.

Do we have research on the effects of green advertisements? What research on comparing approaches to responsibility for future generations and the use of legal frameworks to effect changes exist? Ethical arguments exist, they are developing and much debated - what are the effects of this work? What research is there to test claims of PR? Is there comparative research of different approaches to future education?

CONCERNS:
- Politicians might not support this as it threatens their power
- Need for research on how education on climate change results in depression among children
- We are under pressure to translate and implement knowledge quickly

STATE OF PLAY - CITIZENS VIEW (Everyday life):
We are unsure about availability of education for sustainability for policy makers and civil servants. In Austria and Ireland there are only advertisements for consuming but in Bulgaria and Hungary there are "green" adverts ("clean Bulgaria/Hungary for one day"). Not much thinking ahead by governments and consumers about sustainability, just reacting to wider legislation. At the moment, games are not focused on outdoors, only indoors.

Teaching about ecosystem is inadequate. In Ireland, there are some short courses in sustainable living for adults. There is some teaching of ecology (in biology) and waste management (in geography).

IMPACTED CITIZENS VISIONS:

[LIT] Vision 3: Harmony between Human and Nature
"Our children teach us to plant forests and conserve vital, fresh water, which reserves after many years at last began to increase"

[SVN] Vision 5: Prosperity and Work Activity of Citizens
"Education based on emphasizing community life and the importance of protecting the environment and the common good"

[DE] Vision 1: Sustainability implemented
"Training and education: teach the greatest possible respect and understanding for people and the environment…"

[SVN] Vision 3: Green Future
"Raising awareness and concern for the management of the environment [and] adoption of eco-laws…"

[CHE] Vision 4: Less is more
"Schools will not only educate in view of the needs of the job market. But give more room to creativity. There will be less monoculture and more biodiversity"

[SWE] Vision 2: Education - A Standardised education system in the EU
"the education system naturally highlights ecological issues in all subjects where it is possible to drive environmental thinking into the future."

d. Transforming technologies for planet and people

ASPIRATION

The challenge is:

We have many current technologies that are embedded in the system. How do we re-assess them in the light of our new knowledge about our interconnected Earth system and global societies?

How do we ensure that new technological development helps people and planet?

RESEARCH DIRECTIONS:

Currently technological development is being driven by short term industrial decision-making, without considering ecological and social impacts and long term effects. A democratic approach to technical innovation should include citizens and established organizations.

Research needs to be conducted in different ways to conduct this process effectively. Traditional skills and technologies that work with ecological systems are often under-valued. It is imperative that this should be supported, showcased, and included in future research.

Potentialities for links between these technologies and social innovation should be explored.

RESEARCH QUESTIONS:
- What is the best way of preserving knowledge and skills of more sustainable "technologies" (e.g. closed-loop farming, repair, re-use) and transferring them from central eastern European countries to western European countries? And vice-versa in some cases.
- Test sustainability oriented design principles like:
- Design for durability/biodegradability
- Design for repair and re-use
- Creating new livelihoods
- Linking social and technical innovation
- System impact assessment
- What different models to use for involving citizens in technology assessment? How to train them to be able to do it?

CONCERNS:
- Who decides of the ethical important issues in technology and research?
- If more citizens and stakeholders are involved, will the innovation process slow down?
- Citizens would need system assessment training

STATE OF PLAY - EXPERTS VIEW (Scientific research):
- There is a growing philosophy of technology movement / research, but not so far well linked to sustainability. There is a body of EU research on responsible innovation. Appropriate technology studies tend to be confined to the developing world. Re-thinking current technologies is mostly done by movements, NGO, trough research and campaigning. There is work on the ethics of new technologies and citizen views. There is a lack of research on the potential for new job creation in repairing/ reuse / etc. as resource depletion rises.
- There is existing research on ecological design. Making links between research areas might be the main task, skills in assessing system impacts need to be spread.
- Action research linking social and technological innovation in developing countries needs more support.

STATE OF PLAY - CITIZENS VIEW (Everyday life):
- We use technology too little - too much -use of paper, not enough control.
- In Eastern European countries people tend to repair and reuse more, e.g. technology and clothing. But in Western European countries people tend to waste much more.
- There is too little impact assessment.

IMPACTED CITIZENS VISIONS:

[EST] Vision 5: A new hope: *"In 2050, technological and scientific breakthroughs have led to 1) minimised pollution, air pollution, water pollution and domestic waste, 2) the use of clean energy sources growth of the share of renewable and sustainable energy"*

[LIT] Vision 2: Human and Environment
"[in our vision] there is just enough technology to serve ecology and harmony…"

[ESP] Vision 3: Building the future
"to regulate the role of new technologies in order to avoid damaging the quality of human relationships"

[LIT] Vision 2: Human and Environment
"…pure barber; generation of non-consumers…"

[UK] Vision 1: The 2020 Economy
"a cyclical economy built on 'cradle to cradle' philosophy; built on 100% reusable recourse, including supply changing production, energy usage and consumption"

[PORT] Vision 3: E.U. - We are
"existing technology allows us to have comfort and optimal management of resources"

[PORT] Vision 1: Alice in tomorrow's land
"technological development has evolved and contributed to finding solutions for better resource management (and natural disaster prevention)"

[ROU] Vision 4: The Golden Age
" quality of life will have improved tremendously for senior citizens aided by technology"

[FIN] Vision 2: Predictive health tracking
"Developments in technology and medical sciences have prolonged people's lives and improved their quality of life. Technology is utilized in basic health care and maintenance, in the diversification of treat- ments and, for instance, in the prediction of different kinds of sei- zures."

[IRE] Vision 5: Balance of Nature, Humanity, and Technology
"We want technology to be used for the betterment of society"

[LUX] Vision 3: A quantum leap in development
"Technology is being used for the wellbeing of people and not in order to maximize profits"

9. Personal development

a. Technology as a means of well-being
b. Personal and organisational choice management
c. (Business) Models for balancing time
d. Meaningful research for community

9_Personal development

The need entails a realignment between work, personal and community life ensuring well-being through more flexible and meaningful work, personal development and life-long-learning.

Based on

CIMULACT Social Needs

- Personal development through education [12]
- Free personal and spiritual development [13]
- Balanced Life and Meaningful Work [16]
- Technology serving human beings and society [17]

CIMULACT Citizen Visions

AUT6; BGR3,5; LIT3,6; LUX6; SVK2; GR2,5; HUN4; ROU2; FIN6; PORT3,4, HRV1; CHE1; SVN6; NOR4; NL3; PL5; UK4; CYP6; DE5; BEL2; EST3 p59; HRV2; ROU2; PORT4; LIT6; CYP6; MAL6; BGR5; GR5; LAT5; CHE5; Lat1;

PORT4; NL2,3; SVN5; EST5; LAT4,5; ROU2; DK4; SWE4; LUX4,6; DE6; ITA1,5; NOR4; GR2; LUX2; FR3; HUN2; IRE3; PL5

BEL3; CZE2,3; CYP4; BGR3,6; LUX4; LIT4; HRV2,3; NL3; GR3; NOR3; ESP2,3; PL3,5; FIN2; ROU3; SVK2,3,4; HRV6; MAL6; NOR2; EST5; IRE5;

Related Challenges addressed by Horizon 2020
- Health, demographic change and well-being;
- Europe in a changing world - inclusive, innovative and reflective societies;
- Secure societies - protecting freedom and security of Europe and its citizens.
- Smart, green and integrated transport;

Research Programme Scenarios

a. Technology as a means of well-being
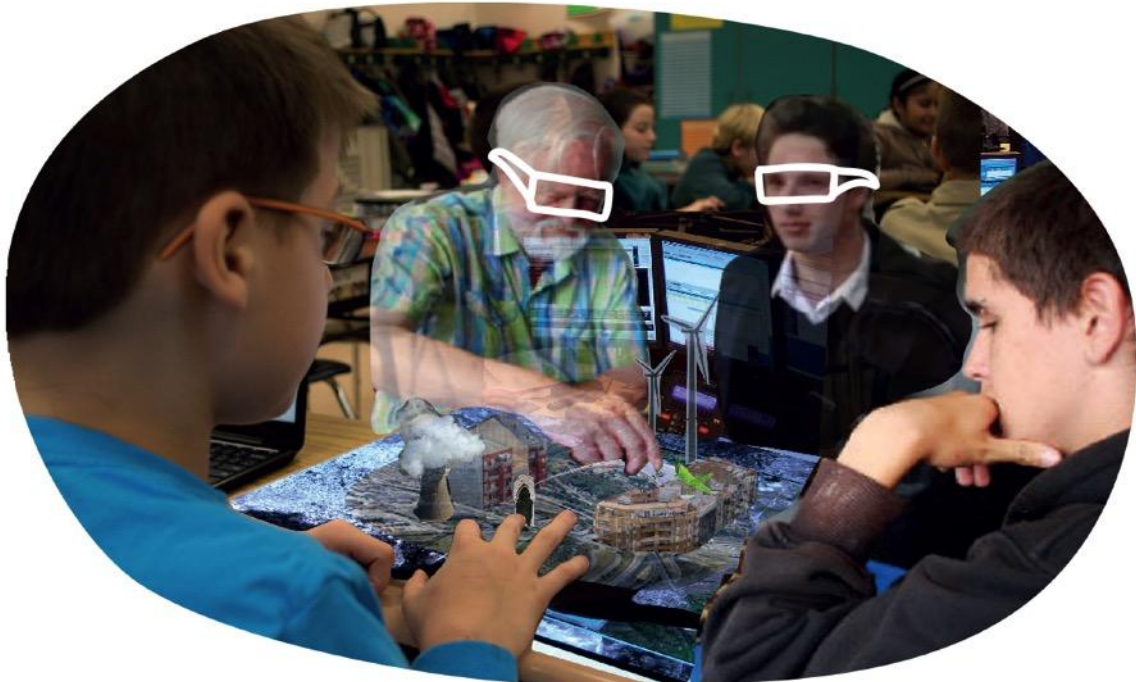
ASPIRATION

Instead of being governed by technological devices we want to govern them. The promotion of a higher level of awareness in the use of technology will allow reaping the benefits it offers without suffering negative consequences such as screen addiction, shifting relationships from physical to virtual space, thinner boundaries between virtual and real actions.

RESEARCH DIRECTIONS:

We need multidisciplinary research for the development of guidelines for personal devices governance to avoid being governed by them. Also research needs to concentrate on how to transfer existing knowledge on how technology impacts us and our relationships to society at large and to actual daily life practices.

RESEARCH QUESTIONS:

- How can we use personal tech devices responsibly in everyday life?
- What are criteria to create guidelines for the people?
- How does tech use affect our social and emotional relationships?
- How to assess existing knowledge on responsible tech use?
- How to transfer new and existing knowledge from science to society?
- How to transfer existing knowledge on our relationships to technology to actual daily life practices?

CONCERNS:
- Personal digital security (identity theft); use of our data by third parties? Where is our data and where does it travel?
- Generational differences on the ability to perceive the downsides of technology
- Increasing level of dependence on technology in all aspects of life

STATE OF PLAY - EXPERTS VIEW (Scientific research):
There is research on addiction, but addiction to tech is different than other addictions because tech is pervasively present. Another consideration is that treating addiction is retrofitting:
- You should try to solve awareness of media use before addiction happens
- There is sociological/philosophical research about how tech mediates relationships (hard and especially soft impacts), but it is not used – by citizens, nor in education, nor in technology development and design.

STATE OF PLAY - CITIZENS VIEW (Everyday life):
- Technology requests more time than we have: loss of quality time, too much information to absorb.
- Our mood (health) suffers of always being connected: stress, social pressure, loss of human contact → potential threat

IMPACTED CITIZENS VISIONS:

[LIT] Vision 6: Emotional Intelligence for Positive World Creation
"Not only technology can save the world, but above all human self-knowledge".

[HRV] Vision 3: The preservation of human health and natureforthe generation XYZ
"[in our vision] Technology does not alienate people and does not endanger their health"

[MAL] Vision 6: Education and Society (community)
"[now] Technology is not completely at our service

[…] To give man a vision. What makes man is not what man makes, and our creations should not become our creators."

[FIN] Vision 2: Predictive health tracking
"Developments in technology and medical sciences have prolonged people's lives and improved their quality of life."

[CZE] Vision 3: Free citizens in the secure world of data
"Free citizens in the secure world of data"

[IRE] Vision 5: Balance of Nature, Humanity, and Technology
"We want technology to be used for the betterment of society"

[ESP] Vision 3: Building the future
"To regulate the role of new technologies in order to avoid damaging the quality of human relationships"

[SVK] Vision 2: Technology for Better Health
"People will live a quality life because of the support for research and development, improved access to its results and better cooperation of the included actions"

b. Personal and organisational choice management

ASPIRATION

Uncertainty is rising due to a rapidly changing living and working environment. To meet this challenge, citizens need evolving social and technical skills. They need to be able to make individual choices and to manage career opportunities because in the 21st century the ability to make choices and the direction these take are determined both by personal skills and by the capacities and capabilities of your communities. Communities and organisations will have to reflect these values and provide support.

RESEARCH DIRECTIONS:

We need solutions that promote life-long learning on both an individual and organisational level. Solutions can be social, organisational as well as technological innovations.

RESEARCH QUESTIONS:

- What are the specific responsibilities of the state/ community/ individual?
- What are the best practices of communities coping with uncertainty and increasing the number of choices?
- Is life-long learning addressing the underlying cause of increased uncertainty in people's life, or it is just a coping mechanism?
- (How) can technology help with coping with uncertainty?
- What is the acceptable level of risk (social security) for the individual that at the same time reflects sustainability criteria? Because at the

moment high social security standards are achieved at the expense of the social security of future generations.

CONCERNS:
- Is life-long learning a good solution for the actual settlement of people's life of is it just covering up the real causes of problems? Or is life-long learning shifting the risks from the state and the work organisations to (vulnerable) individuals?
- Is it possible to find unbiased research? If so, how can we ensure that research on the life-long learning is unbiased?
- The community/individual should not be overloaded with the responsibilities of the state and/or the employer.

STATE OF PLAY - EXPERTS VIEW (Scientific research):
There is knowledge on
- risk society (+ liquid society) but not so much on coping communities,
- personal development (individuals),
- companies as life-long-learning organisations, but not on life-long-learning communities.

STATE OF PLAY - CITIZENS VIEW (Everyday life):
New tools (drones, autonomous cars, industry 4.0) are emerging and we will have to deal with it and make choices about new ways of managing our way of moving, communicating, consuming and living. We are running into the digital age, where we have to deal with so much information to make choices and to manage our life.

IMPACTED CITIZENS VISIONS:

[HRV] Vision 1: New age
"If we desire an alternative and better future, we must change ourselves and the entre educational system and up bringing methods"

[PORT] Vision 3: E.U. – We are
"All generations are invited to participate in the change process, we all feel that we are heard and that we are part of a shift in consciousness".

