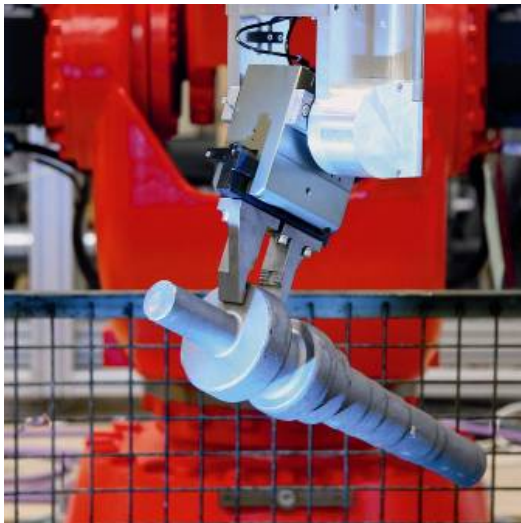

FPC partnership – collaboration as a means to link science to industry

Ivica Kolaric





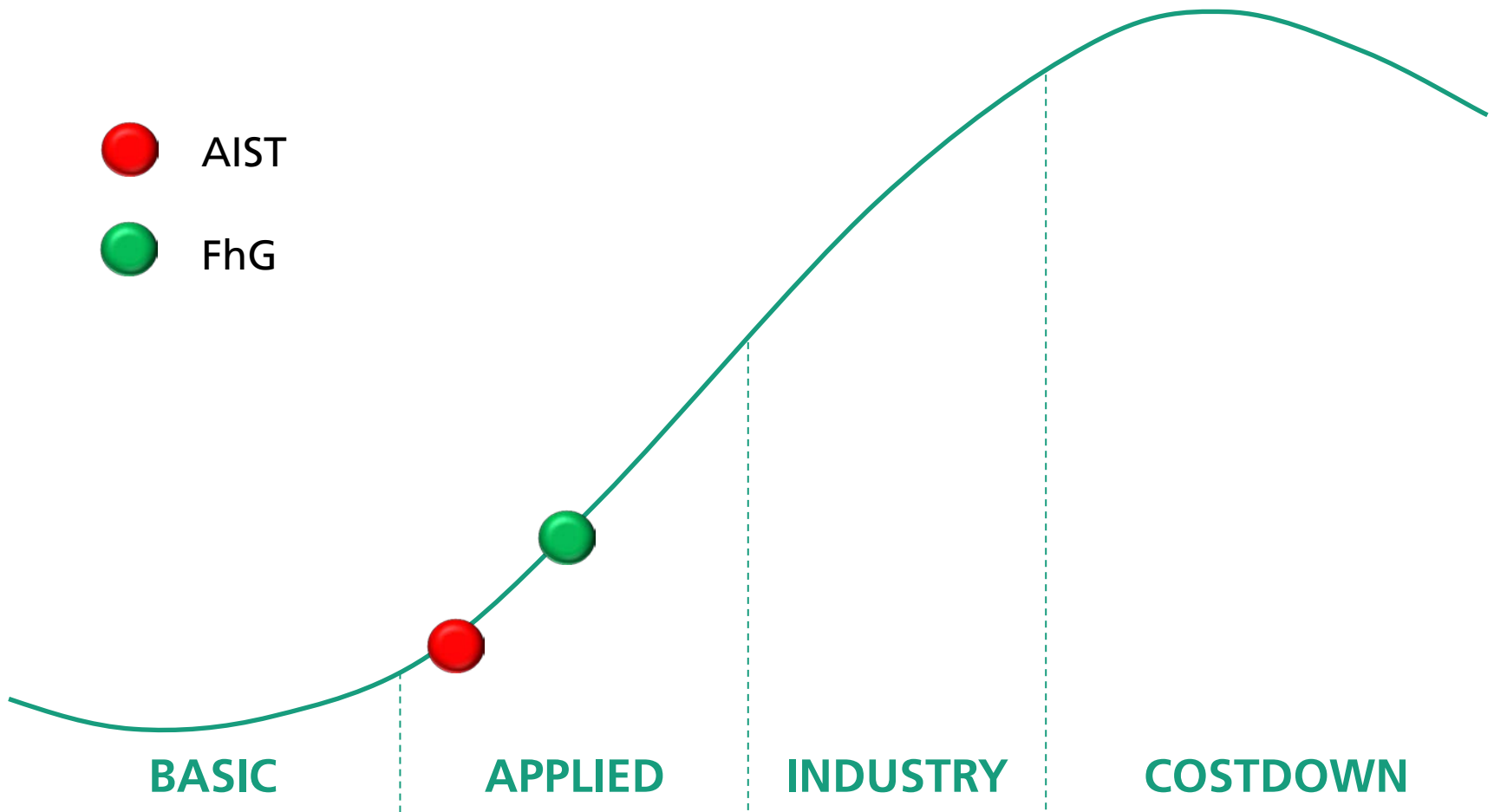
Cooperation

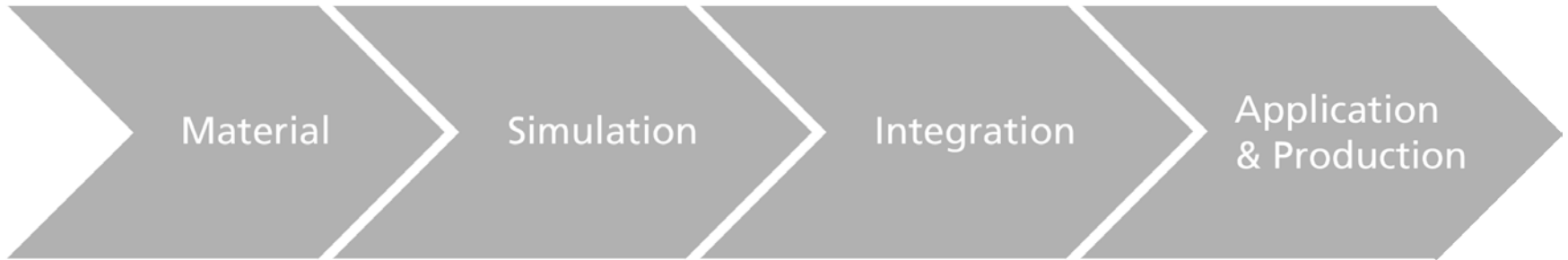
The definition of cooperation is people working together to achieve results or people helping each other out to achieve a common goal.
(Source: Yourdictionary)



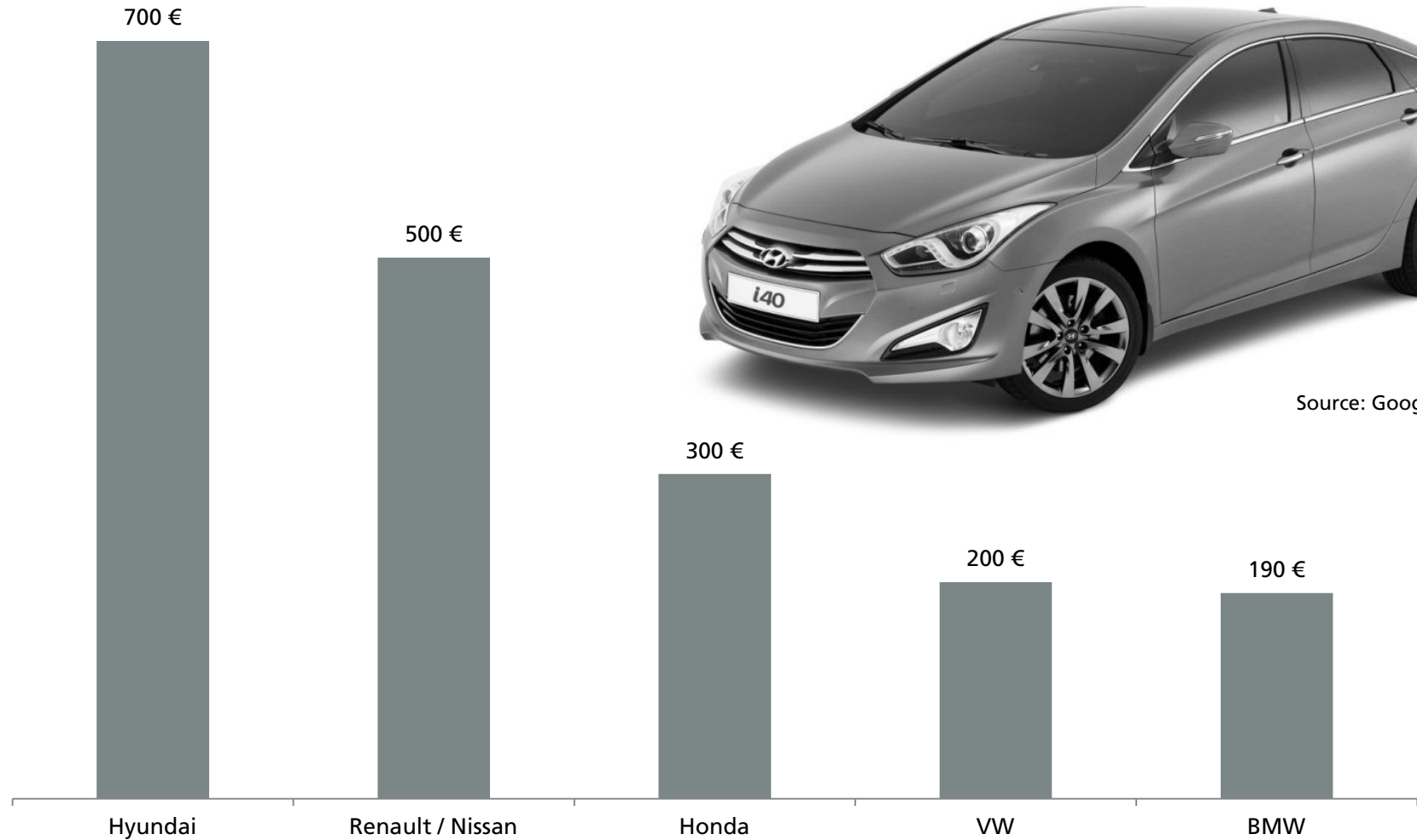
Cooperation

...working **together** to
achieve **results** or helping
each other out to achieve a
common goal





Hyundai MC is very profitable

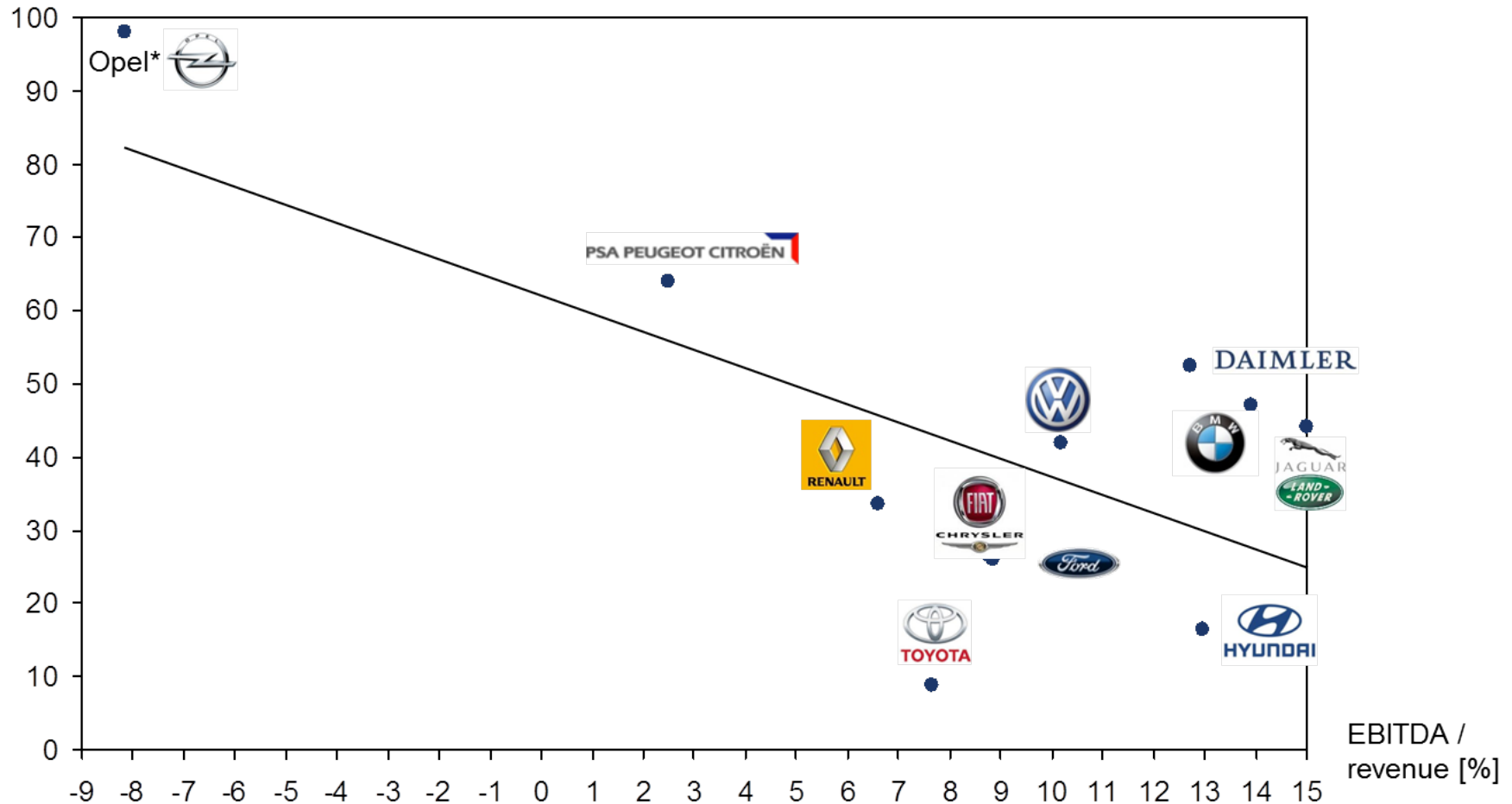


Source: Google

Source : Center of Automotive Management 2010

OEM Profitability and European Sales Share

Volume share in Europe [%]



Sources: Global Insight; Capital IQ; annual reports; AlixPartners analysis *EBIT www.alixpartners.com

Over the last 10 years, mainland Europe - with the exception of Germany - has had a drastic reduction in production volumes

2000			2012		
Country	Ranking	Production volume (units k)	Country	Ranking	Production volume (units k)
USA	1	12.457	China	1	18.332
Japan	2	9.693	USA	2	10.183
Germany	3	4.935	Japan	3	9.634
France	4	3.331	Germany	4	5.735
South Korea	5	3.148	South Korea	5	4.818
Spain	6	2.940	India	6	3.707
Canada	7	2.907	Brazil	7	3.204
Mexico	8	1.875	Mexico	8	2.871
China	9	1.851	Thailand	9	2.771
UK	10	1.797	Canada	10	2.454
Italy	11	1.716	France	11	2.115
Brazil	12	1.578	Spain	12	1.946
Belgium	13	1.012	UK	13	1.560
Russia	14	1.003	Russia	14	1.483
India	15	809	Czech Republic	15	1.156
Poland	16	450	Poland	21	671
Czech Republic	17	450	Italy	22	644
Thailand	18	422	Belgium	23	508

+16%

-37%

-34%

-13%

-62%

-50%

Sales Decline in Saturated Markets

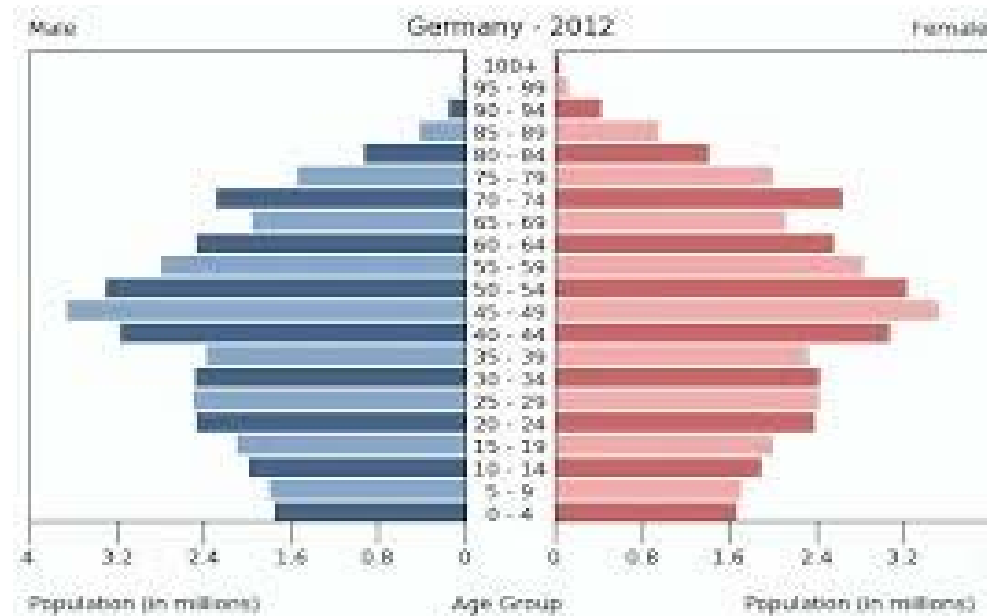
Automotive Industry Vision: Impact of Urbanisation on Car Ownership, Global, 2009 and 2025

	Population (Million)	Per Capita 2025 (\$)	Cars per 1,000 in 2009	Cars per 1,000 in 2025
Tokyo	38.5	46,494	353	340
New York	25.9	67,591	230	220
London	14.4	57,746	400	340
Mexico City	21.0	33,795	209	270
Shanghai	21.0	32,952	32	122
São Paulo	21.5	28,001	150	335
Buenos Aires	13.8	43,581	190	350
Mumbai	26.4	21,224	24	72
Beijing	20.0	25,000	35	155
Delhi	22.5	21,335	117	250
Moscow	14.5	42,759	307	475
Guangzhou	11.8	36,332	43	173
Seoul	9.7	43,860	239	320

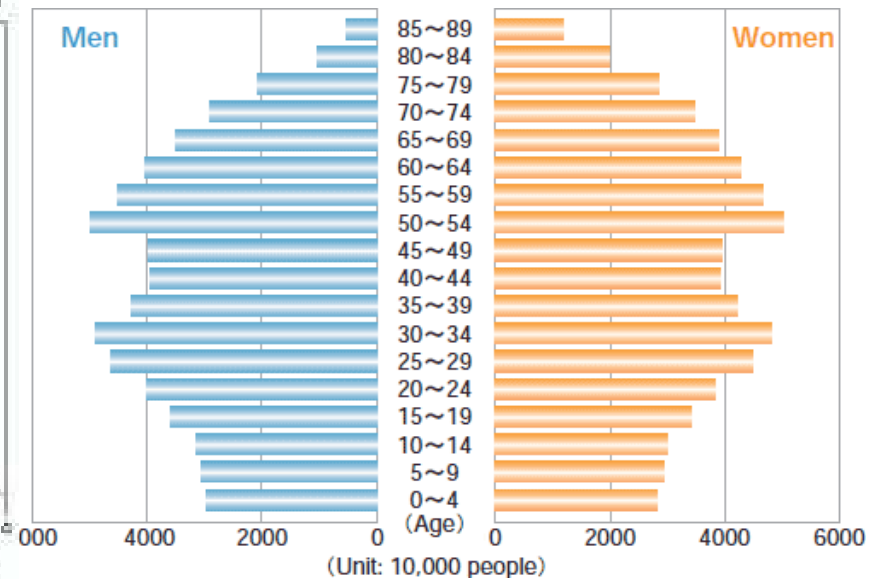
Note: Red denotes a decrease in 2025 from 2009. Green denotes an increase in 2025 from 2009

Source: Frost & Sullivan analysis.