[BGR] Vision 5: Towards better life through a change in thinking and attitudes of people.
"Investing in your personal and spiritual development to be the main priority in 2050.
[...]
Family to be the place for building a value system that is sustainable for society.
[...]
Society invests in the spiritual development of people, and thus enables people to invest in society."

[LIT] Vision 6: Emotional Intelligence for Positive World Creation
"Enabling personal development to grow more settled, balanced and happy individuals and by consequence communities"

[NOR] Vision 3: Society and the individual in balance
"The digital tools have given public participation a universal form. Accessible for all. This has led to a significant increase in public participation."

[IRE] Vision 3: Relationships with one another and the environment
"Children will be educated in a well-rounded manner i.e. educated in trades / environment / etc. a holistic approach."

[ROU] Vision 1: Let's be humans through technology
"Living in a society in which technology helps people throughout all aspects of life (food, health, environment, economic activity) in order to afford the "luxury" of investing in personal development"

[BEL] Vision 3: Digital Mind
"New things to discover and explore that will make our life easier. We'll keep our critical mind and our freewill in front of all these new technologies that will be able to dictate to us and take gradually control of our lives."

[NOR] Vision 2: From fossil fuels to value based renewed energy
"The high-tech knowledge we have acquired, is being channeled into new solutions. By using all resources (people, technology, money), continued welfare and sustainable growth is created."

[UK] Vision 4: Untitled
"- Citizens decide on spending priorities (e.g. taxes, referendum, participatory budgets)
- WIDENING PUBLIC DEBATE/VOTING MECHANISMS – organising more workshops like this, electronic referendum, public debates including more political parties, groups of interest."

[PL] Vision 5: I've Got Talent
"On this, an education system of the future should be based. Training programs will be personalized in accordance with the results of the analysis of pupils' aptitudes and interests."

c. (Business) Models for balancing time
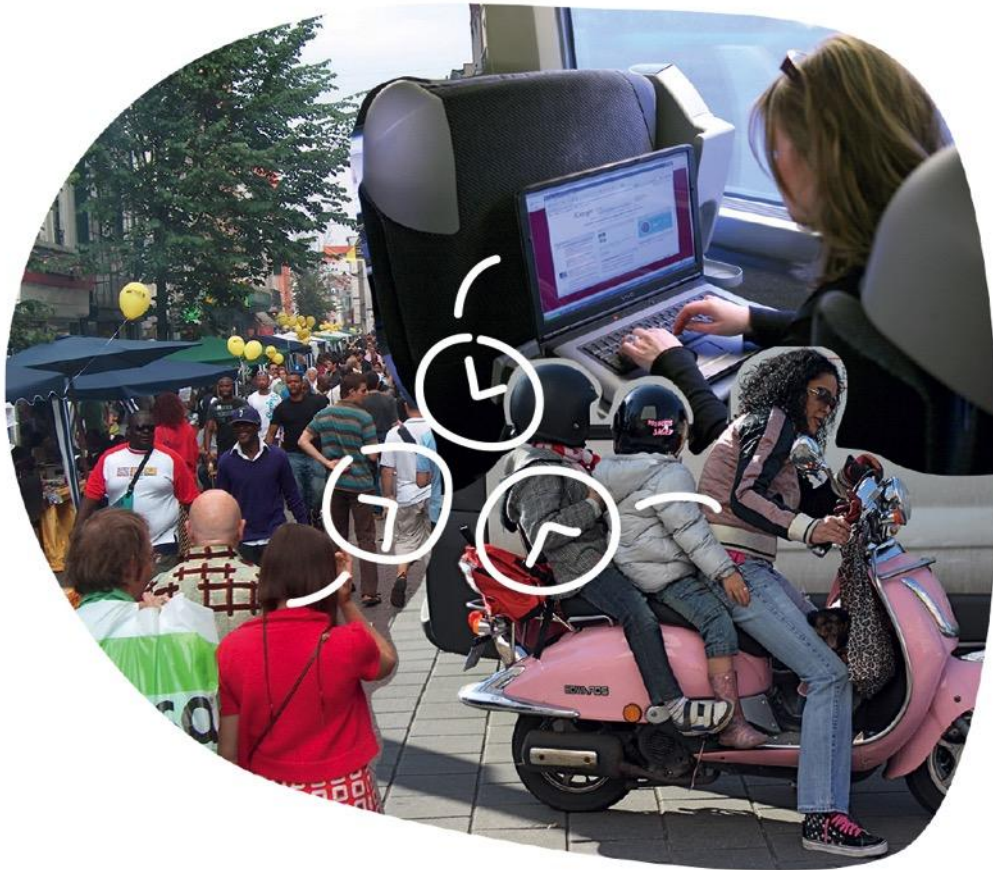
ASPIRATION

Citizens want options to better balance the time invested into work, family and community.

RESEARCH DIRECTIONS:

This can be achieved through new ways of organising work in society e.g. through models that are oriented more to the quality of work results than to working time put in. This could relax the need for fixed work hours. We will need structures to coordinate this shift and negotiate wishes of employers and employees. It is also important to secure the company spirit and relationships between colleagues (eg. people only teleworking may experience isolation and loss of commitment).

RESEARCH QUESTIONS:

- What is the state of implementation and what are the impacts of innovative work management models? (e.g. sharing economy,

teleworking, peer to peer (P2P) economy, lean and agile management methods)
- What are the barriers to their implementation?
- What are the implications of increasing time autonomy of individual workers?
- What will people do with additional free time?
- Teleworking: What are the impacts at the individual and company level? Can co-working spaces reduce the downsides of teleworking and at the same time generate benefits at company level (e.g. cross fertilisation among companies?)

CONCERNS:
- Are new trends like sharing economy and peer to peer (P2P) economy contributing to a vision of a higher quality of life or are they just shifting significant risks from companies to the individual?
- Are welfare measures like basic income helping or hindering the process of individual professional fulfilment?
- Blurring boundaries between private and professional life: what does this do to e.g. teleworkers. Is there a risk of more burn-out when work never stops? Does teleworking promote free-riding?

STATE OF PLAY - EXPERTS VIEW (Scientific research):
- There is research on beyond GDP13 business models, but much less on operational levels.
- There are cooperation models between public and private sector but still exclusion of grass roots levels → citizens.
- Research on online collaboration.
- Studies exist on productivity and time investment and about different age groups and their different qualities. But why is this not part of company life? eg. we are only productive 6 hours, but still work 8 hours?
- How to balance unemployment (so many people unemployed) and employment (who have burn-outs).

STATE OF PLAY - CITIZENS VIEW (Everyday life):
- New economic models are emerging: sharing economy, peer to peer P2P, flat hierarchy model.
- Work is transforming to be a situation, not a place → technologies: teleworking, cloud based remote working, automation, freelancing

IMPACTED CITIZENS VISIONS:
[SVK] Vision 2: Technology for Better Health: *"More time for relax, family and travelling (including trips to other planets)."*

[GR] Vision 2: Work - Self-realization and Environment Protection
"Treating fears (social ethics) and personal liberation e.g. people work in fields they chose as opposed to what society dictates"

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13 Gross Domestic Product

[HRV] Vision 2: Science and technology in the service of mankind
"People have time to freely and at no cost engage in different activities which enrich their lives."

[LUX] Vision 6: I am satisfied with what I am doing! (Do what you love, love what you do!): *"I can combine my social, family and associative commitments and I have time for myself. Every moment of life is well lived. I try, I am wondering, I am experimenting, I am changing, I am building, I live free of my choices, respected by others."*

[PORT] Vision 4: Culture with all for development
"Technology has allowed free time for focusing on personal and collective development based in the various dimensions of life."

[NL] Vision 2: Together for one another
"In this future vision jobs have changed, because of technical changes. A 40 hours work week is no longer necessary. Citizens spend more time to do activities in and for the neighbourhood."

[NOR] Vision 4: The environmental Citizen in a "short travelled" and "mega-local city in 2040": *"In 2040 we will be concerned with living responsibly, each and every one of us."*

[LUX] Vision 2: Generate a life ethic
"- In work life, the contrast between private life and life at work has disappeared, and people make their living through ´meaningful activities.´"

[ITA] Vision 2: A simply special city: *"Young people are taught to work for the community and everyone dedicates a part of his time to the others"*

[ROU] Vision 2: *"More free time for personal development"*

[EST] Vision 5: *"A change in the nature of work – a shorter workday, contribution to society/social dimension"*

[LUX] Vision 4: *"We live in a community of participation and of democracy. We choose our daily working hours and our contribution to the local community"*

[LAT] Vision 5: *"Job is 100% flexible: work at home and elsewhere, choice of working hours, a possibility to adapt and choose responsibilities and tasks; appropriate rewards"*

[LAT] Vision 4: Ecologically independent
"Work is remote"

d. Meaningful research for community

ASPIRATION
- We envisage that research is selected and prioritized according to its ability to contribute to sustainable development and potential beneficial impact to the community. This would return value to tax payers in terms of quality of life. This approach helps to communicate research results to "average citizen" and include them in the implementation process. It also creates a sense of ownership among citizens as they will feel also beneficiaries of R&D&I projects.

RESEARCH DIRECTIONS:
- Currently there is no direct relation on how publicly funded research and innovation "gives back" to community. Research should explore framework conditions for linking research, innovation and development projects closer to the potential benefit to the community.

RESEARCH QUESTIONS:
- How to involve citizens more actively in research in order to prove its relevance to everyday life?
- What are the most effective strategies and channels to communicate the benefits of research results to the general public?
- What are the criteria to be used in the selection of research projects (publicly funded) contributing to a more sustainable society (environmentally, socially and economically)?

CONCERNS:

- Difficult to reach interdisciplinary consensus
- Need for qualitative measuring relevance and output, as well as quantitative
- Research in early stages of maturity may struggle to prove its significance

STATE OF PLAY - EXPERTS VIEW (Scientific research):
- Impact of research is now measured quantitatively, but we need qualitative ways of measuring impact
- Develop tools for participating in evaluations
- How to prioritize involvement of intelligence for real problems of our time.

STATE OF PLAY - CITIZENS VIEW (Everyday life):
- State of research is very obscure for an ordinary citizen
- Even if a citizen knows that research in any field is very important, it is far too complicated to get to it or not well enough communicated.

IMPACTED CITIZENS VISIONS:
[SVK] Vision 4: Futurofarma and Space Tourism
"Combining science with nature in a rational way from which both side effects"

[SVK] Vision 2: Technology for better health
"People will live a quality life because of the support for research and development, improved access to its results and better cooperation of the involved actors"

[ROU] Vision 3: Back to (our) roots
"Technology will develop in harmony with the environment and individuals' needs"

[CHE] Vision 5: Together for one world
"[…] Funding of the research for the development of environmentally friendly technologies and working models that must be designed keeping human needs in mind"

[GR] Vision 5: Man in the center of education and attempts of development
"The development of the society, technology and our economy must be done in a manner beneficial to mankind. There should be no development that harms humanity or the environment. We need to respect and utilize every places' benefits"

10. Green habitats

a. Freedom to choose where we lived
b. Freedom to live where we choose
c. The bigger (cities) the better
d. Moving together (more collective transport options)

10_Green Habitats

We need habitats that allow for a high quality of life with substantially reduced environmental footprint. In particular this requires new concepts for transport and housing.

Based on

CIMULACT social needs
- Fast, flexible, affordable, smart, reliable and clean transport [14]
- Balanced and Fair Development of Both Rural and Urban Areas [15]
- Enabling Systems[14] for Green and Smart City Development [28]

CIMULACT Citizen Visions

IRE1; LIT1; LAT2; EST1,4,5; SVN5; BEL4,5; SWE5; FR5; HUN1; BGR1; MAL2; SVK3,5; DK4,5; DE1,2; LUX2; CYP4; ROU6;

HRV4; LAT4; ITA2; HUN2; HRV6

BGR1,2; NOR4,5; UK3; CHE1,5; SWE5; ESP6; DK4,6; AUT 3,5; FR5,6; MAL1; FIN3,5; ITA2; GR5;

Related Challenges addressed by Horizon 2020
- Health, demographic change and well-being;
- Smart, green and integrated transport;
- Climate Action, environment resource efficiency and raw materials
- Food security, sustainable Agriculture and Forestry, Marine, Maritime and Inland Water Research and the Bio economy;

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[14] Technical, social, governing, agricultural

Funded by the Horizon 2020 Framework Programme of the European Union

CIMULACT
CITIZEN AND MULTI-ACTOR CONSULTATION ON HORIZON 2020

Research Programme Scenarios:

a. Freedom to choose where we live

ASPIRATION

We want to promote a better balance of non-urban and urban areas by establishing a good connectivity between both spaces that:
- allows boundaries of cities to spread,
- helps to decrease the isolation of people in distant rural areas,
- helps to increase the number of working places in non-urban areas,
- facilitates more equal access to (equality) services.

RESEARCH DIRECTIONS:

In order to establish good connectivity between urban and non-urban areas research should investigate technological and organisational solutions for sustainable (low energy intensive/less polluting) transport options that are adapted to the requirements of rural areas (low cost/impact/infrastructure).

RESEARCH QUESTIONS:
- How to achieve fluid integration of diverse transportation means in local hubs that serve local capillarity and long distance transport alike in a quick and efficient manner? Specific solution could include:
- small transportation units that can aggregate (in "trains of units") and disaggregate (in individual units serving multiple locations)
- Good/reliable/instantaneous inter-modal transport information systems
- Organisation/distribution/scheduling of transport means between homes and workplaces.
- How to rebalance local tax payment and location where services are consumed?

CONCERNS:
- Cities and especially city centres may become empty in the afternoon if they are treated only as a working place
- Rural areas may become abandoned – if there is no good connectivity and people move to cities.

STATE OF PLAY - EXPERTS VIEW (Scientific research):
- Bad connectivity and imbalance in transportation services
- Big need to commute to the city
- A lot of congestion problems
- Insufficient public transport connections
- Difference in quality of life between urban and rural areas

STATE OF PLAY - CITIZENS VIEW (Everyday life):
- Transportation system much worse in non-urban areas
- Lack of internet and phone connection in distant areas
- Empty houses in villages in non-urban areas
- More elderly people with less healthcare and services

IMPACTED CITIZENS VISIONS:
[BEL] Vision 5: Moving sustainably

"My city has changed! No more fuel-powered vehicle but public transports on rails (ecological electricity) connecting schools, shops, living areas (any activities).

"Transport means are co-responsible and eco-responsible."

[SVN] Vision 5: Prosperity and work activity of citizens
"Public and affordable transport for greater flexibility and mobility;"

[EST] Vision 5: A new hope
"environmentally friendly means of transport—public transport solutions, fuels"

[DE] Vision 1: Sustainability implemented
"technology overcomes spatial distance problems"

[LAT] Vision 4: Ecologically independent
"Fast, cheap and comfortable transport is available. That will be able to change the ratio between the rural and urban population. A lot of people live in small centres but in case of necessity they are able to get to the work place very easy which is located in larger centres. The transport is fast, comfortable and available upon request at particular time by calling operator upon necessity – the means of transport arrives to the necessary place and brings to the destination."