Demographic Challenges

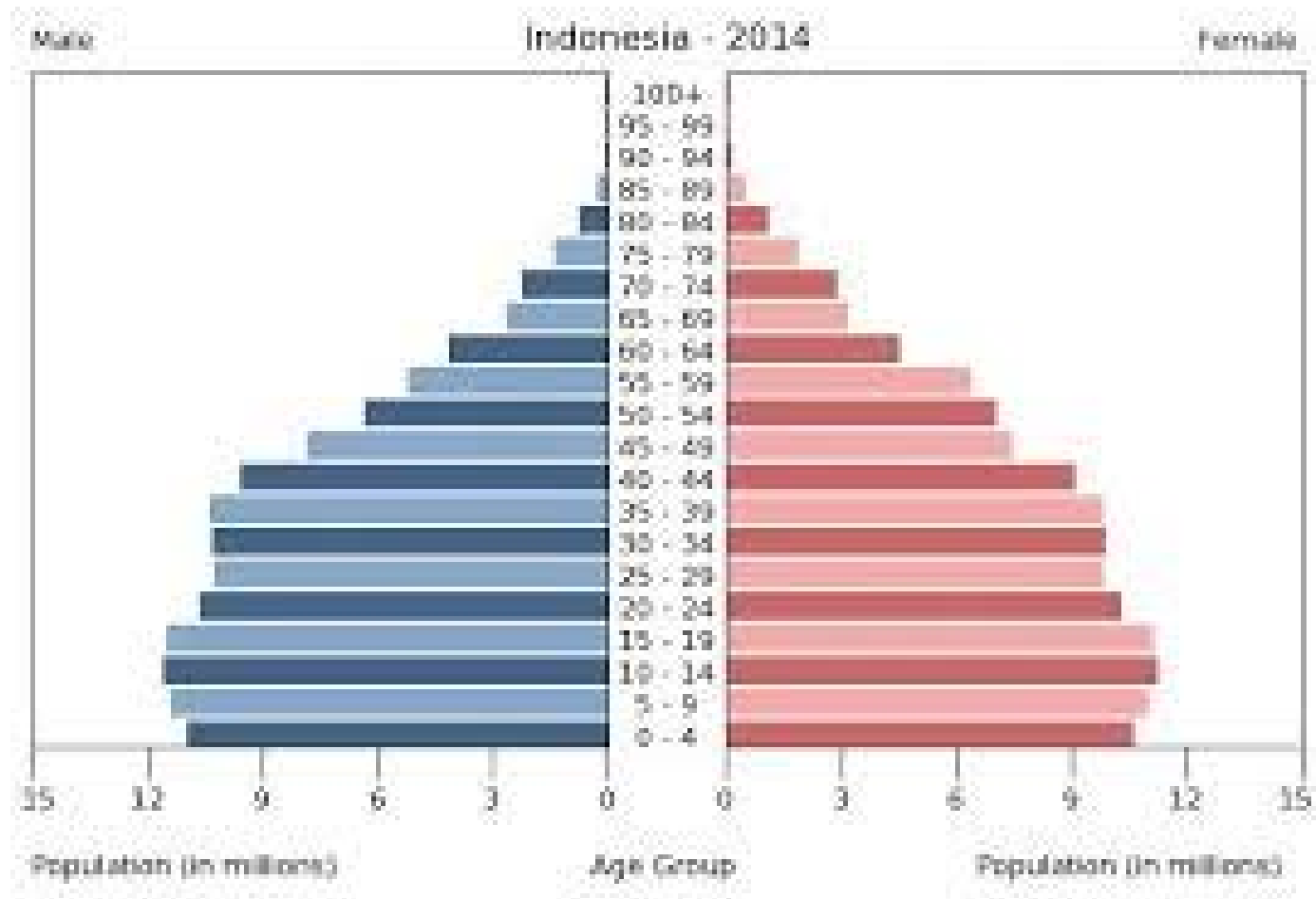


Germany

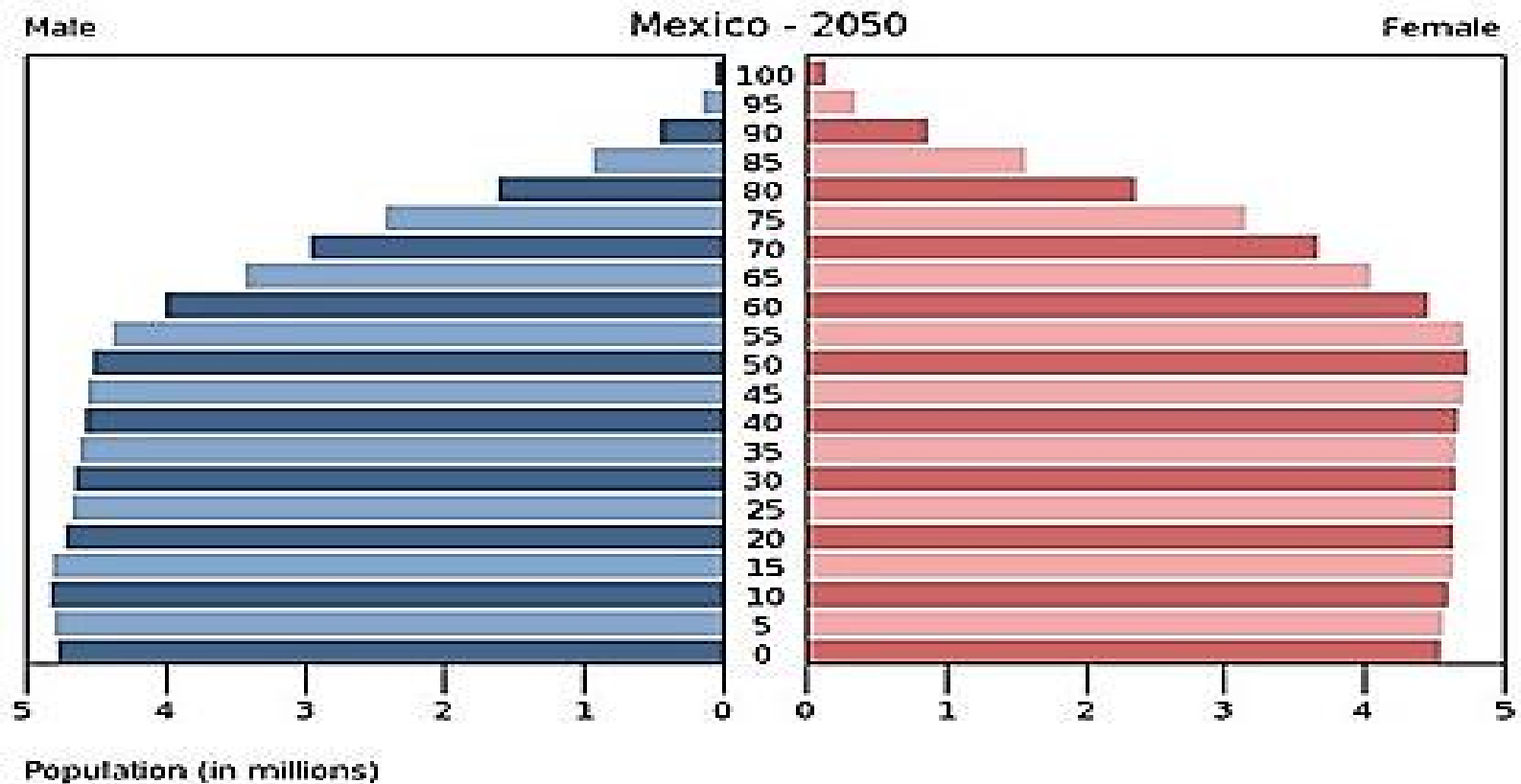


Japan

Demographics: Indonesia

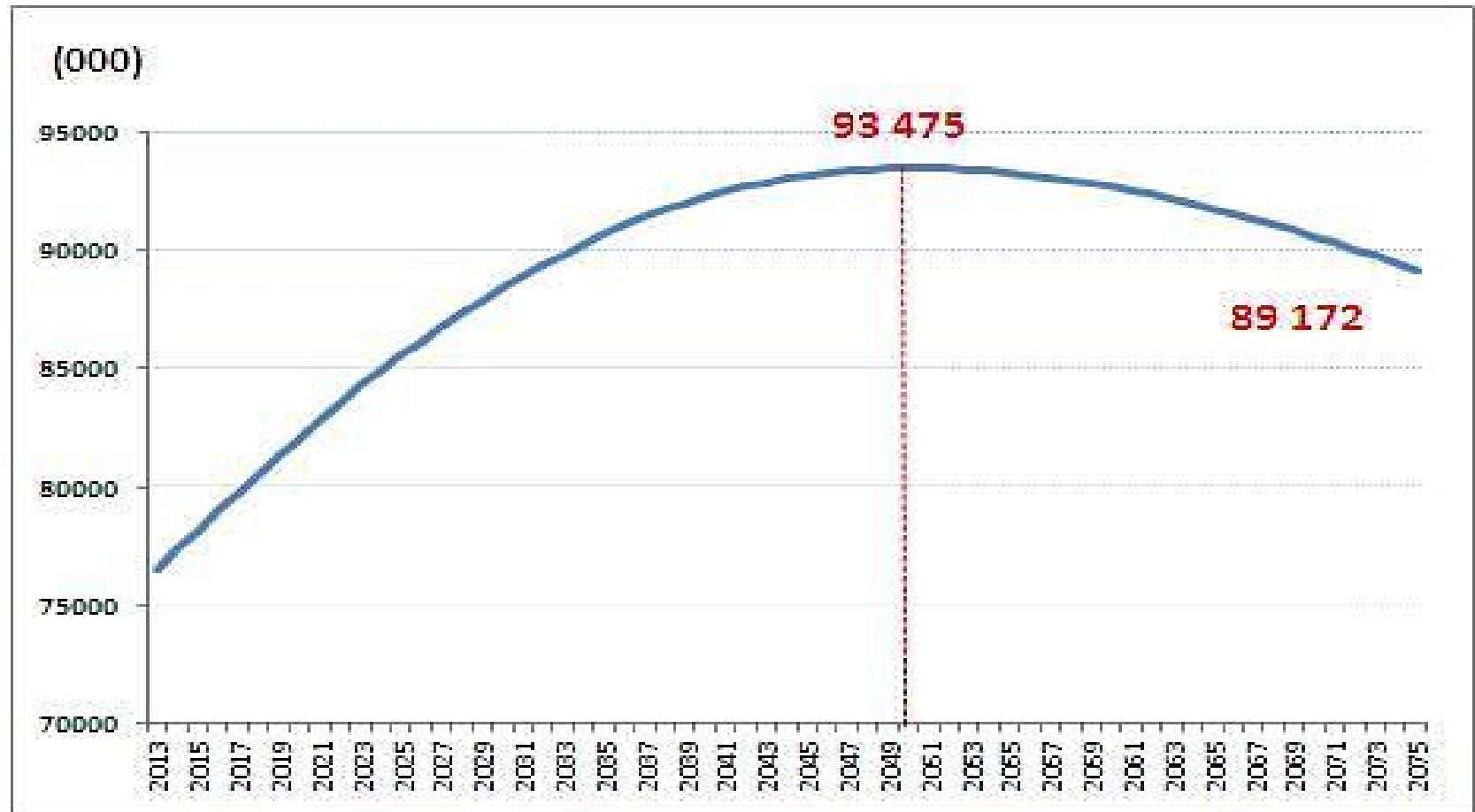


Demographics: Mexico

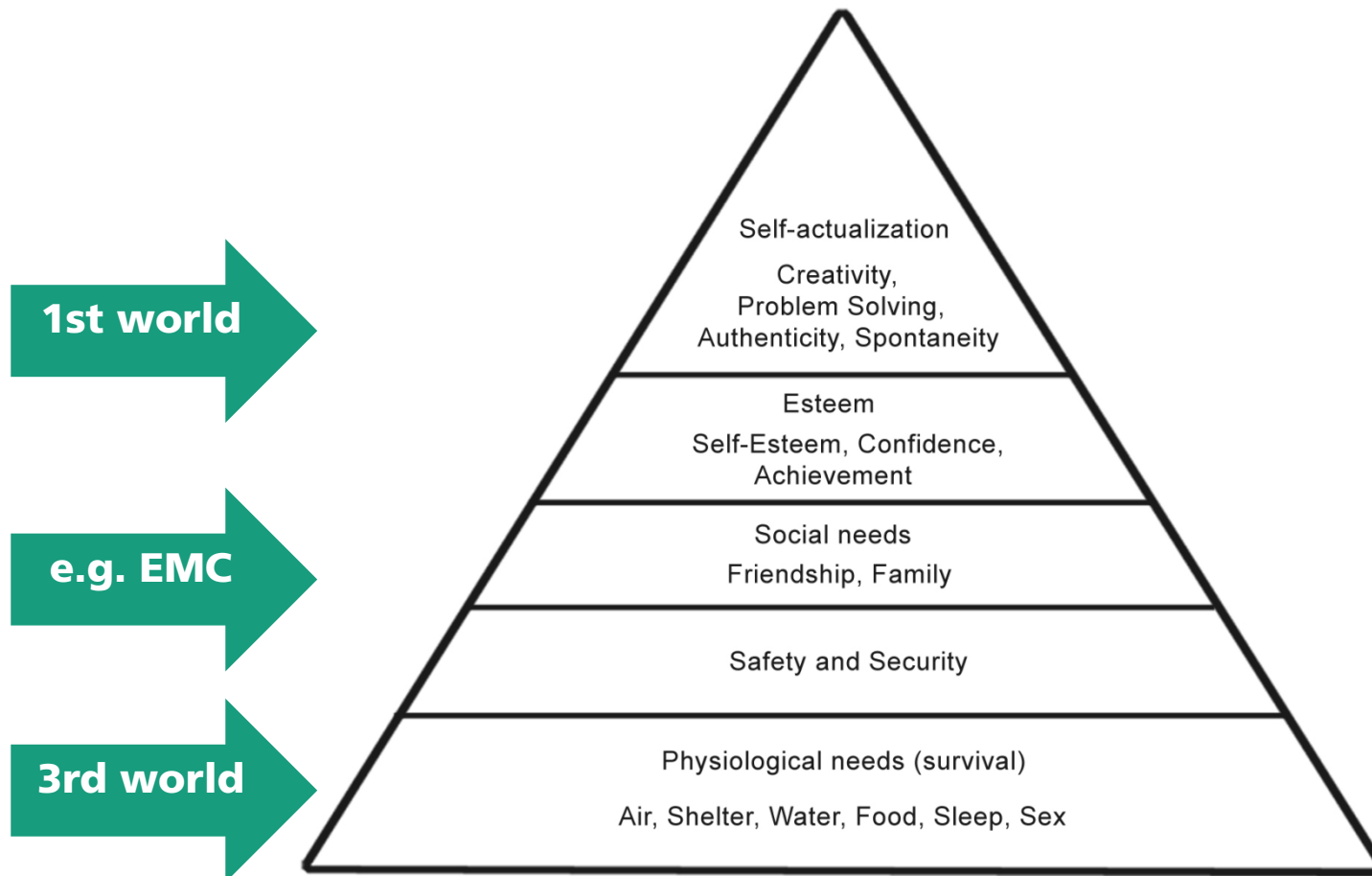


<http://mexicodemography.weebly.com/population-challenges.html>

Demographics: Turkey

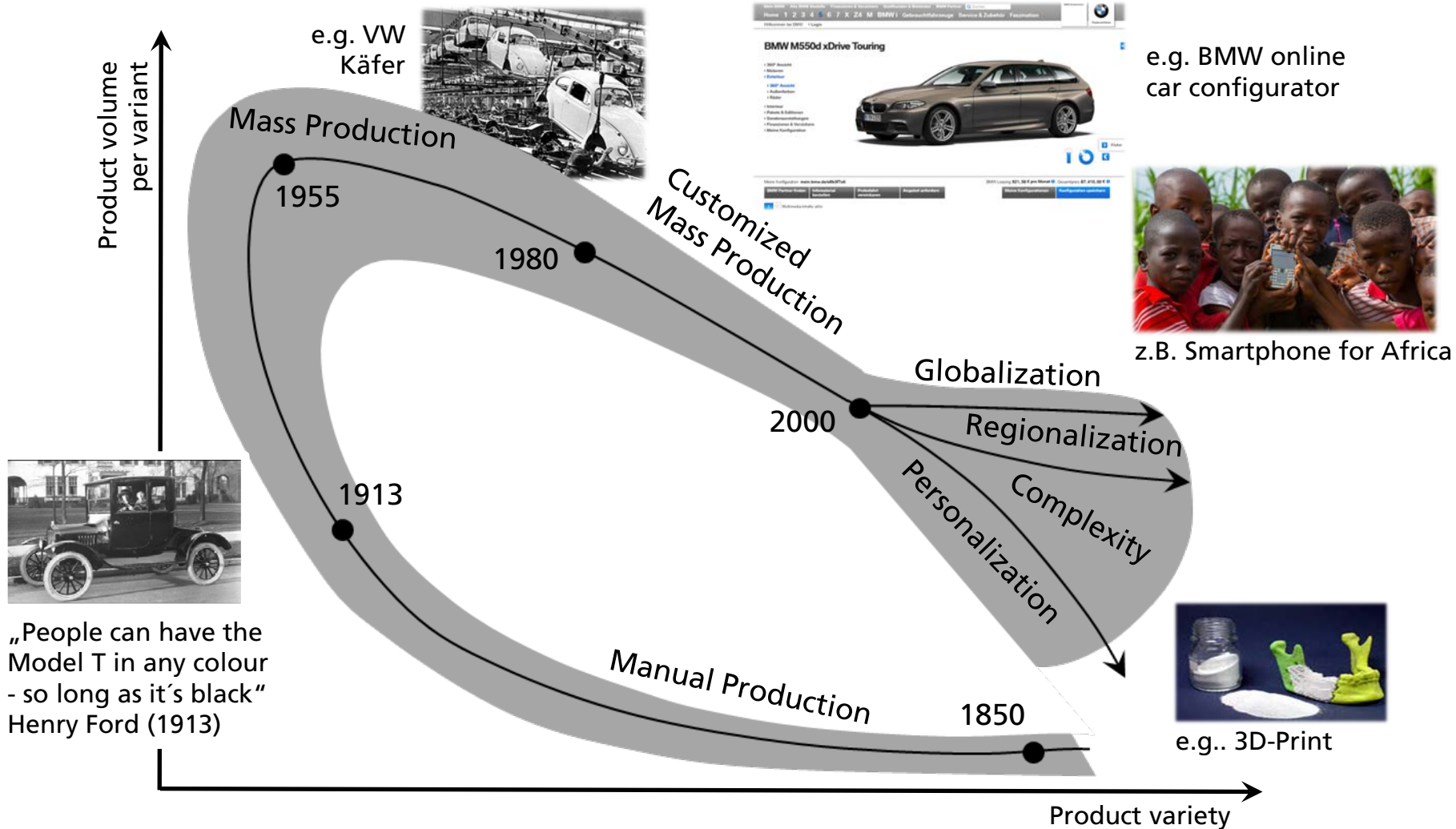


<http://www.turkstat.gov.tr/PreHaberBultenleri.do?id=15844>



History of Production

Managing the increasing complexity



According to Yoram Koren: The Global Manufacturing Revolution; Source: Ford, beetleworld.net, bmw.de, dw.de