"Life outside a city (far away) does not limit comfort of living and provides additional comfort;"

[HRV] Vision 4: Erasing the borders...
"A balanced urban and rural development"

[ITA] Vision 4: A school beyond times - a new education model
„Every hub is as integrated as possible with the urban context, meaning that it is easily reachable with public transportation, surrounded by a green area with cycling paths and zero impact on the environment (solar panels, recycling bins etc.)"

b. Freedom to live where we choose

ASPIRATION

We need to rethink society's organisation into more distributed sustainable communities that produce and consume locally so there is less need to move people and things.

RESEARCH DIRECTIONS:

Rethinking society's organisation – into "more distributed sustainable societies" taps into:

- services and goods available locally in short distances
- people/inhabitants move outside their local living area only occasionally
- employment and work opportunities are available locally
- attractiveness of non-urban quality of life is high

Research needs to explore possible pathways towards these enablers.

RESEARCH QUESTIONS:

- How to design/produce a "distributed living" in technological/organisational/environmental/sustainable/ behavioural terms?

- How to design/produce a "distributed connectivity" for occasional transport infrastructures adapted to "distributed living"?

CONCERNS:
- Lack of socialisation
- Rural sprawl (people living everywhere)
- High costs of distribution of services everywhere

STATE OF PLAY - EXPERTS VIEW (Scientific research):
- Today life is concentrated and centralised because of need to commute to the city (job, study, services...)
- Online shopping and logistics are already distributed
- E-working is diffusing
- Beginning of desktop (micro) production

STATE OF PLAY - CITIZENS VIEW (Everyday life):
- In the past it was like a rule to use locally produced products, nowadays less
- Now there is a new start and rising trend to use local products (eggs, vegetables, cheese, cookies in shops)
- Now the local products are more produced by individuals not by companies

IMPACTED CITIZENS VISIONS:

[MAL] Vision 1: At one with the environment
"Stronger emphasis on local economies reduces carbon footprint of goods resulting in cleaner seas and cleaner air."

[DE] Vision 1: Sustainability implemented
"technology overcomes spatial distance problems"

[LAT] Vision 4: Ecologically independent
"More people live outside urban areas. Direct production and sale is characteristic in the future because people will be able to produce a lot of things for themselves, especially due to 3 d printers and there will be less need to buy something." […]

"The population provides electricity, heating, etc. energy resources itself."

"Self-sufficiency in supply of food/ energy."

[NOR] Vision 4: The environmental citizen in a "short travelled" and "mega local" city in 2040
"New ultra flexible ways of working will dramatically reduce the need for commuting"

c. The bigger (cities) the better
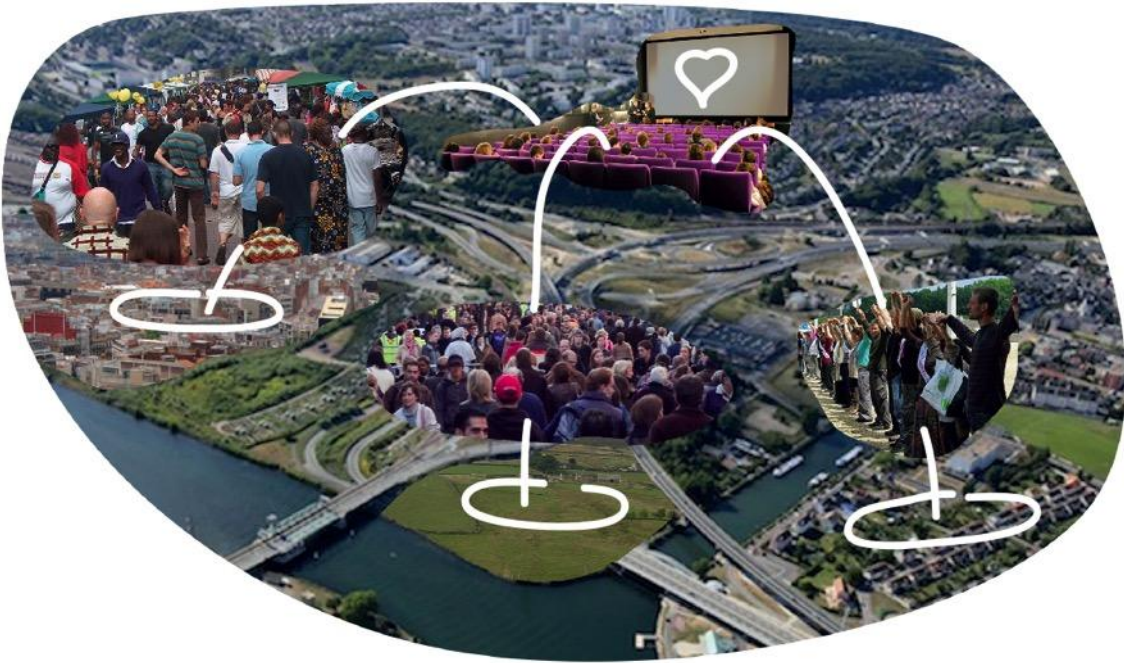
ASPIRATION

We want to make highly dense big cities more liveable for everybody. From this we expect the following benefits:
- Decrease of car needs
- Health improvement
- Collective spaces which are open and safe for socializing
- More connected communities
- Vibrant city life
- Increase of economic activity

RESEARCH DIRECTIONS:

Quality of life in big cities taps to:
- Keeping a mixed/integrated urban fabric (i.e. keep affordable prices/ keep minority/variety of people)
- Making highly dense cities more liveable (i.e. less pollution; safer streets; walkable neighbourhood)

- Facilitating adoption of new efficient sustainable practices (i.e. behaviour change; sustainable lifestyles)
- Diffusion/dissemination of "promising/good" practices (i.e. advanced urban sustainability; urban agriculture; urban regeneration…)

RESEARCH QUESTIONS:
- How to collect good practice examples of cities' governance and maintenance and how to adapt them to different cultural and territorial contexts?
- How to preserve the "city desirable mix" during and at the end of transformations?

CONCERNS:
- Keep better cities affordable
- Prevent decay of rural areas

STATE OF PLAY - EXPERTS VIEW (Scientific research):
- The quality of life in big European cities is already increasing
- Making big parks from urban neglected areas (ex. Madrid, Rio)
- Interstitial public/private shared spaces (ex. NYC Pops)
- Reactivation of public spaces (ex. Ecosistema urbano)
- New use of urban infrastructures (ex. NYC-High line)
- Renovation and revitalization of public/private housing (ex. Paris-Lacatou-Vassal)
- Traffic limited areas/shared spaces/ pedestrian zones (ex. City of Graz)
- Cycling and healthy mobility (ex. Copenhagen) plus walking (Healthy Mobility)

STATE OF PLAY - CITIZENS VIEW (Everyday life):
- Big cities have more cultural services/amenities
- Better health care and quality
- More education possibilities, better variety and quality
- Better possibilities to get work
- Crowded and polluted
- Social insecurity (safety of women, children, terrorism)
- Easy access for products and big variety

IMPACTED CITIZENS VISIONS:

[FR] Vision 5: Living in a balanced society
"Our ecocity is human sized and integrated within nature. Towers have been redeemed and modified. In the street, street lights work thanks to photovoltaic cells, same thing applies for public transport, which is free. It's thus possible to restrain traffic in the city centre.
Proximity businesses are developed and offer essentially local products. Spaces dedicated to goods and services exchange and sharing do also exist, along with collective cultural spaces self-managed."

[DK] Vision 4: The nature city of the future

"The vision is concerning new buildings in an existing city, including an effective future transportation system. The buildings and areas worthy of preservation are expected to still exist. The city is car-free: the transportation system should completely replace the use of private cars. The system could be electrical, magnetic highspeed trains. The city is green. Nature is provided space for as wedges in the peripheral regions. New districts and buildings are built when required, with a variation in structure and composition. The new buildings can be made of prefabricated boxes. The buildings are self-sufficient with solar cells. Rain water is collected, and fruit and vegetables are grown in greenhouses at the rooftop. The composition of the apartments allows spaces and terraces for common activities. The housing estates are open to all citizens: Young, elderly, immigrants, disabled and students. The solidarity and community stimulates activities. There are no lonely people. [...] Every residence has its own terrace for conducting outdoor activities."

[ITA] Vision 2: A simply special city

"The city is an intelligent organism that optimizes use of resources and energy. There are meeting places where every citizen participates bringing his own requests, which generally correspond to the collective ones. The places thus become sharing spaces that encourage the development of active and participating citizens."

[NOR] Vision 4: The environmental citizen in a "short travelled" and "mega local" city in 2040

"We wish for the urban areas of the future to be «mega local» - that they maintain wanted settlement patterns and good, local environments. New ultra flexible ways of working will dramatically reduce the need for commuting and a lower share of buildings that are only in use about 20-40% of 8 of the 24 hours of the day. Good collective solutions, a strong multi-use mode of thought and high population density will contribute to a lower aggregated environmental burden and higher well-being. Green lungs and an environmentally oriented urban development will secure «responsible life quality», also in tomorrow's mega local cities, across generations"

[ITA] Vision 4: A school beyond times - a new education model

"The sense of belonging to the community is strong and it is a common feeling among all citizens. Everybody takes care of the urban territory and respects it: bike paths, green areas and solar panels are widespread around the city. "

d. Moving together (more collective transport options)
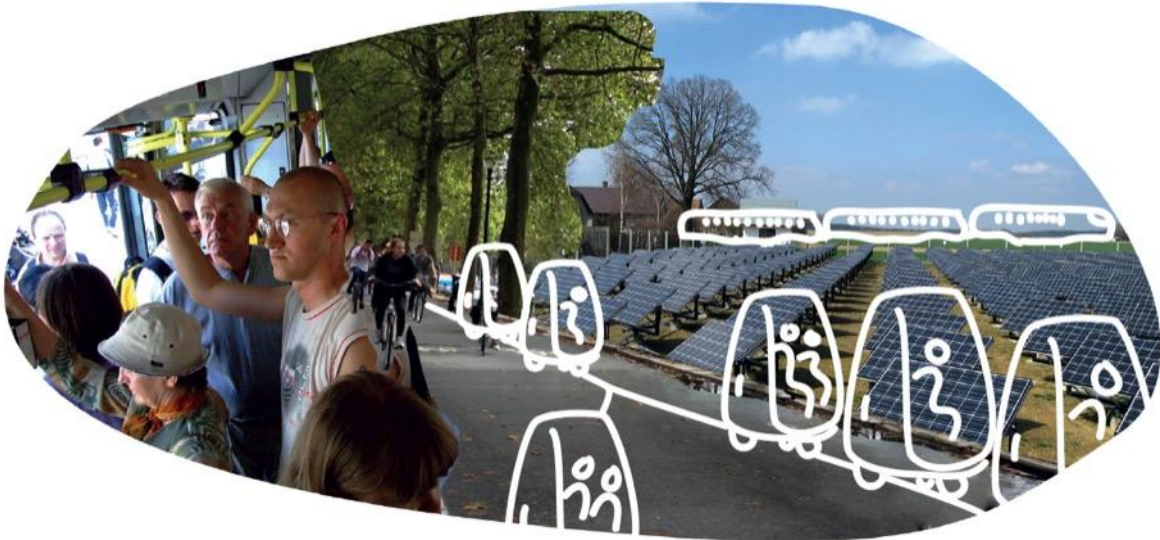
ASPIRATION
We envisage new collective transport concepts and respective technologies that reduce transport related pollution and energy demand and at the same time bring people together.

RESEARCH DIRECTIONS:
More collective transport taps into:
- Transport systems are less based on infrastructures (and more flexible) or sensing existing infrastructures (intensifying their use)
- Small/individual units that are able to temporary aggregate and disaggregate (trains of units and local capillary distribution)
- Transport systems that are less top-down organised and more community-based, self-organised (swarm intelligence) (eg. self-organised mini-buses)
- Units are shared
- Transport systems that enable more socialisation (i.e. being together in collective transports)
- Substantial reduction of individual private transport means.

RESEARCH QUESTIONS:
- How can we go beyond the current common understanding of "collective transport"; i.e. less infrastructure inquiring, more flexible

community based organisation more based on temporary aggregation of shared individual systems?
- How can we intensify the use of existing infrastructure "more trains on railways and collective sustainable transport motorways"?

CONCERNS:
Last-mile connectivity must follow to provide links to small cities and rural areas

STATE OF PLAY - EXPERTS VIEW (Scientific research):
- Examples for good integrated transportation solutions already exist and are available to researchers and scientists
- Existing driver-less and automated transport solutions
- Car-sharing exists in many EU-cities
- New forms of transport organisations –not just public for collective transport like community organised and shared transport

STATE OF PLAY - CITIZENS VIEW (Everyday life):
- Depends where you live inside the country
- Big cities have good collective transportation
- Car-pooling is used in lack of public transporting and to have cheaper travelling (Blabla car – Uber).

IMPACTED CITIZENS VISIONS:

[ITA] Vision 2: A Simply special city
"The city is an intelligent organism that optimizes use of resources and energy. There are meeting places where every citizen participates bringing his own requests, which generally correspond to the collective ones. The places thus become sharing spaces that encourage the development of active and participating citizens."

[CHE] Vision 5: Together for on world
"Urbanistic measures: construction projects promoting and rewarding the cohabitation of young and old, able and disabled"

[MAL] Vision 2: Better quality of life towards sustainable approach to local and global issues
"Less traffic due to self-driving cars, Higher use of scooters and bicycles"

[DK] Vision 4: The nature city of the future
"The city is car-free: the transportation system should completely replace the use of private cars. The system could be electrical, magnetic highspeed trains."

[BGR] Vision 1: The smart city – this is me!
"Car sharing instead of urban transport."

[ITA] Vision 4: A school beyond times - a new education model
"Every hub is as integrated as possible with the urban context, meaning that it is easily reachable with public transportation, surrounded by a green area with cycling paths and zero impact on the environment (solar panels, recycling bins etc.)"

11.
Sustainable economy

a. Learning for society
b. Production awareness
c. Consume less, enjoy more
d. From Wall Street to Main Street

11_Sustainable Economy

The need entails a more sustainable economy that promotes well-being rather than profits, integrating the well-being of people in every economic activity.

Based on

CIMULACT social need
Economy for well-being and sustainability [27]

CIMULACT Citizen Visions

LUX2,3; PORT2; FR2; SVN1; FIN1,3,4; FR2; HRV2; CZE1 ; CHE3; UK1; LUX5; DE1; DK5; DK6;

Related Challenges addressed by Horizon 2020
-   Health, demographic change and well-being

Research Programme Scenarios:

a. Learning for society

ASPIRATION

We live in a society that greatly values the individual human being. To some extent, a more sustainable economy, that promotes well-being, requires a more balanced position between the common good and the individual. For this shift to occur, citizens need to be educated in a life-long process, on the negotiation of the personal fulfilment and the promotion and benefits of collective goals (for example, volunteering for a local communal garden means giving up personal resources for the benefit of the community). For this cultural shift to occur, education has to be both formal and informal through example and engagement at different levels of society, from the individual to the local, regional and national levels.

RESEARCH DIRECTIONS:

There are two parallel drives of our society's attitudes. On one side, we are driven by individualistic behaviours but, on the other, there is a collectivist dimension of those behaviours. Currently our society tends to emphasize individual fulfilments despite their consequences on the community. We want to enable/foster a more balanced awareness of these two dimensions by working at both the individual and the community levels. In order to achieve

this goal, we need to understand the crucial elements of community building, joining and growth. We need to design appropriate educational systems that take into account the diversity of communities of disadvantaged backgrounds, while enabling the common good.

A specific challenge for investigation is to explore and understand the key factors that allow local best practices to scale and/or replicate in other contexts.

RESEARCH QUESTIONS:

- How can we make people think about the individual as well as the collective impact of their actions?
- How can we design and adapt education tools towards collective thinking appropriately to different stages of life?
- What are the crucial elements that individuals need in order to build/join/be a part of the community?
- How can collective thinking serve disadvantaged communities and communities that have "historical baggage"?
- What are the processes that allow local best-of-practice initiatives to scale?

CONCERNS:

- Managing different levels of non-institutionalised representativeness.
- Negative connotation of the word "collectivism" and possible bad practices (too controlling).

STATE OF PLAY - EXPERTS VIEW (Scientific research):

There are many great examples of initiatives to support the creation of sustainable community oriented towards collective thinking.

- "Transition town" movement: teaching communities to be more resilient to crisis in a sustainable way.
- "Civic economy": NGOs and cooperative movements have shown ways to create a resilient community and show economic value.
- "Tragedy of commons": in order to manage public goods collaborative models between public/private are needed.
- "The Sardex factor": how alternative local currencies are enhancing human relationships, building communities and trust through educational workshops.

STATE OF PLAY - CITIZENS VIEW (Everyday life):

- Mostly individual initiative (not systematic)
- Gardening in schools / social learning
- Rudolf Steiner (Waldorf) School
- Joint collective group work (playgrounds, clean park, plant trees)
- Initiators: Radio Station, NPOs, YMCA…

IMPACTED CITIZENS VISIONS:

[PORT] Vision 2: Cooperation

"In 2050, our society is based on cooperative values and in a systemic vision of the reality. There is now an unconditional basic income to ensure the basic needs of citizens (in terms of food, health care, housing, education and training). Citizens actively participate in governance, thus guaranteeing sound management of resources (material and immaterial). Moreover, the interests of people and of the planet are placed above economic-financial interests."

"All citizens have enough time to develop quality human relations and maximize their capacities."

"Social recognition is based on each person's contribution to society instead of material wealth."

[UK] Vision 1: The 2020 Economy

"The measures of success today require dogmatic and ruthless pursuit of profit based on short-term production and consumption at the expense of human rights and individual security and happiness. The 2020 economy requires mass redistribution of power and decision-making to democratic bodies and representatives for the common good. The most important difference is what constitutes a successful economy. We want as much value to be placed on the positive impact companies have on the economy as financial growth."
[...]
"Economic development and growth that benefit the many and not the few, within a framework of sustainability and equality of wealth and opportunity, underpinned by the principles of trade justice and accountability and transparency."

[FRA] Vision 2: Collective Project

"Society in general will exit from overproduction and thus from overconsumption. Waste and polluting products are reduced to a minimum. Basic equipment and needs (housing, food, energy, and security) will be ensured for everyone thanks to a better repartition of wealth. Proximity solidarity is more active and developed. The absence of patents on living things, and the free availability of seeds as open source allow self-sufficiency and knowledge transmissions between generations."

[SVN] Vision 1: Society of sustainable balance

"Not-for-profit, circular economy, respect of social actors' mutual interests;"

[LUX] Vision 2: Generate a life ethic

"Liberty ends where it limits the liberty of others."

b. Production awareness

ASPIRATION

With limited resources, it is important that business becomes more environmentally aware of implication of the product lifecycle. Ultimately, more sustainable production technologies and models lead to promotion of goods' production within the scope of limited resources. An example could be the Cradle-to-Cradle Model, whereby production uses resources within a cycle in order to minimize or erase waste. (E.g. a pullover produced from bamboos fibre.) The production, thus, is highly aware of sustainability in all steps of the value chain.

RESEARCH DIRECTIONS:

Current models of production are unsustainable in respect to resource use. Innovation is required on two fronts:

1) To discourage the use of technologies, which are not environmentally friendly, and
2) To support the adoption of clean technologies, as well as their development.

Old economic models for the production of goods that include unsustainable practices, such as planned obsolesce need to be contained and reversed. Research needs to be undertaken to take into account cradle-to-cradle approaches and their impact on current business. The full cost and gains of

implementing these novel approaches are complex and difficult to quantify, especially in monetary terms. Creative ways of visualizing these costs and gains needs to be developed for the full impact to be measured.

RESEARCH QUESTIONS:

- What are the most beneficial sustainable production technologies and models (cradle to cradle, industrial symbiosis, clean technologies etc.) and how can they best be implemented into current production patterns?
- How can we include negative externalities into the cost of production/goods? On the other side, what are the long-term effects of clean technology initiatives?
- How can we ascribe value beyond money to some aspects of sustainable production awareness that are not easily quantifiable in monetary terms?
- How can we assess and account the full cost of the value chain? What role can "good" companies play in spreading sustainable best practices to the rest of the value chain?
- Which changes need to occur to stop the practice of planned obsolesce? What is the impact of changing this model for companies relying on it?

STATE OF PLAY - EXPERTS VIEW (Scientific research):

New models of growth are needed. New goals beyond just increase economic growth/profit need to be developed. There is a lot of research on incentives, such as tax incentives, to boost environmental choices in business/innovation. There needs to be more research on medium/long term impact/effects of these schemes. Complementarily, new ways of discouraging unwanted behaviour should also be investigated e.g. in industrial symbiosis programs.

CONCERNS:

- What will be the impact for poor consumers if prices go up due to the new processes?
- Fewer new technological products will be sold.
- We need to deal with the balance between imports and exports in future.

STATE OF PLAY - CITIZENS VIEW (Everyday life):

CSR (Corporate Social Responsibility), Cradle to cradle, Labels (fair trade).

IMPACTED CITIZENS VISIONS:

[FIN] Vision 3: Efficient recycling

"Sampo goes to work to a self-sufficient food factory, dials his workplace code, and a road elevator picks him up. Aino lives in the same community that consists of smart homes operated by solar energy and wind power. The homes collect energy in batteries and also utilize deepdrilled groundsource heat. Smart homes use the energy that is available at the time: for example wind power during the winter and solar energy during the summer. In the

morning, Aino forks over the compost, which gives warmth to her grasshopper and shiitake mushroom cultivation. Aino has been developing superconductors at the energy plant and this technology has been put in operation in 2050."

[LUX] Vision 5: From Zombies to communities/Coexisting in solidarity and working for the well-being of all citizens
"a transparent information and communication of decision-making processes [...] healthy food due to sustainable and social production"

[CZE] Vision 1: Society without plastics
"Efficient use of resources and new materials, recycling economy minimize reduction of waste. [...] the efficient use of existing sources as well as of new materials. Recycling and economy with a minimizing production of waste is a common part of life in the European Union."

[FR] Vision 2: Collective project
"Society in general will exit from overproduction and thus from overconsumption. Waste and polluting products are reduced to a minimum"

[CHE] Vision 3: Harmony between the social and the global
"Production is adapted to the effective needs, which implies an economical paradigm shift. The growth and the maximization of profit are no longer an objective. Sustainable economy is a reality."

[LUX] Vision 3: A quantum leap in development
"Technology is being used for the wellbeing of people and not in order to maximize profits. Consumable goods have high quality and are very durable which leads to a general reduction in mass production. Ecological impact is steadily decreasing"

[LIT] Vision 4: From Harmonious Personality to Recycling Technologies
"Universal material and technologies allow us to remake old things and turn them into new ones. [...] This invention frees society from the use of the surplus and creates conditions for harmonious personalities."

[DE] Vision 1: Sustainability implemented
"Cradle to cradle (complete material cycle without residual products/waste) production to continuously re-use resources after product end-of-life Supporting the natural cycle"

[SVN] Vision 1: Society of Sustainable Balance
"Not-for-profit, circular economy, respect of social actors' mutual interests;"

[FIN] Vision 1: VALUES – immateriality and minimalism

*"Products are not designed to break, and they have longer warranties.
Goods can be repaired and spare parts are available for longer periods."*

c. Consume less, enjoy more

ASPIRATION

In the future people will adopt a different lifestyle where they will consume less, but enjoy more. They will work less and enjoy more time of higher quality with family and friends. More value will be assigned to non-material assets. People will be more conscious about how their choices would impact the environment.

RESEARCH DIRECTIONS:

Today conspicuous consumption is the norm and goods are used and thrown away with a very short life cycle. There are good examples of responsible consumerism but only limited adoption on a bigger scale. We want to support citizens to become more responsible consumers by making information about the product lifecycle more transparent and available than it is today. The increased information should enable better-informed decisions. We expect these to affect (positively) work-life balance and personal well-being.

RESEARCH QUESTIONS:

- What kind of incentives/enablers do we need to implement for consumers to make more responsible/sustainable purchasing decisions?
- What is the right amount/form of information we need to provide for enabling consumers to make better purchasing decisions?
- How do we ensure the quality of the information that companies provide regarding how a good is produced (trustworthiness)? What kind of organisation/system should be the watch-dog? How can we avoid conflict of interest?

CONCERNS:
- The difficult business environment for certain companies needs to be dealt with.

STATE OF PLAY - EXPERTS VIEW (Scientific research):
There is a lot of research on consumer behaviours, as well as a lot of academic and non-academic research on whether context or value is driving consumer choices. Research is needed in fostering positive change in behaviour. Also, to decrease consumption, a greater visibility of goods' production should be explored/implemented.

STATE OF PLAY - CITIZENS VIEW (Everyday life):
- Car and bike sharing (companies, individuals)
- Apps like Free-Market
- Exchanging/sharing goods and services
- "Self-Aiding" communities (Repair Stares, Soup Kitchen)
- Living for assistance.

IMPACTED CITIZENS VISIONS:

[FR] Vision 2: Collective project
"Society in general will exit from overproduction and thus from overconsumption."

[CZE] Vision 1: Society without plastics
"In 2050, children will be educated at school as well as at home in ecological behaviour."

[SVN] Vision 1: Society of Sustainable Balance
"Maintenance of healthy environment (nature-friendly food production, renewable sources of energy, clean water, recycling)."

[FIN] Vision 1: VALUES – immateriality and minimalism
"Social value is not based on consumption. […]Information belongs to all: data communications are a basic right and data/interfaces open to citizens. […]Co-owning of products is commonplace."

[FIN] Vision 4: The future of responsible consumption
"Citizens no longer value throwaway culture, unethical production nor low quality. Hence children and citizens are educated in a long term to become responsible consumers. As a result, less waste is produced and it is more efficiently processed to energy, for instance. […] Responsible consumption also boosts business and the economy as well as creates new businesses and jobs. Information on responsible consumption and innovations developed based on them could be a new Finnish export product. Responsible consumption comes forth especially in the cities of the future, where people live densely and in harmony with nature. Responsible consumption extends from choices in transport to choices in foodstuffs and commodities such as textiles and home electronics."

[DE] Vision 1: Sustainability implemented
"Economy serves the people, not people serving the economy
• Growth is not the main motivation/indicator for economic success (post-growth society)
• Orientation towards common good (community economy)
• Technological progress does not automatically result in more production, but the time obtained can also be used elsewhere (8 hour day may no longer be necessary)"

[BEL] Vision 5: Moving sustainably
"I'm a fair consumer : I know my coffe, tea, milk producer. "

[CHE] Vision 1: Conscious Consumption
"We know the impact of our actions. We are informed about the origin and the composition of what we consume."

d. From Wall Street to Main Street

ASPIRATION

From Wall Street to Main Street means that in the future investors will make their allocation decisions looking not just to profit generation, but also to the (positive) social and environmental impact of (real) businesses. Thus corporations and SMEs will incorporate social and environmental targets in their strategies (in their core business).

RESEARCH DIRECTIONS:

The current financial sector needs reformation to foster sustainability and well-being. There are many examples and evidence of more sustainable approaches, as well as investment practices, but they do not easily reach mainstream. More research is needed to understand how to transform this knowledge to the right stakeholders for the greatest impact, because the system suffers from great inertia. Greater insight needs to be generated in order to understand how to overcome this inertia by looking at regulations, technical skills and other practices, thus making the "Sustainable and Responsible Investment (SRI)" approach more adopted. One key aspect of this shift should include ways to incentivise the business and financial community towards long-term investment and gains. This will require an in-

depth discussion on how to develop appropriate risk analysis and mitigation practice in order to include social, economic and environmental dimensions.

RESEARCH QUESTIONS:
- What kind of knowledge transfer processes do we need to reach the right stakeholders with current research about SRI?
- Which are the main changes that regulations and the system need to go through in order to foster SRI?
- How can we incorporate sustainability into risk analysis and mitigation practices?
- How can we incentivise business and financial community to shift their thinking towards long-term investment and gain?

CONCERNS:
- Lower capital gain (for financial companies and investors)
- Some criminal groups managing finances (huge amount of money) coming from illegal activities will cause problems.

STATE OF PLAY - EXPERTS VIEW (Scientific research):
Example: "Demystifying the SRI". In this paper, the author discusses the objection to the fact that ethical investment is inversely proportional to economic success. In some cases, sustainable business outperforms traditional ones. Work needs to be done in scientific dissemination and knowledge transfer with both industry and policy makers. (An example is the Carbon Disclosure Project).

STATE OF PLAY – CITIZENS VIEW (Everyday life):
- Community/Ethical banks
- Islamic banking
- Investment into sustainable pension funds directed into more ethical projects, etc.

IMPACTED CITIZENS VISIONS:

[LUX] Vision 5: From Zombies to communities/ Coexisting in solidarity and working for the well-being of all citizens
"an unconditional basic income for each citizen.
• a new local/regional monetary system without interest and banks of "well-being" for a local economy."