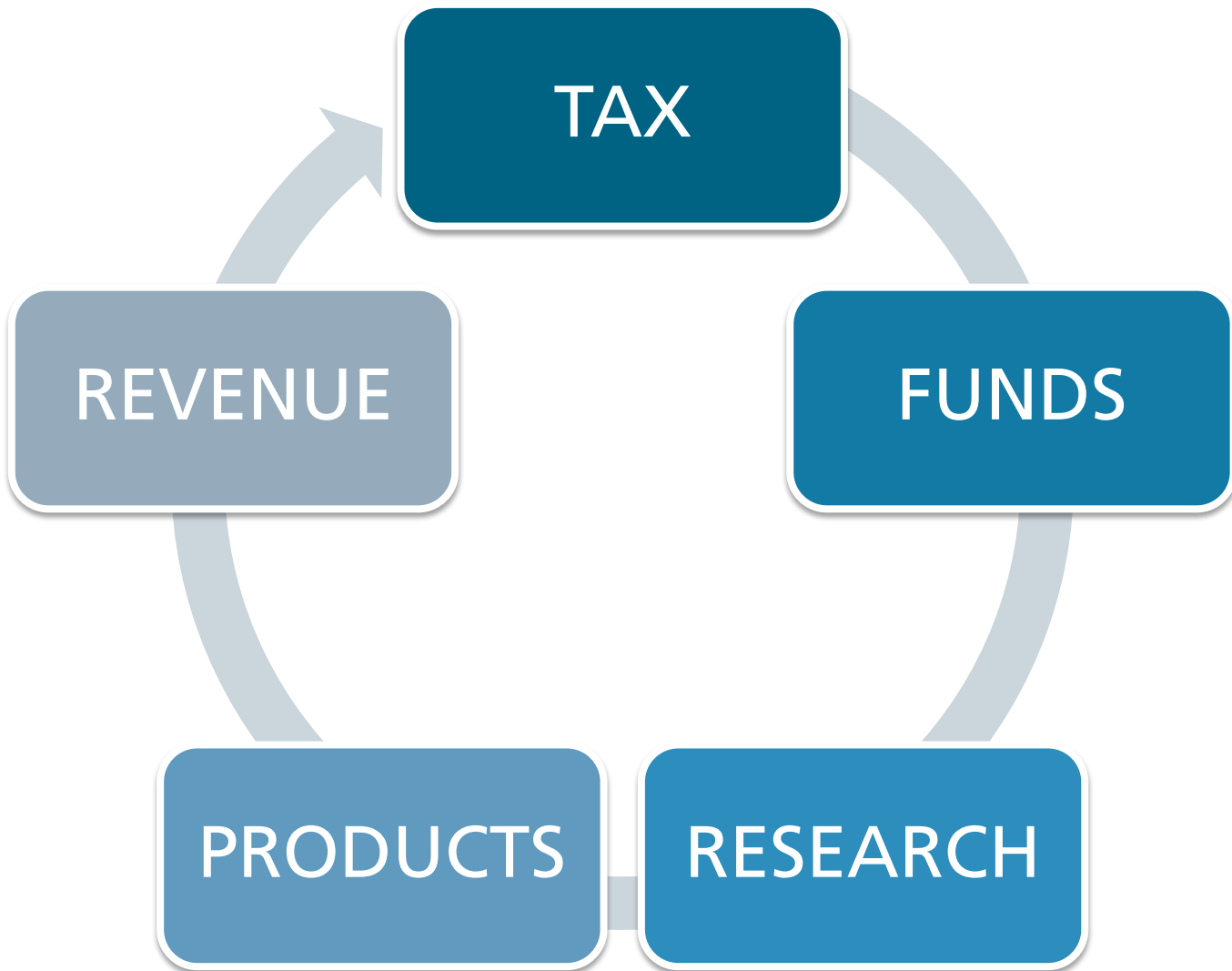
15

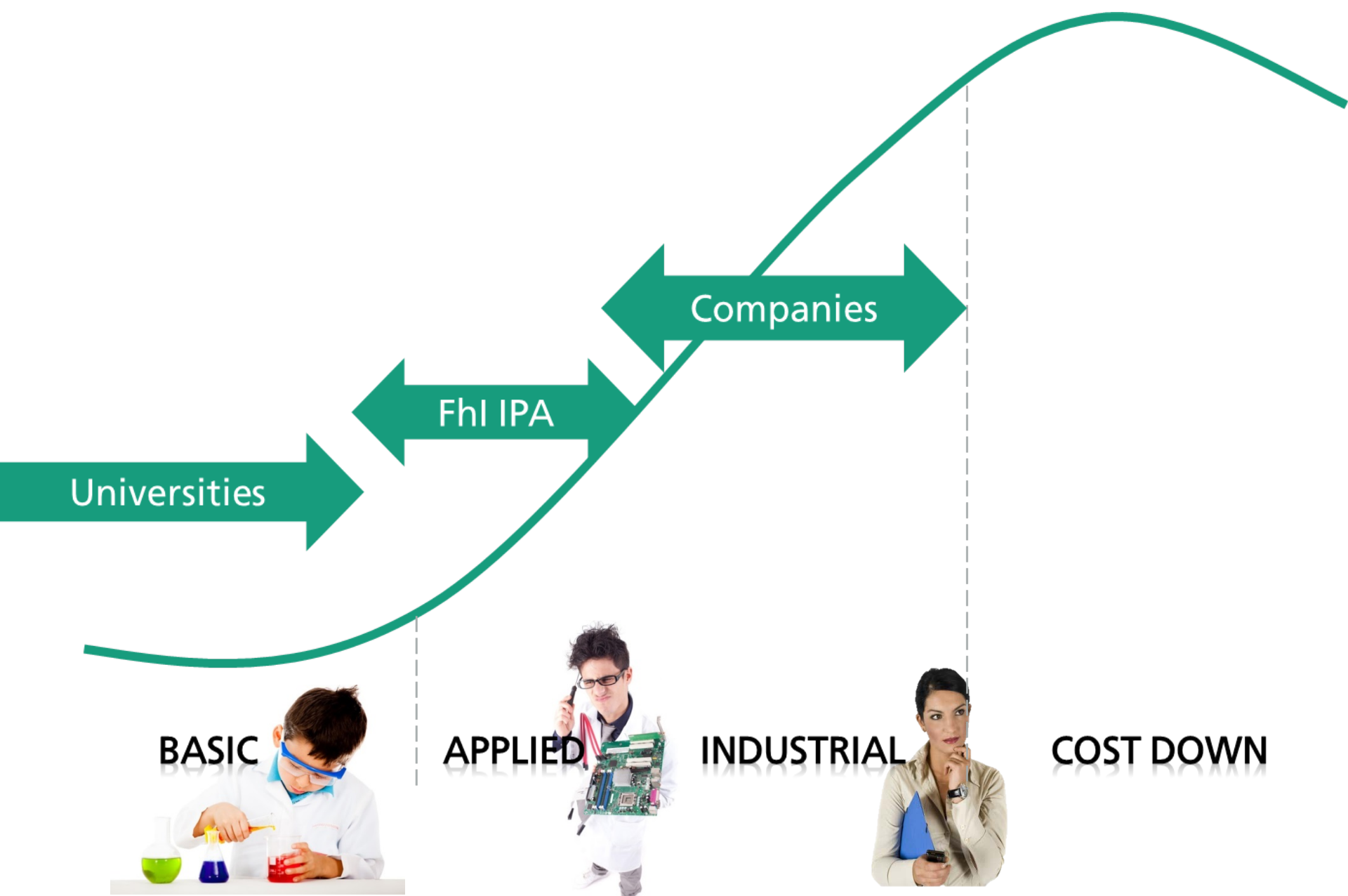
**Money for
research**



**Research
result for
money**







Quality of Research

- Publications
- Citations
- Patents



Quality of Research

+ Licences fee
+ Contract research with industry

- Publications
- Citations
- Patents

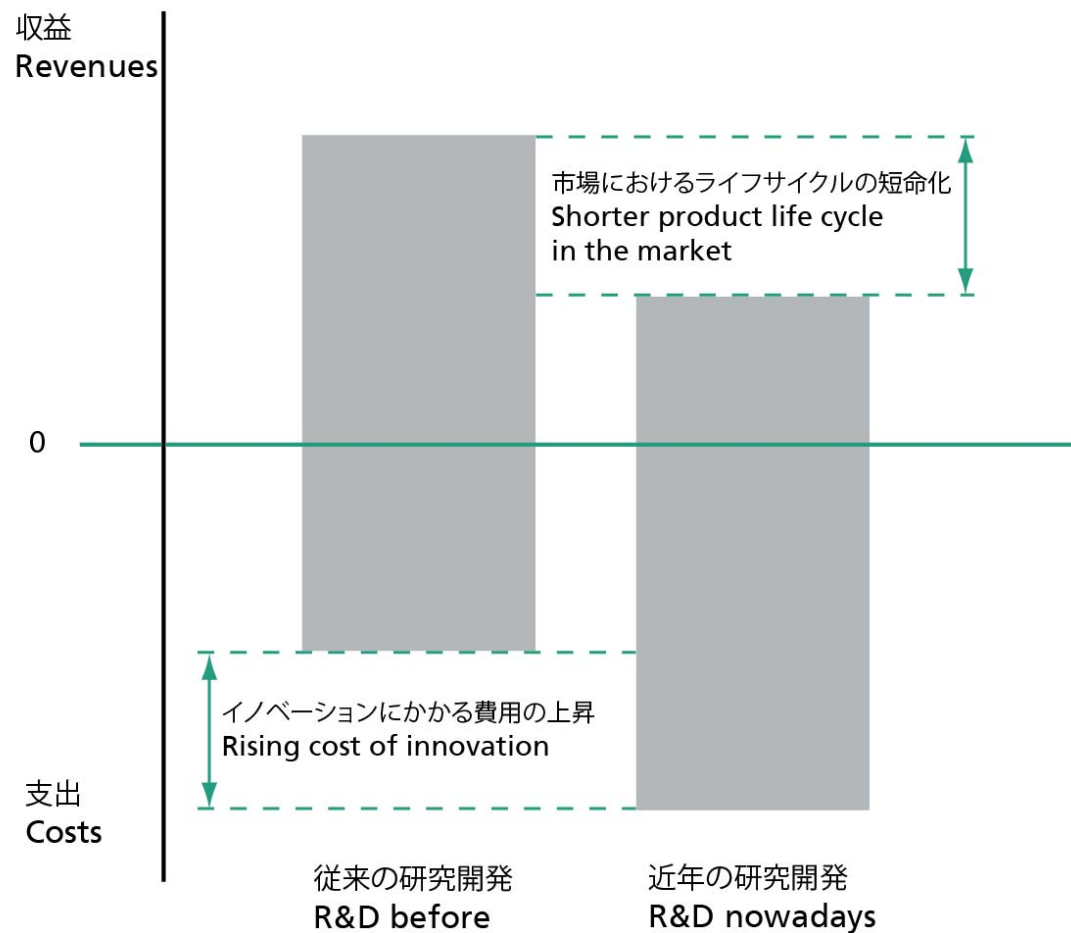