[DE] Vision 1: Sustainability Implemented
"Economy serves the people, not people serving the economy
• Growth is not the main motivation/indicator for economic success (post-growth society)
• Orientation towards common good (community economy)
• Technological progress does not automatically result in more production, but the time obtained can also be used elsewhere (8 hour day may no longer be necessary)"

[UK] Vision 1: The 2020 Economy
"The measures of success today require dogmatic and ruthless pursuit of profit based on short-term production and consumption at the expense of human rights and individual security and happiness. The 2020 economy requires mass redistribution of power and decision-making to democratic bodies and representatives for the common good. The most important difference is what constitutes a successful economy. We want as much value to be placed on the positive impact companies have on the economy as financial growth.
[...]
Economic development and growth that benefit the many and not the few, within a framework of sustainability and equality of wealth and opportunity, underpinned by the principles of trade justice and accountability and transparency."

[DK] Vision 5: Holistic management and ethical economy
"When I watch the news and hear about a large economic decision made by the government, I will know that also non-economic aspects have been taken into consideration. " [...]
"Life and investment by the society are approached from a long-term perspective."

12.
Sustainable energy

a. Smart energy governance
b. Enabling market for energy prosumers
c. Interconnected open systems
d. Beyond energy efficiency: less consumption by structural design and behaviour

12_Sustainable Energy

There is a need for sustainable production and consumption of energy.

Based on

CIMULACT social need
- Accessible, affordable, green and abundant energy [18]

CIMULACT Citizen Visions

IRE1; MAL3; NOR5; NL4; FR2; NL5; NOR2; LUX3; CYP5; EST5; DK3; EST1; AUT1;

Related Challenges addressed by Horizon 2020
- Secure, clean and efficient energy;
- Smart, green and integrated transport;
- Climate action, environment, resource efficiency and raw materials.

CIMULACT
CITIZEN AND MULTI-ACTOR CONSULTATION ON HORIZON 2020

Research Programme Scenarios:

a. Smart energy governance

ASPIRATION
We envisage a decentralised energy management system that is optimising the integration of resources and takes into account all stakeholders interests.

RESEARCH DIRECTIONS
Definition and validation of a methodological basis and tools for a transparent, participatory and multidisciplinary energy governance, enabling multi-layered integration of stakeholders' interests.

RESEARCH QUESTIONS
- Which are the experiences of bottom-up multi-layered energy governance systems in EU and other countries?
- Which are the barriers and success factors for such governance models?
- What is the structure of data needed for supporting efficient multi-layered governance and how would be made available?
- Which are the skills required for experts involved?

CONCERNS:
- Responsibility is maybe split too much.
- Regional accent way increase xenophobia.
- Who is responsible for the energy security as a whole?

STATE OF PLAY - EXPERTS VIEW (Scientific research):
- Pilot scale (Milan)
- Mostly centred on cities or at a regional level, missing the international dimensions
- No cross-cutting analysis, no multidisciplinary approach
- Planning models needed.

STATE OF PLAY - CITIZENS VIEW (Everyday life)
- Protests against windmills (because of sound and view)
- Protests against water gates on small rivers.

IMPACTED CITIZENS VISIONS

[NOR] Vision 5: A world to live in, a world to live of, a world to live for
"Responsible management of resources (pharmaceuticals, energy, food (production + distribution))"

[IRE] Vision 1: Community Enrichment through Education
"Sustainable energy systems
o Global collaboration
o Respect for environment, resources"

[GR] Vision 6: Five Pillars for human development
"Surroundings: green thinking and living: environmental awareness through education for a "green" lifestyle and renewable energy sources"

[DK] Vision 3: A sustainable Planet
"The sustainable energy sources are: Wind energy, solar cells, solar panels, heat pumps, biomass fuel which includes household waste, manure and slurry, water power and excess heat from the industry. In 2050 we will not use fossil fuels such as oil and gasoline/petrol. We have invented new forms of sustainable energy, such as waste separation which provides energy for the city. The Industry is the driving force behind the development, because there is a demand for and profits to gain in green initiatives."

b. Enabling market for energy prosumers

ASPIRATION

We envisage an energy landscape where people, families, communities and companies are not only consumers but also producers of energy. Externalities included in big producers' costs make the small producers more competitive. The vision could have a sharing economy component and increase the energy efficiency and the share of low carbon energy in Europe.

RESEARCH DIRECTIONS:

Research should explore how to foster innovation in policies, technologies and business models for enabling the expansion of the EU energy prosumers market.

RESEARCH QUESTIONS:
- Which incentives have proved effective?
- Which is the impact of existing regulations (on regional, national, EU level)?
- Evaluation of existing business models and piloting new ones.
- How to improve small scale technologies and make them convenient and affordable?

CONCERNS:
- Grid stability
- New kinds of monopolies

- Speculations and gaming the networks
- Energy hacking and terrorism.

STATE OF PLAY - EXPERTS VIEW (Scientific research):
- Feed-in tariff / self consumption
- Pilot projects in smart grids (smart metering)
- Successful cases with heating supply
- Pilot schemes for business models for non-energy actors
- Virtual power station
- EURES directive.

STATE OF PLAY - CITIZENS VIEW (Everyday life):
Connection of solar panels of houses to the national systems is possible in Spain, Poland and Malta.

IMPACTED CITIZENS VISIONS:

[NL] Vision 5: Energy: *"all kinds of energy resources we did not use in 2016 are being used and every house has a solar power installation. Energy in being generated in diverse and creative ways, e.g. from physical exercising also at home or waste that cannot be recycled is converted into energy."*

[LUX] Vision 3: A quantum leap in development: *"the energy market is not generating profit anymore, but there is democratic energy."*

[NOR] Vision 4: The environmental Citizen in a «short travelled» and «mega local» city in 2040: *"Energy recycling from smart shoes and body heat supply the smart watch and the smart glasses. Mandatory installation of solar cells or solar lamps on all buildings. Energy recycling on roads, buildings and other infrastructure."*

[AUT] Vision 5: Smart living with nature: *"By now, all housing covers its own energy demand."*

[FIN] Vision 3: Efficient recycling
"Aino lives in the same community that consists of smart homes operated by solar energy and wind power. The homes collect energy in batteries and also utilize deepdrilled groundsource heat. Smart homes use the energy that is available at the time: for example wind power during the winter and solar energy during the summer. In the morning, Aino forks over the compost, which gives warmth to her grasshopper and shiitake mushroom cultivation. Aino has been developing superconductors at the energy plant and this technology has been put in operation in 2050. "

[EST] Vision 5: A new hope: *"the use of clean energy sources growth of the share of renewable and sustainable energy"*

c. Interconnected open systems
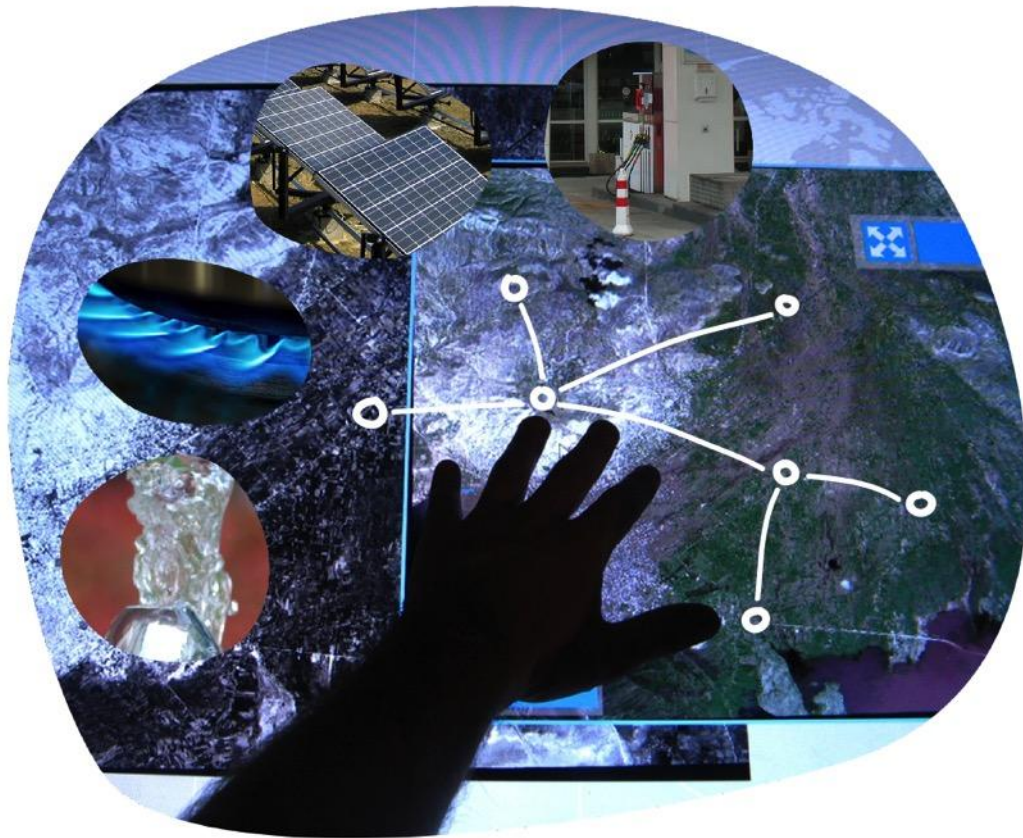
ASPIRATION
We want to reduce the environmental and social footprint of energy systems and enable adaptation to climate change. Therefore we envisage setting up an interconnected open energy system where synergies of regional and urban resources are exploited in an optimum way to meet energy demand and thus imbalance between production and consumption of energy is substantially reduced.

RESEARCH DIRECTIONS:
The key challenge for achieving this goal is the heterogeneity of the energy system. In order to create the synergies required we need multidisciplinary methods and tools such as prediction tools, infrastructure and protocols for system access, new business models and incentive systems

RESEARCH QUESTIONS:
- How to integrate urban/regional systems optimally (optimisation models based on multi-disciplinarity)?
- How to integrate energy system design into rural/urban planning (including social dimension)?

- What are suitable prediction tools, infrastructure for access and protocols of access, business models and incentive systems

CONCERNS:
- Missing political will (i.e. for collaboration between regions)
- GRID stability (for shocks on short term and for long term structural changes)
- Cost of infrastructure could be too high (no return on investment) if the current producers continue to sell chip energy, which does not integrate externalities.

STATE OF PLAY - EXPERTS VIEW (Scientific research):
- Virtual power stations
- Limitation in the full integration of RES (Renewable Energy System) into network
- Demand side management
- Power to gas research
- Pilot for electrified storage; big centralised storage (hydro, compressed air).

STATE OF PLAY - CITIZENS VIEW (Everyday life):
- Roads lighting in the night because of nuclear power (Belgium)
- Tesla batteries

IMPACTED CITIZENS VISIONS:

[EST] Vision 5: A new hope
"The use of fossil fuels decreases and the use of clean/renewable energy sources increases."

[NL] Vision 4:
"Clean and renewable locally produced energy will be used, creativity self-sustaining regions in terms of energy use. This means that, based on the regional characteristics and circumstances, an energy mix will be used that differ for every region."

d. Beyond energy efficiency: less consumption by structural design and behaviour

ASPIRATION

We want to bring about behaviour change and exploit technological innovation and integrated planning to increase energy sufficiency.

RESEARCH DIRECTIONS:

Research should target integrated structural change that combines technological innovation and behavioural change and goes far beyond mere increase of energy efficiency.

Examples are:
- Learning zero-energy city based on big data and artificial intelligence
- Reduction of transport (car) of components by 3D print
- Reduce energy consumption in buildings by spatial planning, tele-presence, and smart homes/Internet of things
- Passive cooling
- Spatial planning for energy efficiency.

RESEARCH QUESTIONS:
- Identify and assess behaviours that have a structural impact on reducing energy consumption
- How to design tools (awareness tools, information tools, stimulation tools) able to promote relevant behaviour (with structural impact)?
- What planning methods are efficient in reducing energy consumption?
- Which enabling technologies can drastically reduce resources' consumption?
- Which technologies are capable of replacing other energy consuming technologies by providing comparable services (e.g. telepresence replacing transport)?

STATE OF PLAY - EXPERTS VIEW (Scientific research):
- Models for spatial energy planners
- Optimization of energy demand by ICT
- Smart city research (→ transportation)
- Pilot research and implementation for social science application into energy (human behaviour and cooperation).

Case studies:
- COOL BIZ (Japan dress-code)
- Passive cooling.

STATE OF PLAY - CITIZENS VIEW (Everyday life):
- Shared cars/transportation
- Self-driving cars
- Drone delivery
- Teleworking
- Traffic optimization (ICT)
- Smart houses (e.g. Nest Us).

CONCERNS:
- Rebound effect (e.g. reduce flight emissions, but people fly more)
- Standards could discourage innovation.

IMPACTED CITIZENS VISIONS:

[CYP] Vision 5: Environmental Conscience
"Saving energy and resources will cause a reduction of environmental pollution to some extent and thereby improvement of citizens' health."
[NL] Vision 5: Energy
"Education about nature and environment learns people about sustainable energy. "

[HUN] Vision 4: Secure and environmentally friendly world
"With the continuous development of our technology we managed to reduce our pollutant emissions to as low levels as possible, and 98% of the energy we use comes from renewable sources."

Part 2: The CIMULACT social needs

Part 2 of this document covers the 29 social needs that were developed from the original citizens visions and formed the starting point of the work in the Milano conference as explained in the introduction. For the purpose of organising the Milano working groups these needs were grouped into teh 12 domains used in part 1 of the document.

1 Equal and Open Access to the Health Care System

What is needed
- Equal opportunities
- Securing public funding
- Non discrimination
- Good quality services

Related CIMULACT Citizen Visions (9)

[BGR] Vision 6: Evolution in health care.
[CYP] Vision 2: A just society oriented towards human rights
[CYP] Vision 3: Human Rights
[CZE] Vision 2: Quality health care for all
[FIN] Vision 2: Predictive health tracking
[GR] Vision 6: Five Pillars for human development
[HRV] Vision 3: The preservation of human health and nature for the generation 1YZ
[LAT] Vision 6: Successfully functioning society.
[ROU] Vision 5: The socio-political structure for a global citizen

Related Challenges addressed by Horizon 2020
- Health demographic change and wellbeing

2 Holistic and preventive healthcare system

What is needed
Holistic approach of the healthcare system including the following aspects: physical and mental health, wellbeing

Why it is needed
- To improve the quality of life & life expectancy
- To help people to take care of themselves
- To increase efficiency of healthcare and research

- To prevent incurable diseases like cancer

Subneeds
- Monitoring the health states (ITA4)
- Healthy lifestyles (EST6)
- Revolutionary Drugs (ROU6)
- To be able to work properly (ROU 6)
- Right medication and therapy (DK1)
- Individual choices of treatment and selfcare (SVN3)
- Mental and physical health (SVN3, DK1)
- More natural based medication with no side effects (SVN3)
- More sports and exercise (LUX4)
- More prevention incl. Vaccination (GR4)

Related CIMULACT Citizen Visions (19)

[AUT] Vision 2: Bonus of health
[CZE] Vision 3: Free citizens in the secure world of data
[DK] Vision 1: Physical and mental health
[EST] Vision 6: Life in your age
[GR] Vision 4:Improving quality of life - a weapon to fight cancer
[HUN] Vision 3: Snapshots - Fragments of conversation in a community house
[ITA] Vision 4: A school beyond times - a new education model
[LAT] Vision 2 Latvia in a Federal Europe
[LIT] Vision 4: From Harmonious Personality to Recycling Technologies
[MAL] Vision 4: Sustainable and Equitable Society
[PL] Vision 1: Healthy Family, Healthy Society (Flower of Life)
[ROU] Vision 1: Let's be humans through technology
[ROU] Vision 4: The Golden Age
[ROU] Vision 6: The mind of the future, in a healthy body
[SVK] Vision 3 (Green): Unlimited Possibilities of the Future: Transportation, Healthcare and Dissemination of Ideas
[SVK] Vision 5 (Orange): Technology - a Substitute of Humanity?
[SVN] Vision 1: Society of Sustainable Balance
[SVN] Vision 3: Green Future
[SWE] Vision 3: Ecological sustainability and health

Related Challenges addressed by Horizon 2020
- Health demographic change and well-being
- Europe in a changing world - inclusive, innovative and reflective societies

3 Healthier Living provided by Technology

- Lives are healthier by technologies [FIN2, BGR6, ROU4]
- Reseat & developed for health technology needed. [ROU6, CZE2, GR4]
- Higher convenience (online, no waiting time), self-treatment & autonomy [NOR3, HRV2]
- Preventive tracking taking data Protection serious

Related CIMULACT Citizen Visions (11)

[GR] Vision 4:Improving quality of life - a weapon to fight cancer
[LIT] Vision 4: From Harmonious Personality to Recycling Technologies
[PL] Vision 1: Healthy Family, Healthy Society (Flower of Life)
[ROU] Vision 4: The Golden Age
[ROU] Vision 6: The mind of the future, in a healthy body
[BGR] Vision 6: Evolution in health care.
[CZE] Vision 2: Quality health care for all
[FIN] Vision 2: Predictive health tracking
[HRV] Vision 2: Science and technology in the service of mankind
[NOR] Vision 3: Society and the individual in balance
[PL] Vision 6: Quick and Complex Diagnostics as a Guarantee of Healthy Society

EC Challenge
- Health, Demographic Change and Wellbeing

4 Healthy Life from Childhood to old age

What is needed, why it is needed
People are able to live healthily right into old age. This is needed because we are living longer (especially in Europe). This does not just rely on health services but on healthy lifestyles and taking responsibility for one's own health

Subneeds
- Having Knowledge to make the right choices – people need education about healthy lifestyles
- Having the right tools (technology) for self-diagnosis including continuous monitoring of health indicators
- People have resources to practice healthy lifestyles /eg sport facilities, access to healthy food)
- Community awareness and involvement
- People looking after each other, "wellbeing facilitator" for every community

Related CIMULACT Citizen Visions (13)

[ROU] Vision 4: The Golden Age

[PL] Vision 6: Quick and Complex Diagnostics as a Guarantee of Healthy Society
[EST] Vision 6: Life in your age
[CYP] Vision 1: Pension System
[ESP] Vision 5 Always young: It is within our reach
[FR] Vision 4: Sharing common values to live better together
[LAT] Vision 6: Successfully functioning society.
[MAL] Vision 3: Education leading to a new way of life
[PL] Vision 2: Vision of a Healthy Life "From Kindergarten to Seniors"
[SVN] Vision 6: Equality and Human Rights - A Driver of Social Development
[SWE] Vision 5: Environmentally and socially adapted living spaces
[UK] Vision 5: Promoting community wellbeing
[UK] Vision 6: Citizen Empowerment

Related Challenges addressed by Horizon 2020
- Health, demographic change and wellbeing

5 Enhance Quality of Education

What is needed

Enhance the quality of education through:
- Restructuring content and learning context
- Personalisation starting from the student's talent ability and learning style

Subneeds

- Promote individual talents in special facilities
- Allow people to study at their own pace and encourage them to experiment, more room for creativity
- Assess people on talent and abilities (instead of documented knowledge)
- Second and third languages in education
- More teacher training
- Restructure educational content (along strengthening students real aptitudes)
- Multi-thematic hubs, more integrated learning and different learning styles
- Start from what people love, the created value will be rewarded
- Interactive training methods
- State of play technology (makes different learning styles possible and increases engagement)
- Skills and knowledge through fun and games

Related CIMULACT Citizen Visions (14)

[ITA] Vision 4: A school beyond times - a new education model
[AUT] Vision 4: Education means freedom
[DE] Vision 5: Dream school 2050
[ESP] Vision 1: Hope for the future
[EST] Vision 4: A united world
[GR] Vision 1:Humanity - Environment – Justice
[HUN] Vision 5: Education in the world of transforming work
[LUX] Vision 6: I am satisfied with what I am doing! (Do what you love, love what you do!)
[MAL] Vision 6: Education and Society (community)
[NL] Vision 6: Education is the foundation of civilization
[PL] Vision 5: I've Got Talent
[SVK] Vision 1 (Purple): Popularization of Science and Technology
[SVK] Vision 6 (Red): School of the Future
[SWE] Vision 6: An expanded view of human competencies

Related Challenges addressed by Horizon 2020

- Europe in a changing world - inclusive, innovative and reflective societies

6 Education by the Community/Shared Learnings

What is needed/Why is it needed

Members of society all encompass a lot of knowledge and wisdom. Mutual learning between members of a community helps to create a common language, forms the community develops the skills and knowledge forms mutual aid. The aim is to pass knowledge about cultural traditions, content distinct traces from the community and develop new forms of it.

Related CIMULACT Visions (17)

[MAL] Vision 6: Education and Society (community)
[PL] Vision 5: I've Got Talent
[ROU] Vision 4: The Golden Age
[UK] Vision 6: Citizen Empowerment
[CZE] Vision 4: Upbringing and education towards tolerance
[FR] Vision 1: Sociability over technology
[HUN] Vision 4: The annual evaluation speech of the female CEO in 2050
[IRE] Vision 1: Community Enrichment through Education
[ITA] Vision 2: A simply special city
[ITA] Vision 3: Return to via Gluck
[ITA] Vision 5: Personal growth within collective growth and vice versa
[LIT] Vision 2: Human and Environment

[LIT] Vision 3: Harmony between Human and Nature
[LIT] Vision 5: Sustainable Family Policy
[LUX] Vision 4: Technology at society's service
[PL] Vision 4: Quality of Family Life. Family - Reborn
[PORT] Vision 6: My day in 2050

Related Challenges addressed by Horizon 2020
- Health demographic change and well-being
- Europe in a changing world - inclusive, innovative and reflective societies

7 Education for green living

What is needed
There is a need for education for environmental awareness

Related CIMULACT Citizen Visions (18)

[LIT] Vision 3: Harmony between Human and Nature
[DE] Vision 5: Dream school 2050
[HUN] Vision 5: Education in the world of transforming work
[SVN] Vision 3: Green Future
[SWE] Vision 3: Ecological sustainability and health
[BEL] Vision 6:The eco-logical school
[CHE] Vision 2: Inclusive Education
[CYP] Vision 5: Environmental Conscience
[CYP] Vision 6: Future Experiential School
[CZE] Vision 1: Society without plastics
[DE] Vision 1: Sustainability implemented
[FIN] Vision 4: The future of responsible consumption
[HRV] Vision 6: Modern tradition and green technology
[MAL] Vision 1: At one with the Environment
[NL] Vision 5: Energy
[SVN] Vision 2: The Nature is Always Right
[SVN] Vision 5: Prosperity and Work Activity of Citizens
[SWE] Vision 2: Education - A Standardised education system in the EU

Related Challenges addressed by Horizon 2020
- Climate Action, environment resource efficiency and raw materials
- Europe in a changing world - inclusive, innovative and reflective societies

8 Accessible Education

According to the visions accessible education comprises:
- Use new technologies to offer education to everyone, all life long and to all profiles (eg. MOOC)
- Education opens to the world, promotion of the international students' mobility and free language course
- High quality accessible and free education should be public
- Education should take care and do not leave students behind by adapting the courses when needed
- Fair territorial equity regarding education; both poor and rich areas should have the same level of quality

Related CIMULACT Citizen Visions (23)

[CHE] Vision 2: Inclusive Education
[SVN] Vision 5: Prosperity and Work Activity of Citizens
[MAL] Vision 6: Education and Society (community)
[NL] Vision 6: Education is the foundation of civilisation
[SVK] Vision 1 (Purple): Popularization of Science and Technology
[SVK] Vision 6 (Red): School of the Future
[FR] Vision 4: Sharing common values to live better together
[HRV] Vision 2: Science and technology in the service of mankind
[MAL] Vision 4: Sustainable and Equitable Society
[BGR] Vision 3: Family, personal development and value system.
[BGR] Vision 4: Good education - the way towards human and society development.
[CHE] Vision 3: Harmony between the social and the global
[CHE] Vision 5: Together for one world
[CYP] Vision 2: A just society oriented towards human rights
[DE] Vision 3: Diversity and self-determination
[ESP] Vision 2: Small changes are powerful
[ESP] Vision 3: Building the future
[ESP] Vision 4: Our ideal society: thoughts create realities
[HRV] Vision 3: The preservation of human health and nature for the generation 1YZ
[MAL] Vision 5: A Democratic, Diverse and Equal Society
[NL] Vision 1: Equality for all people
[PORT] Vision 1: Alice in tomorrow's land
[SWE] Vision 1: Equality between women and men

Related Challenges addressed by Horizon 2020
- Europe in a changing world - inclusive, innovative and reflective societies

9 Education for Citizenship

What is needed/Why is it needed

Need for education that supports citizenship that is necessary for an active society with social responsibility. This will empower people to fulfil the role of an engaged citizen behaving responsibly as a member of society.

Related CIUMLACT Citizen Visions (23)

[CHE] Vision 5: Together for one world
[ESP] Vision 3: Building the future
[MAL] Vision 5: A Democratic, Diverse and Equal Society
[HUN] Vision 5: Education in the world of transforming work
[SWE] Vision 2: Education - A Standardised education system in the EU
[ITA] Vision 2: A simply special city
[PL] Vision 4: Quality of Family Life. Family – Reborn
[MAL] Vision 3: Education leading to a new way of life
[AUT] Vision 6: We are one community!
[BEL] Vision 4: Citizen-centred vision
[BGR] Vision 5: Towards better life through a change in thinking and attitudes of people.
[DE] Vision 4: Living together - shared homes in 2050
[DK] Vision 2: A democratic society with REAL equal opportunities
[ESP] Vision 6: The environment where we shall live
[FR] Vision 2: Collective project
[FR] Vision 3: 2050 will be the "right time"
[FR] Vision 5: Living in a balanced society
[GR] Vision 5:Man in the center of education and attempts of development
[IRE] Vision 2: Expression of Quality
[LUX] Vision 2: Generate a life ethic
[MAL] Vision 2: Better quality of life towards sustainable approach to local and global issues
[NL] Vision 2: Together for one another
[PL] Vision 3: New Technologies in Everyday Life

Related Challenges addressed by Horizon 2020
- Europe in a changing world - inclusive, innovative and reflective societies

10 Hands-On applied education and actionable knowledge

What is needed/ Why it is needed
The main assumption is that manual/craft/practical knowledge is as important and qualified as intellectual/theoretical one.

There is a need for experimental, practical, education which develops personal interests and skills (including hobbies) so to unfold the children`s potential. This education can lead to:
1. Developing awareness about everyday issues (including environment, health) and
2. Acquiring a profession (getting a job right after school) and be guided in a career

Subneeds
- Tailor made vocational training

Related CIMULACT Citizen Visions (11)

[HUN] Vision 5: Education in the world of transforming work
[BGR] Vision 4: Good education - the way towards human and society development.
[HRV] Vision 3: The preservation of human health and nature for the generation 1YZ
[DE] Vision 5: Dream school 2050
[CYP] Vision 6: Future Experiential School
[IRE] Vision 1: Community Enrichment through Education
[GR] Vision 6: Five Pillars for human development
[ITA] Vision 6: Technology at the service of man
[LIT] Vision 1: Freedom to Create - Responsibility. Sustainable Future
[NOR] Vision 1: A work life for all
[UK] Vision 2: Community Empowered Learning for the 21st Century

EC Challenge
Europe in a changing world/inclusive, innovative and reflective societies

11 Life-Long Learning

What is needed/Why it is needed
Life-long-learning is a human right because education is not age based but aims to achieve the individual and societal full-potential, plus a better citizenship. Life Long Learning is fundamental for:
- Changing employment over lifetime
- Raising awareness about healthy living when growing older leads to reducing the digital divide
- personal empowerment

Related CIMULACT Citizen Visions (10)

[HUN] Vision 5: Education in the world of transforming work
[HRV] Vision 3: The preservation of human health and nature for the generation 1YZ
[DE] Vision 5: Dream school 2050
[IRE] Vision 1: Community Enrichment through Education
[GR] Vision 6: Five Pillars for human development
[ITA] Vision 6: Technology at the service of man

[NOR] Vision 1: A work life for all
[UK] Vision 2: Community Empowered Learning for the 21st Century
[NL] Vision 6: Education is the foundation of civilisation
[NL] Vision 5: Energy

EC Challenge
- Health, Demographic Change and wellbeing;
- Europe in a changing world - inclusive, innovative and reflective societies

12 Personal development through education

What is needed/Why is it needed
Encourage and enable personal development to grow more skilled, balanced and happy individuals (and by consequence communities) through education.