Quality of Research

Money

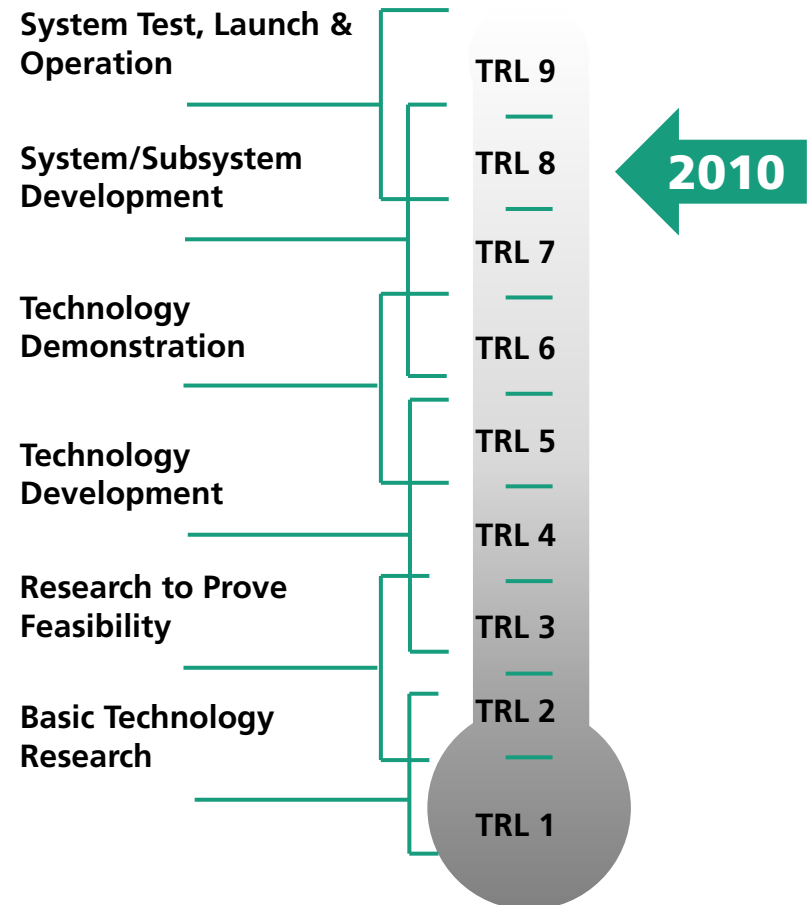
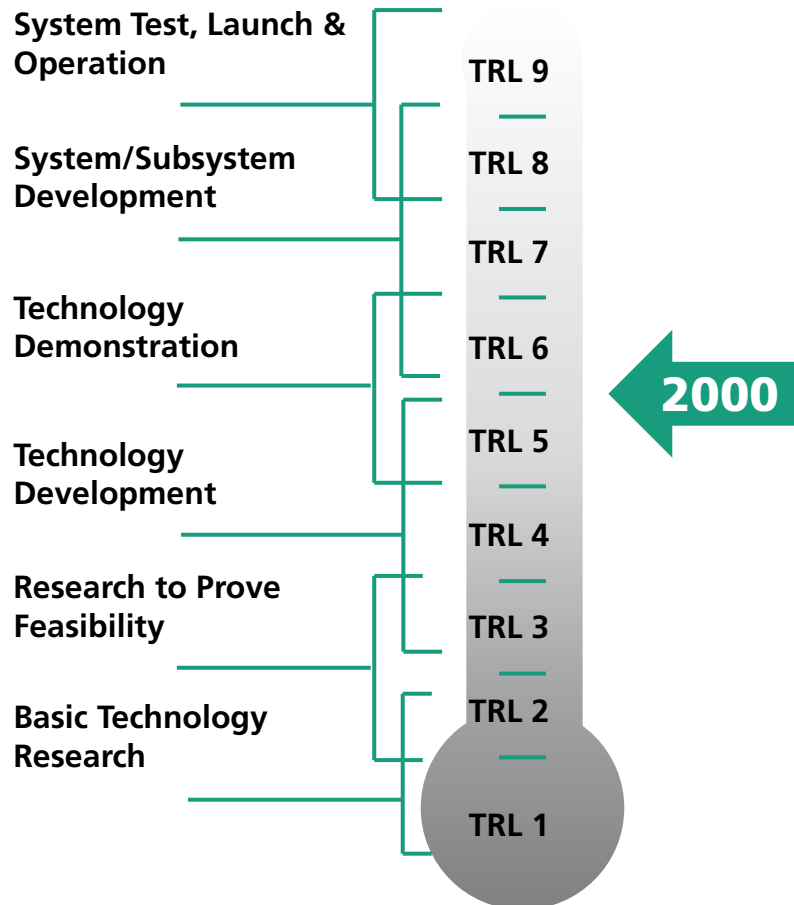


R&D is getting more expensive



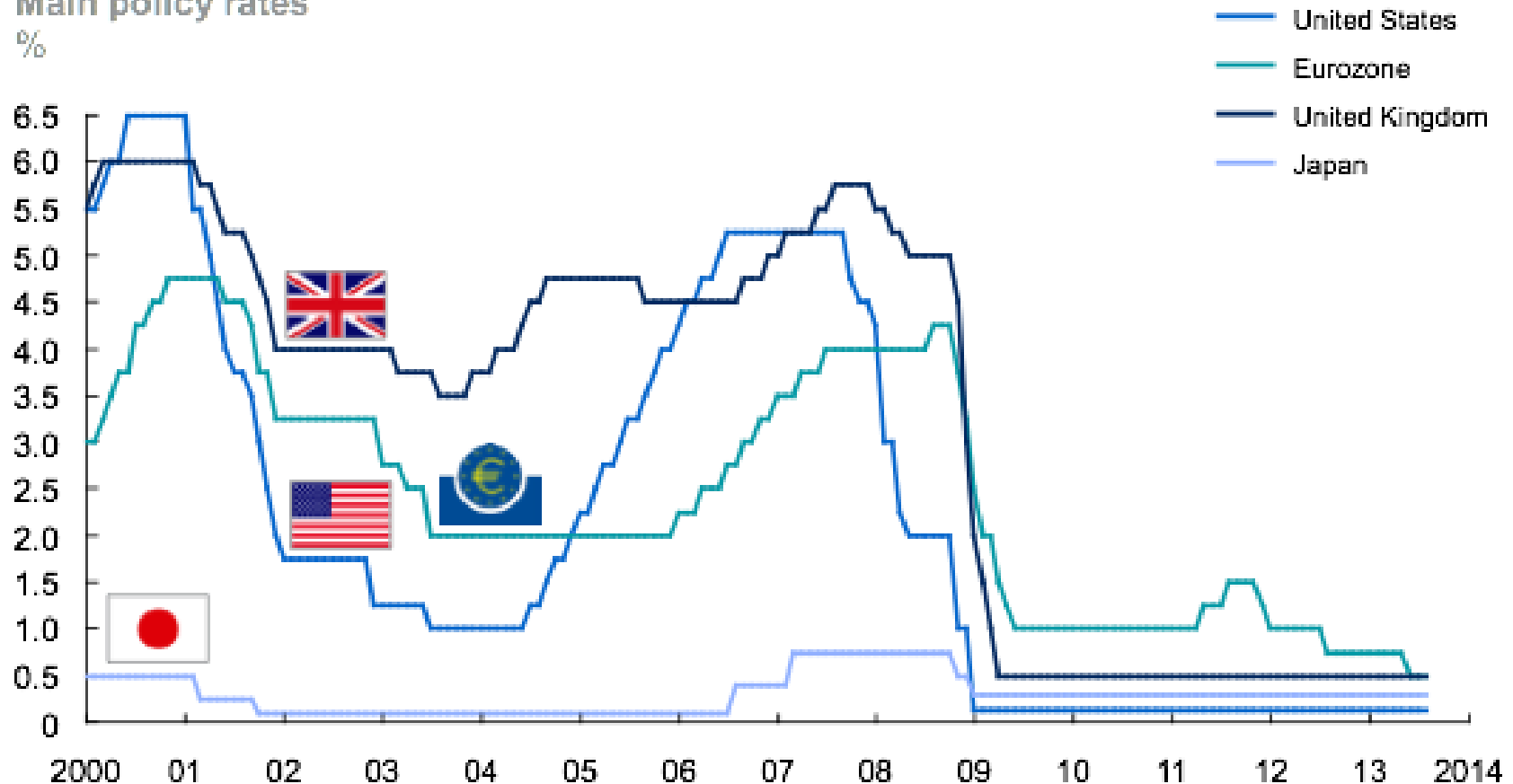
**You can
spend money
only one time**





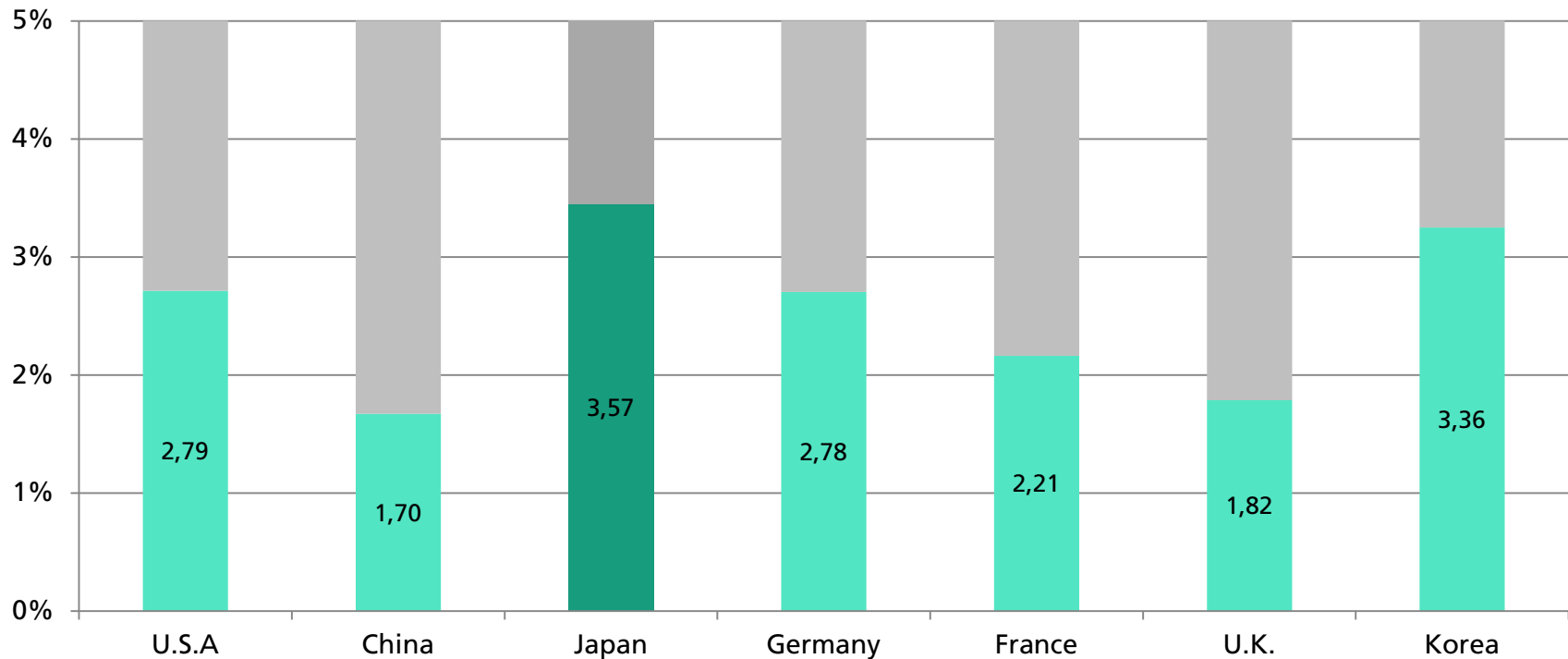
Central banks pushed policy rates to ultra-low levels in 2009 and have held them there since