Subneeds
- Time to engage freely and at no cost in different activities enriching lives
- Invest in tech that leads to free time to focus on personal and collective development
- Focus on personal happiness (not productivity) leading to happiness of collective
- Encourage personal development: critical mind, creativity, open mindedness, subject equally valued, new infrastructures
- Development of creativity and talents
- mindset change: self knowledge and ability to manage energy

Related CIMULACT Citizen Visions (13)

[BEL] Vision 2: September 2051 : back to school
[BGR] Vision 5: Towards better life through a change in thinking and attitudes of people.
[CHE] Vision 5: Together for one world
[CYP] Vision 6: Future Experiential School
[EST] Vision 3: Social welfare and sustainability
[GR] Vision 5:Man in the center of education and attempts of development
[HRV] Vision 1: New age
[HRV] Vision 2: Science and technology in the service of mankind
[LAT] Vision 5: Work as a means of expression.
[LIT] Vision 6. Emotional Intelligence for Positive World Creation
[MAL] Vision 6: Education and Society (community)
[PORT] Vision 4: Culture with all for development

[ROU] Vision 2: ECO-TERRA

EC Challenges:

- Health, Demographic Change and wellbeing;
- Europe in a changing world - inclusive, innovative and reflective societies

13 Free personal and spiritual development

What is needed?/Why it is needed?
- A change in thinking and attitudes of people towards better life and positive world creation. [BGR5, LIT6]
- Society invests in the personal and spiritual development of people and thus enables people to invest in society.
- Learning how to listen, understand and express needs and emotions since an early age. [LUX6]
- A basic income guarantee from the state [AUT6]: more time for relaxing, family and travels. [SVK2]

Subneeds
- New Kind of schools:
    - o School for emotions [BGR3]
    - o School of dreams [BGR3]
- Meditation & Relaxation rooms [HUN4]
- Personal liberation: people work in fields they choose instead of which society dictates [GR2]
- More free time for personal development & social life [ROU2]
- Harmony between human & nature [LIT3]
- Less materialistic life [FIN6]

Additional hints
- Telepathy [LIT6]
- Mind control (self-treatment) [LIT6]
- Individual happiness index [PORT4]

Related CIMULACT Citizen Visions (23)

[BGR] Vision 5: Towards better life through a change in thinking and attitudes of people.
[CYP] Vision 6: Future Experiential School
[GR] Vision 5:Man in the center of education and attempts of development
[LIT] Vision 6. Emotional Intelligence for Positive World Creation
[ROU] Vision 2: ECO-TERRA
[AUT] Vision 6: We are one community!
[BGR] Vision 3: Family, personal development and value system.
[CHE] Vision 1: Conscious Consumption
[FIN] Vision 6: Community as an asset

[GR] Vision 2:Work - Self-realization and Environment Protection
[HUN] Vision 4: The annual evaluation speech of the female CEO in 2050
[LAT] Vision 1: Order of the global things
[LIT] Vision 3: Harmony between Human and Nature
[LUX] Vision 6: I am satisfied with what I am doing! (Do what you love, love what you do!)
[NL] Vision 1: Equality for all people
[NL] Vision 4: Sustainable energy mix & cradle to cradle
[NOR] Vision 4: The environmental Citizen in a "short travelled" and "mega local" city in 2040
[PL] Vision 5: I've Got Talent
[ROU] Vision 3: Back to (our) roots
[ROU] Vision 4: The Golden Age
[SVK] Vision 2 (Blue): Technology for Better Health
[SVN] Vision 6: Equality and Human Rights - A Driver of Social Development
[UK] Vision 4: Untitled

Related Challenges addressed by Horizon 2020
- Health, Demographic Change and Wellbeing

14 Fast, flexible, affordable, smart, reliable and clean transport

What is needed/Why it is needed
People want to get from A to B for work, leisure, family ect.

Subneeds
- More public transport, trains
- More care sharing
- Fewer individual cars
- Restrict city traffic
- More bicycles
- More technology such as:
    - Light-rail capsule
    - Teleportation
    - Gravitational forces used
    - Hoverplatforms
    - teleport

Related CIMULACT Citizen Visions (16)

[BEL] Vision 4: Citizen-centred vision
[BEL] Vision 5: Moving sustainably
[BGR] Vision 1: The smart city - this is me!
[DE] Vision 1: Sustainability implemented
[DE] Vision 2: Individual mobility of the future
[DK] Vision 5: Holistic management and ethical economy

[EST] Vision 5: A new hope
[FR] Vision 5: Living in a balanced society
[HUN] Vision 1: NATURALLY
[IRE] Vision 1: Community Enrichment through Education
[LAT] Vision 2 Latvia in a Federal Europe
[MAL] Vision 2: Better quality of life towards sustainable approach to local and global issues
[SVK] Vision 3 (Green): Unlimited Possibilities of the Future: Transportation, Healthcare and Dissemination of Ideas
[SVK] Vision 5 (Orange): Technology - a Substitute of Humanity?
[SVN] Vision 5: Prosperity and Work Activity of Citizens
[SWE] Vision 5: Environmentally and socially adapted living spaces

Related Challenges addressed by Horizon 2020
- Health, Demographic Change and wellbeing;
- Smart, green, integrated transport;
- Climate Action, environment resource efficiency and raw materials

15 Balanced and fair development of both rural and urban areas

What is needed/Why it is needed
Cities have concentrated for a long time on population, wealth, activities, culture, work, team sports. This has generated an unfair balance of development chances, leaving the countryside "abandoned". Cities have ended up with lower quality of life (stress, noise, pollution, small spaces to live, housing costs increase, etc.) while the preserved environment of the countryside now often a healthy, safe, pleasant life context. Rural areas have now development projects of their own (with specific values).

Subneeds
- Rural areas fairly represented and are equal partners with urban representatives. Renal areas have a voice in governance and decision making.
- Development of environmentally-friendly activities in rural areas in order to limit pollution and harm on biodiversity and natural ecosystems
- Restore contaminated soils
- Countryside is a place of creativity, innovation, culture which generates a SMART countryside breaking with the popular image of "retarted" countryside.
- Renal areas are a great space for wellbeing and social life and natural support

Related CIMULACT Citizen Visions (5)

[HRV] Vision 4: Erasing the borders...
[HRV] Vision 6: Modern tradition and green technology
[HUN] Vision 2: The rise of a backward region
[ITA] Vision 2: A simply special city

EC Challenge
- Health, Demographic Change and Wellbeing;
- Food security, sustainable Agriculture and Forestry, Marine, Maritime and Inland Water Research and the Bio economy;
- Climate Action, Environment, Resource Efficiency and Raw Materials

16 Need for more balanced life and more meaningful work

What is needed/Why it is needed

There is need for realignment between work and personal and community life. More time is needed to be able to invest in family life and participate in local activities. Jobs should make more sense to the individuals, be more meaningful and rewarding. People need both to be able to define their own work and to achieve a more balanced life and greater self-realisation

Subneeds

More Community Supporting Jobs.

Work needs to deal with more community oriented challenges. Community oriented jobs should stimulate collaboration.

More balance in work

Work needs to provide learning situations and more free time for personal, family and community development. It should stimulate creativity.

We need more balanced distribution of profits between employers and employees. We need also equal pay for employees. Salaries mean money but also other kinds of rewards such as good work conditions, meaningful and pleasureful activities.

Related CIMULACT Citizen Visions (22)

[HUN] Vision 2: The rise of a backward region
[LAT] Vision 4 Ecologically independent
[EST] Vision 5: A new hope
[SVN] Vision 5: Prosperity and Work Activity of Citizens
[ROU] Vision 2: ECO-TERRA
[GR] Vision 2:Work - Self-realization and Environment Protection
[LUX] Vision 6: I am satisfied with what I am doing! (Do what you love, love what you do!)
[NOR] Vision 4: The environmental Citizen in a "short travelled" and "mega local" city in 2040
[PL] Vision 5: I've Got Talent
[LAT] Vision 5: Work as a means of expression.
[PORT] Vision 4: Culture with all for development
[DE] Vision 6: The future of work
[DK] Vision 4: The nature city of the future
[FR] Vision 3: 2050 will be the "right time"

[IRE] Vision 3: Relationships with one another and the environment
[ITA] Vision 1: Towards a more aware society
[ITA] Vision 5: Personal growth within collective growth and vice versa
[LUX] Vision 2: Generate a life ethic
[LUX] Vision 4: Technology at society's service
[NL] Vision 2: Together for one another
[NL] Vision 3: Freedom
[SWE] Vision 4: A healthier Europe

EC Challenge
- Health, Demographic Change and wellbeing;
- Europe in a changing world - inclusive, innovative and reflective societies
- Secure societies - protecting freedom and security of Europe and its citizens.

17 Technology serving human beings and society

What is needed/Why it is needed
Developing technologies which will enhance human capabilities and dispositions according to needs identified by this project. Developing human potential is a scarce and sometimes only resource for value based economy and quality of life.

Subneeds
Technology changes improving quality of life in areas of health (e.g. prevention in general) social care, education, transport, communication (access to information) child- elderly care, housing (intelligent buildings), addiction prevention, working conditions, security, assisting every day activities (prosthetics etc.), nutrition, social capital (easing social relations), housework, public participation.
- Technology and information will become a common property freely available to everyone
- To develop personalised solutions
- Public services universally accessible,
- To help develop physical and mental capabilities

Additional hints
Threats of uncontrolled technological development
- Alienation of isolated individuals
- Limiting artificially induced consumption
It is significant that society is in control of technology and not vice versa

Related CIMULACT Citizen Visions (28)

[EST] Vision 5: A new hope
[PL] Vision 5: I've Got Talent
[LUX] Vision 4: Technology at society's service
[NL] Vision 3: Freedom
[HRV] Vision 6: Modern tradition and green technology
[SVK] Vision 3 (Green): Unlimited Possibilities of the Future: Transportation, Healthcare and Dissemination of Ideas
[BGR] Vision 3: Family, personal development and value system.
[LIT] Vision 3: Harmony between Human and Nature
[ROU] Vision 3: Back to (our) roots
[SVK] Vision 2 (Blue): Technology for Better Health
[HRV] Vision 2: Science and technology in the service of mankind
[MAL] Vision 6: Education and Society (community)
[BEL] Vision 3: Digital Mind
[BGR] Vision 6: Evolution in health care.
[CYP] Vision 4: Technology applicable as a channel of progress EU context
[CZE] Vision 2: Quality health care for all
[CZE] Vision 3: Free citizens in the secure world of data
[ESP] Vision 2: Small changes are powerful
[ESP] Vision 3: Building the future
[FIN] Vision 2: Predictive health tracking
[GR] Vision 3: A smooth coexistence of citizens in a secure and "green" society
[HRV] Vision 3: The preservation of human health and nature for the generation 1YZ
[IRE] Vision 5: Balance of Nature, Humanity, and Technology
[NOR] Vision 2: From fossil fuels to value based renewed energy
[NOR] Vision 3: Society and the individual in balance
[PL] Vision 3: New Technologies in Everyday Life
[ROU] Vision 1: Let's be humans through technology
[SVK] Vision 4 (Yellow): Futurofarma and Space Tourism

Related Challenges addressed by Horizon 2020
- Health, Demographic Change and wellbeing;
- Smart, green, integrated transport;
- Secure societies - protecting freedom and security of Europe and its citizens.

18 Accessible, affordable, green and abundant energy

What is needed/Why is it needed
There is a need for sustainable production and consumption of energy.

Subneeds

- The energy mix differs for every region, depends on the available resources, high level of energy self sustainability of regions
- Democratic energy; the energy market is not generating profit
- Responsible management of energy resources

Related CIMULACT Citizen Visions (13)

[EST] Vision 5: A new hope
[NOR] Vision 2: From fossil fuels to value based renewed energy
[IRE] Vision 1: Community Enrichment through Education
[NL] Vision 4: Sustainable energy mix & cradle to cradle
[AUT] Vision 1: Finally a true European Community!
[CYP] Vision 5: Environmental Conscience
[DK] Vision 3: A sustainable Planet
[EST] Vision 1: Human-friendly and safe environment
[FR] Vision 2: Collective project
[LUX] Vision 3: A quantum leap in development
[MAL] Vision 3: Education leading to a new way of life
[NL] Vision 5: Energy
[NOR] Vision 5: A world to live in, a world to live of, a world to live for

Related Challenges addressed by Horizon 2020
- Smart, green, integrated transport;
- Climate Action, environment resource efficiency and raw materials
- Secure societies - protecting freedom and security of Europe and its citizens.

19 We need a society with room for all

What is needed/Why it is needed
There is a need for greater unity in diversity with increased interaction and integration. There is a need for more respect for parents, adults, minorities and the ill, equal rights and responsibilities, respect and space for diverse cultures and religions. There should not be any discrimination at work or in communities and better communication between groups.

Related CIMULACT Citizen Visions (15)

[IRE] Vision 1: Community Enrichment through Education
[SVK] Vision 3 (Green): Unlimited Possibilities of the Future: Transportation, Healthcare and Dissemination of Ideas
[HRV] Vision 3: The preservation of human health and nature for the generation 1YZ
[HUN] Vision 2: The rise of a backward region
[BEL] Vision 1: Foundations for respect, equality, diversity through education
[CZE] Vision 4: Upbringing and education towards tolerance

[DE] Vision 3: Diversity and self-determination
[DK] Vision 1: Physical and mental health
[EST] Vision 4: A united world
[FR] Vision 1: Sociability over technology
[GR] Vision 1:Humanity - Environment - Justice
[HRV] Vision 5: Society of equal opportunities
[IRE] Vision 2: Expression of Quality
[MAL] Vision 5: A Democratic, Diverse and Equal Society
[SWE] Vision 1: Equality between women and men

Related Challenges addressed by Horizon 2020
- Health, Demographic Change and wellbeing;
- Europe in a changing world - inclusive, innovative and reflective societies
- Secure societies - protecting freedom and security of Europe and its citizens.

20 Ensure more balance with nature: Systems&Cycles

What is needed/Why is it needed
No Privatization of common good. Full respect of nature and capacity to restore damaged nature.

Subneeds
- Ensure that untouched nature will be preserved
- To restore damaged natural systems
- To guarantee that our condition of existence is not impacting natural systems
    o Design of products for longer life
    o Circular economy/recycling

Related CIMULACT Citizen Visions (14)
[DK] Vision 1: Physical and mental health
[EST] Vision 5: A new hope
[CYP] Vision 5: Environmental Conscience
[DK] Vision 3: A sustainable Planet
[LIT] Vision 3: Harmony between Human and Nature
[IRE] Vision 5: Balance of Nature, Humanity, and Technology
[SVK] Vision 4 (Yellow): Futurofarma and Space Tourism
[DE] Vision 1: Sustainability implemented
[AUT] Vision 5: Smart living with nature
[FIN] Vision 1: VALUES - immateriality and minimalism
[LIT] Vision 2: Human and Environment
[PORT] Vision 1: Alice in tomorrow's land

[PORT] Vsion 3: E.U. - We are
[SVN] Vision 1: Society of Sustainable Balance

21 Gain control and influence through participation in governance

What is needed/Why it is needed
- More effective engagement in the decision making
- e-government infrastructure/interface electronic voting
- Citizens take responsibility

Subneeds
- Awareness: Information on what is going on
- Government backs up and supports when citizens engage
- EV Mandated Block Parties twice a year. Participants must come from min of 3 countries, blue flag must be visible, ode to joy should be played.

Additional hints
Tendency to focus on local democracy

Related CIMULACT Citizen Visions (23)

[PORT] Vsion 3: E.U. - We are
[FR] Vision 1: Sociability over technology
[MAL] Vision 5: A Democratic, Diverse and Equal Society
[AUT] Vision 1: Finally a true European Community!
[FR] Vision 2: Collective project
[ITA] Vision 5: Personal growth within collective growth and vice versa
[HUN] Vision 1: NATURALLY
[UK] Vision 4: Untitled
[CHE] Vision 2: Inclusive Education
[CYP] Vision 3: Human Rights
[CZE] Vision 5: Open civil society
[ESP] Vision 4: Our ideal society: thoughts create realities
[ESP] Vision 5 Always young: It is within our reach
[EST] Vision 2: Secure and environmentally friendly world
[IRE] Vision 4: Decision-making for a Sustainable Future
[LUX] Vision 5: From Zombies to communities/ Coexisting in solidarity and working for the well-being of all citizens
[PORT] Vision 2: Cooperation
[PORT] Vision 5: We build the future now
[PORT] Vision 6: My day in 2050
[ROU] Vision 5: The socio-political structure for a global citizen
[SVN] Vision 4: Clean Environment - Common Sense

[UK] Vision 1: The 2020 Economy
[UK] Vision 6: Citizen Empowerment

Related Challenges addressed by Horizon 2020:
- Europe in a changing world - inclusive, innovative and reflective societies

22 Social Justice

What is needed/Why it is needed
- Basic income in order to have: equal opportunities, material safety
- Social cohesion
- Gender equality
- Equal access to healthcare, education

Subneeds
- Welfare state
- Trust in justice system
- Free independent press
- Citizens consultations, involvement and information
- Religion equality
- Benefits of technology are shared
- Inheritance tax so new generations start with more equality

Related CIMULACT Citizen Visions (18)

[MAL] Vision 5: A Democratic, Diverse and Equal Society
[CZE] Vision 5: Open civil society
[LUX] Vision 5: From Zombies to communities/ Coexisting in solidarity and working for the well-being of all citizens
[UK] Vision 1: The 2020 Economy
[HRV] Vision 5: Society of equal opportunities
[IRE] Vision 2: Expression of Quality
[HRV] Vision 2: Science and technology in the service of mankind
[ESP] Vision 3: Building the future
[GR] Vision 3: A smooth coexistence of citizens in a secure and "green" society
[NL] Vision 1: Equality for all people
[SVN] Vision 6: Equality and Human Rights - A Driver of Social Development
[HRV] Vision 1: New age
[AUT] Vision 2: Bonus of health
[CHE] Vision 4: Less is more
[CYP] Vision 2: A just society oriented towards human rights
[DK] Vision 2: A democratic society with REAL equal opportunities
[FR] Vision 4: Sharing common values to live better together
[MAL] Vision 4: Sustainable and Equitable Society

- Health, Demographic Change and wellbeing;
- Europe in a changing world - inclusive, innovative and reflective societies

23 Sustainably produced, healthy, clean and responsible food

What is needed/Why it is needed

In order to preserve natural resources and the environment, society needs sustainably produced food that is made ethically/responsibly. Most production is done locally, bearing in mind the principles of ecological management. Food produced this way is safe, healthy and nutritious.

Subneeds

More awareness of what we eat.

- More knowledge on nutrition. (vegetarism, seasonal eating, governed by laws)
- Animal welfare ("Happy Cows")
- Reuse of food waste
- Use of green energy in food production
- Environmental food transport
- Gardens integrated into settlements (community gardens, school gardens)
- Healthy food shops
- Accessible to all
- New food types (insects, artificial food/tablets
- Food safety

Related CIMULACT Citizen Visions (22)

[LUX] Vision 5: From Zombies to communities/ Coexisting in solidarity and working for the well-being of all citizens
[FR] Vision 1: Sociability over technology
[ESP] Vision 5 Always young: It is within our reach
[IRE] Vision 4: Decision-making for a Sustainable Future
[EST] Vision 5: A new hope
[SVK] Vision 4 (Yellow): Futurofarma and Space Tourism
[SVN] Vision 1: Society of Sustainable Balance
[BEL] Vision 1: Foundations for respect, equality, diversity through education
[EST] Vision 4: A united world
[EST] Vision 1: Human-friendly and safe environment
[HRV] Vision 6: Modern tradition and green technology
[ROU] Vision 2: ECO-TERRA
[IRE] Vision 3: Relationships with one another and the environment

[BEL] Vision 5: Moving sustainably
[CHE] Vision 1: Conscious Consumption
[FIN] Vision 4: The future of responsible consumption
[FIN] Vision 5: Eco-efficient nutrition and living
[ITA] Vision 4: A school beyond times - a new education model
[LUX] Vision 1: On the way to a participatory community
[NOR] Vision 6: Ensuring sustainable use of natural resources
[PL] Vision 1: Healthy Family, Healthy Society (Flower of Life)
[PL] Vision 2: Vision of a Healthy Life "From Kindergarten to Seniors"

EC Challenge
- Health, Demographic, Change and Wellbeing;
- Food security, sustainable Agriculture and Forestry, Marine, Maritime and inland water research and the bio economy;
- Climate Action, environment resource efficiency and raw materials

24 For a liveable planet, nature is respected, preserved and restored

What is needed/Why it is needed
In order to preserve life on a liveable planet, less harmful activities are developed through sustainable materials, responsible technology and policy regulations, but also through a collective awareness. Environment is systematically taken into account in any kind of decisions or activities. Biodiversity is rich and preserved. Pollution is limited and sanctioned. Nature is encouraged to be everywhere. It is part of daily life even in cities.

Subneeds
- Education for environment and sustainability
- Access to nature for all is encouraged
- Nature conversation is part of all lifestyles
- Environmental policies limit harmful and polluting activities (CO2, GMO)
- Co-existing with nature in a smart and integrative way (constructions are fitting with nature) and in equitable manner
- Development of green businesses and activities (green jobs)
- Healthy environment healthy citizens

Related CIMULACT Citizen Visions (22)

[IRE] Vision 4: Decision-making for a Sustainable Future
[ESP] Vision 3: Building the future
[CHE] Vision 4: Less is more
[EST] Vision 2: Secure and environmentally friendly world
[SVN] Vision 4: Clean Environment - Common Sense
[AUT] Vision 5: Smart living with nature
[DK] Vision 4: The nature city of the future

[SWE] Vision 4: A healthier Europe
[HUN] Vision 4: The annual evaluation speech of the female CEO in 2050
[LAT] Vision 1: Order of the global things
[BEL] Vision 6:The eco-logical school
[BGR] Vision 2: Green planet - everyone's responsibility.
[CHE] Vision 6: Social living space
[DE] Vision 5: Dream school 2050
[DK] Vision 6: A greener world
[ESP] Vision 1: Hope for the future
[GR] Vision 4:Improving quality of life - a weapon to fight cancer
[LAT] Vision 3: Responsible lifestyle
[LIT] Vision 1: Freedom to Create - Responsibility. Sustainable Future
[SVN] Vision 2: The Nature is Always Right
[SVN] Vision 3: Green Future
[SWE] Vision 3: Ecological sustainability and health

Related Challenges addressed by Horizon 2020
- Health, Demographic, Change and Wellbeing;
- Food security, sustainable Agriculture and Forestry, Marine, Maritime and inland water research and the bio economy;
- Climate Action, environment resource efficiency and raw materials

25 Community Development

What is needed/Why it is needed

There is an expressed need for developing local communities of members who have similar values, interests, know how. Principles of community development: solidarity and cooperation, responsibility, social cohesion and better social integration. Communal activities new professions appear. Cultivation of relationship of closeness and affection.

Subneeds
- Need to have a higher level of social inclusion of all members of a community, of different age groups, people with disabilities. Responsibility towards the other members is a norm. Sharing of resources underpins sustainability. People have their voice and weight in decision making.
- Need for empowerment; Wide public debate and citizens decide on the investment priorities of the community
- Need for new business opportunities at community level
- Need for more sharing of common values in generations cultures and countries

Community development addresses every aspect of human life.

Related CIMULACT Citizen Visions (18)

[LUX] Vision 5: From Zombies to communities/ Coexisting in solidarity and working for the well-being of all citizens
[FR] Vision 1: Sociability over technology
[MAL] Vision 5: A Democratic, Diverse and Equal Society
[HRV] Vision 5: Society of equal opportunities
[FR] Vision 4: Sharing common values to live better together
[ITA] Vision 5: Personal growth within collective growth and vice versa
[UK] Vision 4: Untitled
[PORT] Vision 5: We build the future now
[FR] Vision 3: 2050 will be the "right time"
[NL] Vision 2: Together for one another
[BGR] Vision 5: Towards better life through a change in thinking and attitudes of people.
[FIN] Vision 6: Community as an asset
[EST] Vision 3: Social welfare and sustainability
[CHE] Vision 3: Harmony between the social and the global
[HUN] Vision 3: Snapshots - Fragments of conversation in a community house
[HUN] Vision 6: Community house model programme / "The jointly owned horse does not have a roughed-up back anymore."
[ITA] Vision 3: Return to via Gluck
[LIT] Vision 5: Sustainable Family Policy

EC Challenges: All

26 Community Building

What is needed/Why it is needed
Increase cohesion at community level →
Sense of belonging → common activities → sharing → Family like
Subneeds
- Inclusive societies : nobody is isolated
- Community commons : common property, vehicles, tools ; management of the neighbourhood
- Self-sufficiency: 3D printing : Food, etc. Using robots, energy autonomy.
- Generations living together : exchange of experience between generations ; shared living spaces, family
- Connectivity: technology to facilitate connections, communication tools, adopted to the needs of people.

Related CIMULACT Citizen Visions (14)

[MAL] Vision 5: A Democratic, Diverse and Equal Society

[NL] Vision 2: Together for one another
[LIT] Vision 5: Sustainable Family Policy
[CHE] Vision 6: Social living space
[SVN] Vision 2: The Nature is Always Right
[ITA] Vision 4: A school beyond times - a new education model
[LUX] Vision 1: On the way to a participatory community
[BGR] Vision 3: Family, personal development and value system.
[SVN] Vision 5: Prosperity and Work Activity of Citizens
[ITA] Vision 2: A simply special city
[SWE] Vision 5: Environmentally and socially adapted living spaces
[DE] Vision 4: Living together - shared homes in 2050
[PL] Vision 4: Quality of Family Life. Family - Reborn
[UK] Vision 5: Promoting community wellbeing

Related Challenges addressed by Horizon 2020
- Health, Demographic Change and Wellbeing;
- Europe in a changing world – inclusive, innovative and reflective societies

27 Economy for wellbeing and sustainability

What is needed/Why it is needed
Every economic activity is meant for the wellbeing of people:
- Business (companies)→cooperatives (production)
- Consumers→modesty, responsibility
- Work for money→status improve in society

Subneeds
- From profits to wellbeing and sustainability
- Responsible production, environmental protection, social responsibility
- Solidarity
- Voluntary work
- Cooperatives
- Less connected with money
- Recycling

Related CIMULACT Citizen Visions (16)
[LUX] Vision 5: From Zombies to communities/ Coexisting in solidarity and working for the well-being of all citizens
[DK] Vision 6: A greener world
[SVN] Vision 1: Society of Sustainable Balance
[CHE] Vision 1: Conscious Consumption
[FIN] Vision 4: The future of responsible consumption

[UK] Vision 1: The 2020 Economy
[HRV] Vision 2: Science and technology in the service of mankind
[FR] Vision 2: Collective project
[PORT] Vision 2: Cooperation
[FIN] Vision 1: VALUES - immateriality and minimalism
[LUX] Vision 3: A quantum leap in development
[LUX] Vision 2: Generate a life ethic
[DK] Vision 5: Holistic management and ethical economy
[AUT] Vision 3: Work and the economic world: worth living
[CZE] Vision 1: Society without plastics
[FIN] Vision 3: Efficient recycling

Related Challenges addressed by Horizon 2020
- Health, demographic change and wellbeing

28 Enabling Systems* for Green and Smart City Development
*(Technical, social, governing, agricultural)

What is needed
No more pollution, healthier cities, easier life with more pleasure in cities.
Why it is needed
Because the current systems, strategies, tools are not reaching enough good results.
Subneeds
- To live in the city AND in nature, Buildings and streets are covered by canopy, vegetation and life (birds)
- To eat good and sane food produced in city farms
- To do my part as a citizen (and not just consume and pay taxes). To make my city sustainable. Living in a sustainable city is an act not a product.
- To know that the footprint of my city is adequate. A city is like a spaceship where we consume only what the life support system produces.
- To be assisted by technology
- Less noise, more natural sounds
- To drink water locally produced

Additional hints
- Concerns about « old buildings » stock
- Energy produced and consumed locally
- Visitors understand how to be a temporary citizen "tuned" with practices

Related CIMULACT CITIZEN Visions (20)

[DK] Vision 6: A greener world
[CHE] Vision 1: Conscious Consumption
[AUT] Vision 3: Work and the economic world: worth living
[FIN] Vision 3: Efficient recycling
[ITA] Vision 2: A simply special city
[SWE] Vision 5: Environmentally and socially adapted living spaces
[AUT] Vision 5: Smart living with nature
[DK] Vision 4: The nature city of the future
[BGR] Vision 2: Green planet - everyone's responsibility.
[FIN] Vision 5: Eco-efficient nutrition and living
[NOR] Vision 5: A world to live in, a world to live of, a world to live for
[NOR] Vision 4: The environmental Citizen in a "short travelled" and "mega local" city in 2040
[BGR] Vision 1: The smart city - this is me!
[FR] Vision 5: Living in a balanced society
[GR] Vision 5:Man in the center of education and attempts of development
[CHE] Vision 5: Together for one world
[ESP] Vision 6: The environment where we shall live
[FR] Vision 6: Living together with nature
[MAL] Vision 1: At one with the Environment
[UK] Vision 3: Healthy cities, healthy people, healthy countryside

EC Challenge
Smart green and integrated transport

29 Personal freedom and responsibility

What is needed?/Why it is needed?
- Each individual must assume responsibility for the care of nature, environment, relationships [SVN3].
- People developed a sense of social responsibility [EST3].
- Balance between technology and personal values [CZE6].
- There is no manipulation of your thoughts by media, social or political influences [NL3]. You can maximize your happiness.

Subneeds
- Personal responsibility in decision-making-direct democracy [LAT3]
- People invent jobs for themselves - necessary for society, creative, developing, meaningful, gratifying [LAT5]
- Responsible consumption [FIN4]
- Freedom to choose and participate in continuous education and training [PORT5]
- Education in democratic culture in elementary school [DK2]

Additional hints
- Electronic voting [LAT3]
- No dress code based cultural or religion regulation [DE3]

[FIN] Vision 4: The future of responsible consumption
[PORT] Vision 5: We build the future now
[EST] Vision 3: Social welfare and sustainability
[LAT] Vision 3: Responsible lifestyle
[SVN] Vision 3: Green Future
[DK] Vision 2: A democratic society with REAL equal opportunities
[DE] Vision 3: Diversity and self-determination
[NL] Vision 3: Freedom
[LAT] Vision 5: Work as a means of expression.
[CZE] Vision 6: Back to the roots

Related Challenges addressed by Horizon 2020

- Secure societies- Protecting freedom and security of Europe and its citizens
- Europe in a changing world - inclusive, innovative and reflective societies