Main policy rates
%



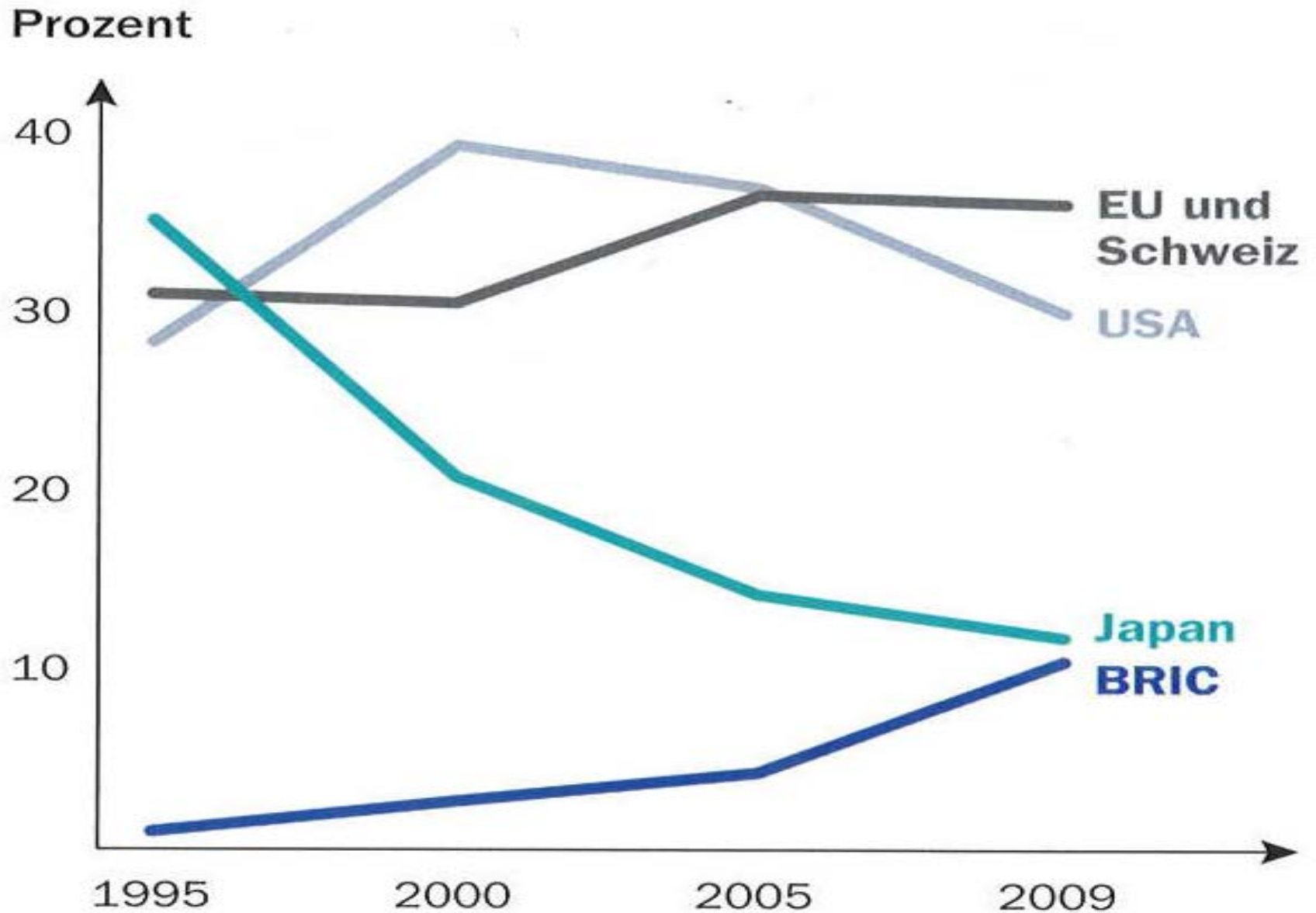
SOURCE: US Federal Reserve; European Central Bank; Bank of England; Bank of Japan; McKinsey Global Institute analysis

Comparison of R&D Investments (ratio in GDP)

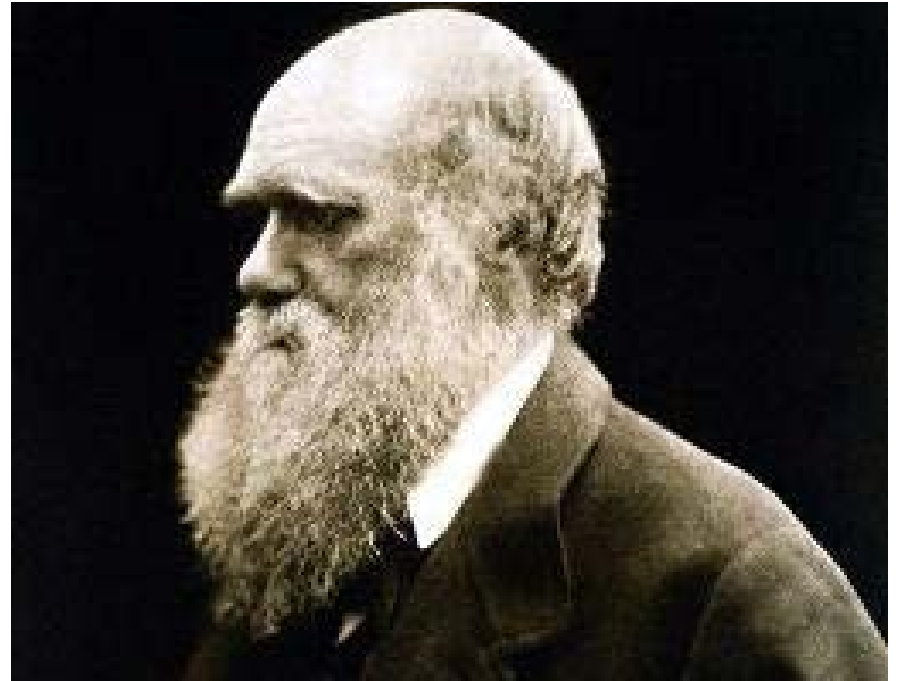


Source: Ministry of Internal Affairs and Communications MIC, „Results of Survey of Research and Development“ (2011) *Data: U.S.A and Korea: 2008, Japan and U.K. 2010, others 2009

Fortune 500 Companies



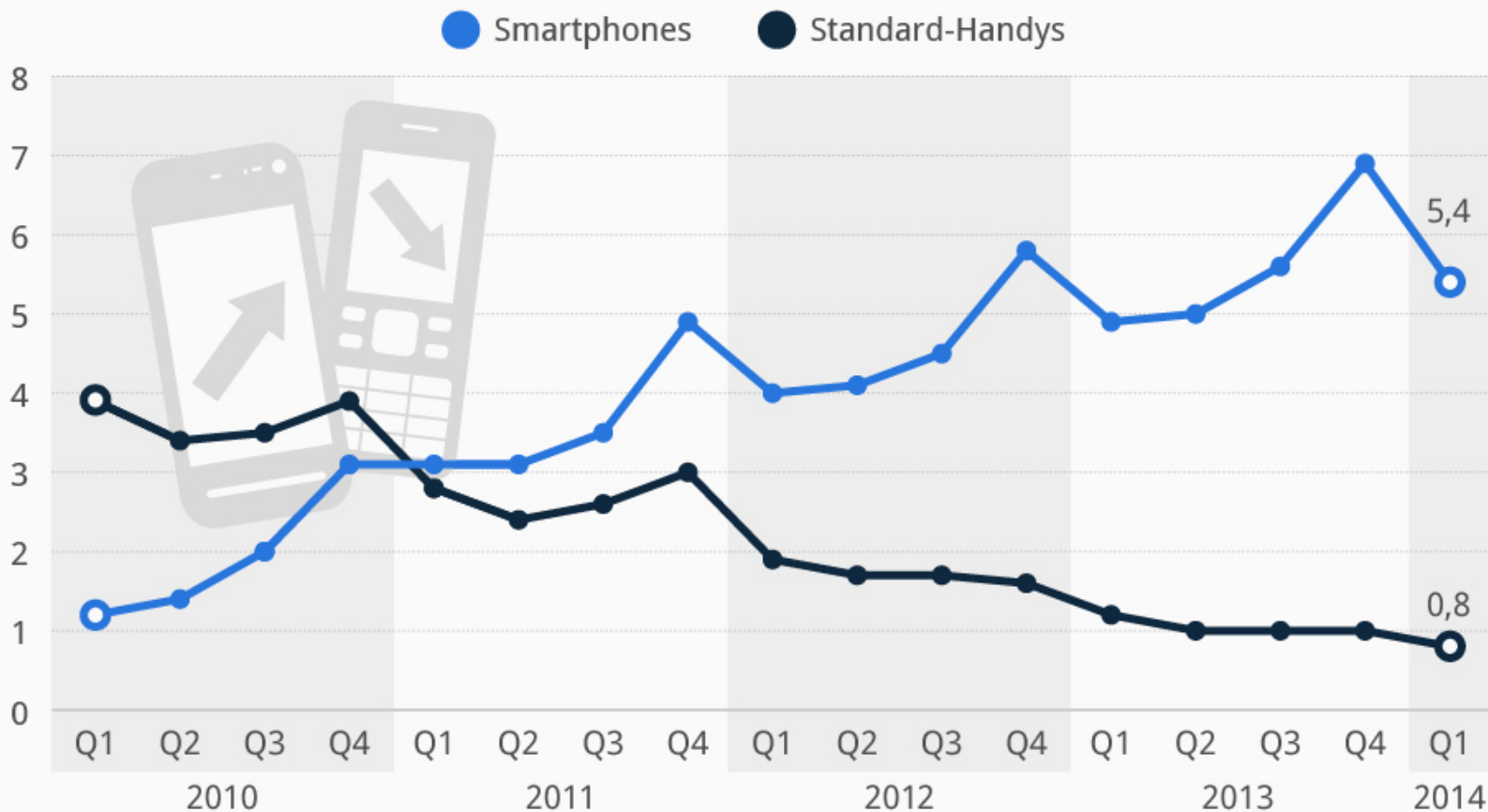
*„It is not the strongest of
the species that survives,
nor the most intelligent,
but the one most
responsive to change.“*

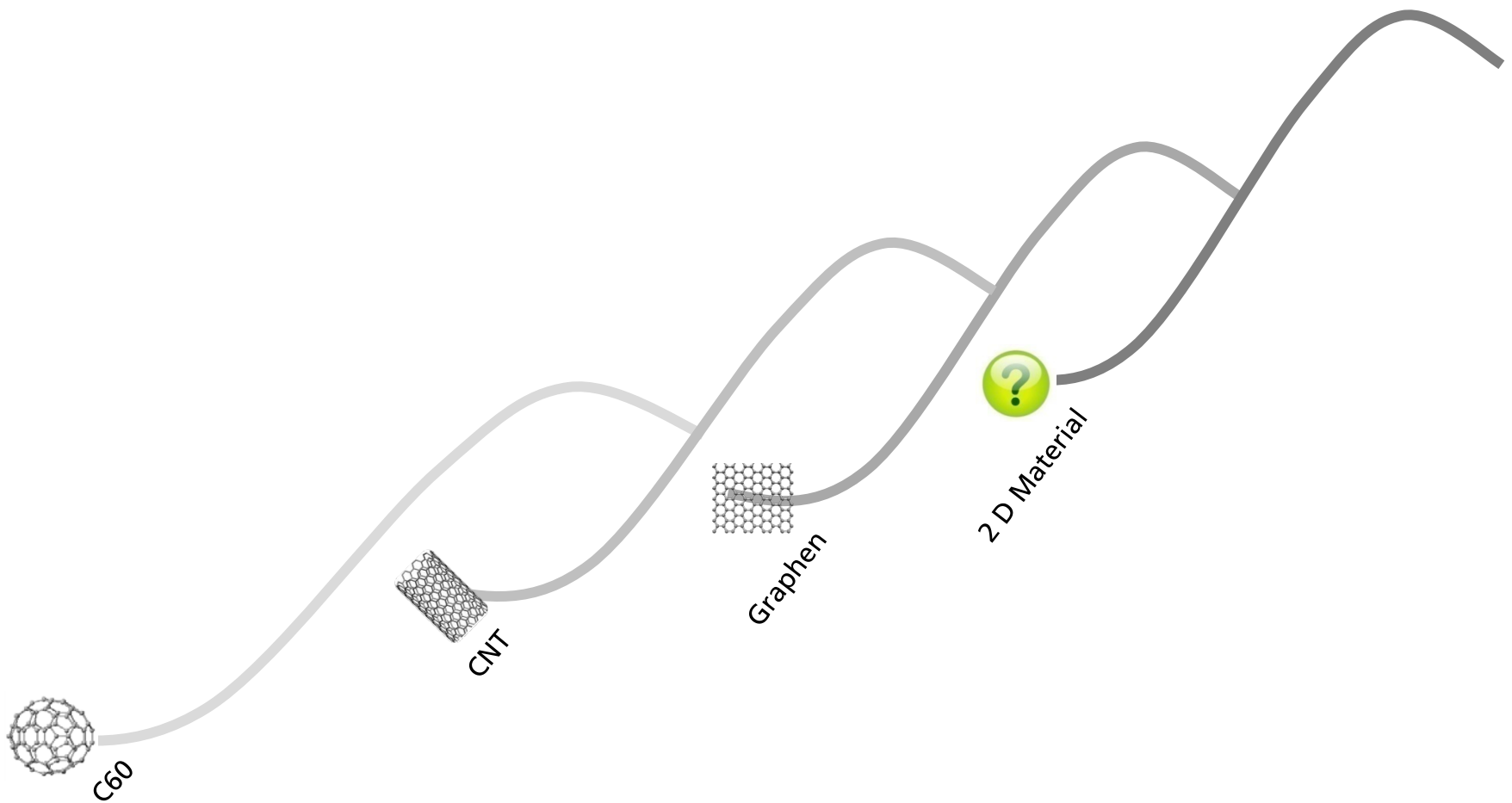


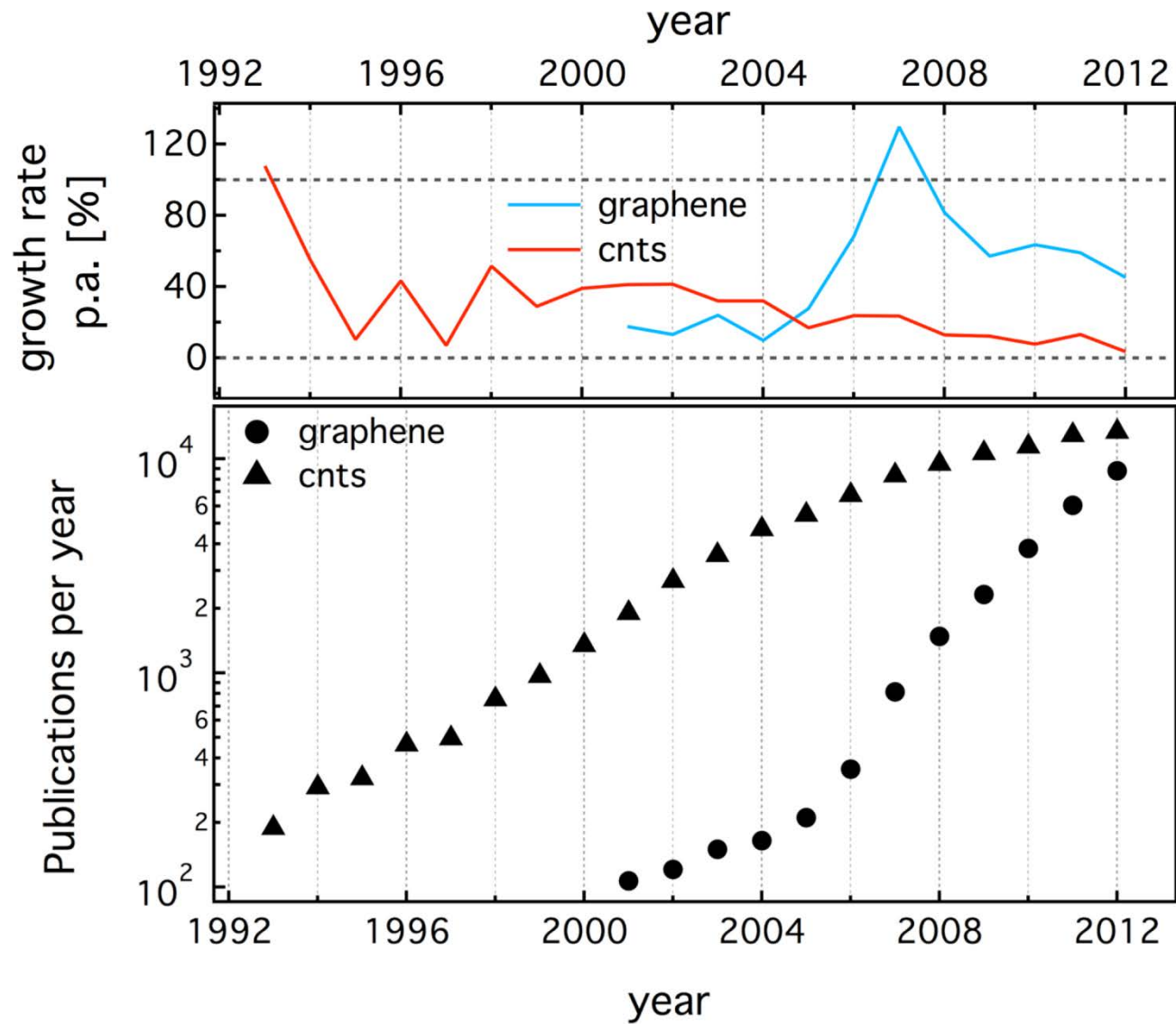
Charles Darwin, 1809-1882

Standard-Handy-Absatz fällt um 38%

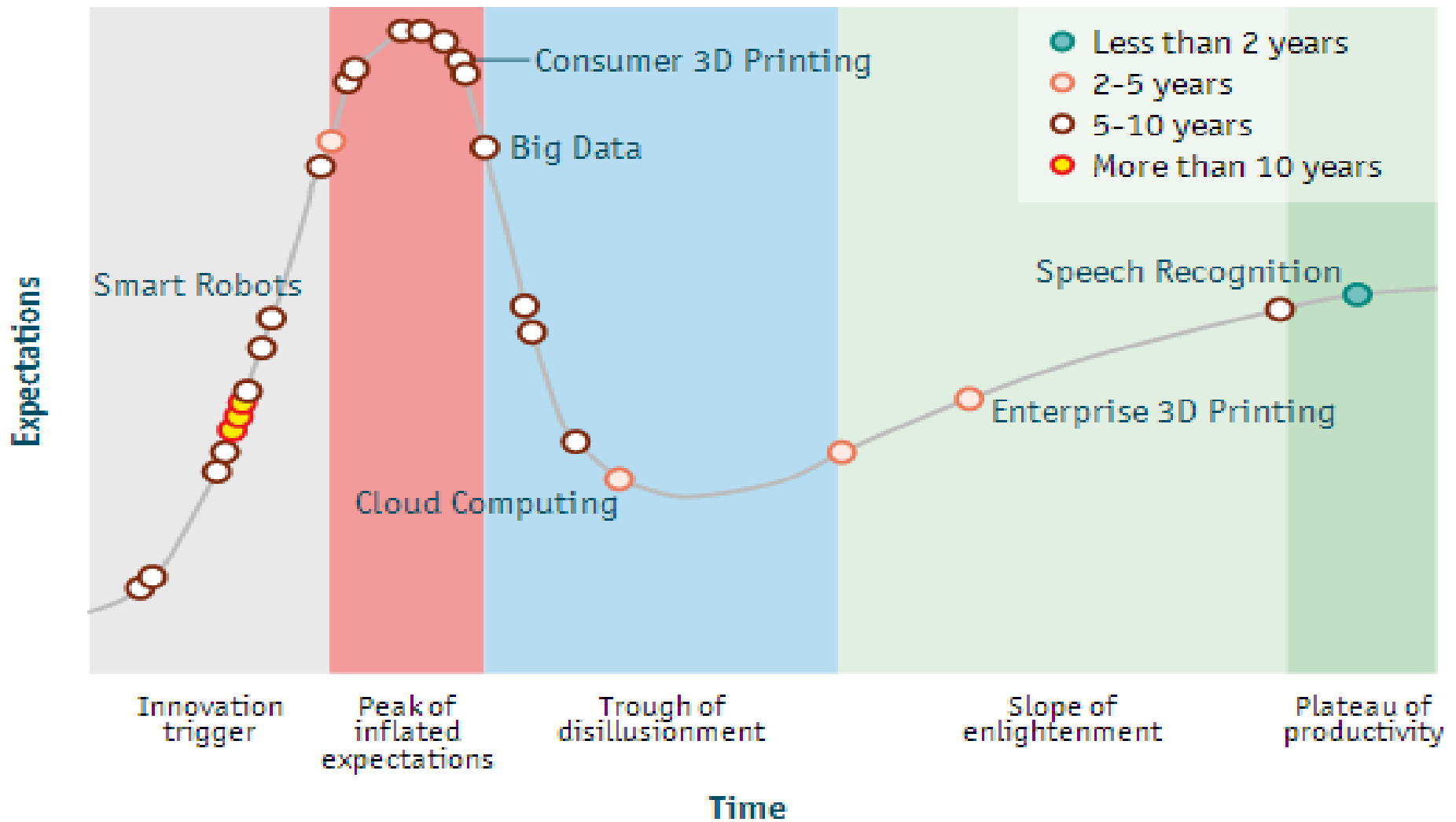
Absatz von Mobiltelefonen in Deutschland (in Millionen Geräten)







The Emerging Technologies Hype Cycle 2014*



Sources: Gartner; The Economist | Note: *selected technologies

