

The logo for SID Banka features a stylized 'S' composed of three segments: a red dot, a red curved line, and a blue curved line. To the right of this graphic, the word 'Banka' is written in a bold, blue, sans-serif font.

SID Banka

SID - Slovenska izvozna in
razvojna banka, d.d., Ljubljana

FINANCIAL INSTRUMENTS for ACCESS TO INNOVATION

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GLOBAL OVERVIEW AND EUROPE

- RDI spending among the Global Innovation 1.000 overall increased by 11,4% in 2018 (record high of 782 billion USD)
- Chinese RDI spending increased by the highest margin of 34,4% and also registered the highest number of entries into the GI 1.000 (16%)
- EU was the second in spending growth (14%) and second in number of new entries into the GI 1.000 (7%)

Despite the favourable statistics, only a few European companies may be found amongst top 20 spenders, with Germany and Swiss „saving“ Europe’s reputation

Rank in 2018	Rank in 2017	Change	Company	Geography	Industry	R&D spending (US\$ Billions)	R&D Intensity	Change from 2017
1	1	NA	Amazon.com, Inc.	North America	Software and Internet	22.6	12.7%	40.6%
2	2	NA	Alphabet Inc.	North America	Software and Internet	16.2	14.6%	16.3%
3	5	2	Volkswagen	Europe	Auto	15.8	5.7%	14.1%
4	4	NA	Samsung Electronics	ROW	Computing and Electronics	15.3	6.8%	6.8%
5	3	-2	Intel Corporation	North America	Computing and Electronics	13.1	20.9%	2.8%
6	6	NA	Microsoft Corporation	North America	Software and Internet	12.3	13.7%	-5.7%
7	9	2	Apple Inc.	North America	Computing and Electronics	11.6	5.1%	15.3%
8	7	-1	Roche Holding AG	Europe	Healthcare	10.8	18.9%	-8.7%
9	12	3	Johnson & Johnson	North America	Healthcare	10.6	13.8%	16.0%
10	8	-2	Merck & Co., Inc.	North America	Healthcare	10.2	25.4%	0.8%
11	11	NA	Toyota Motor Corporation	Japan	Auto	10.0	3.9%	2.6%
12	10	-2	Novartis AG	Europe	Healthcare	8.5	17.0%	-11.1%
13	15	2	Ford Motor Company	North America	Auto	8.0	5.1%	9.6%
14	20	6	Facebook, Inc.	North America	Software and Internet	7.8	19.1%	31.0%
15	14	-1	Pfizer Inc.	North America	Healthcare	7.7	14.6%	-2.7%
16	13	-3	General Motors Company	North America	Auto	7.3	5.0%	-9.9%
17	16	-1	Daimler AG	Europe	Auto	7.1	3.6%	-9.2%
18	19	1	Honda Motor Co., Ltd.	Japan	Auto	7.1	5.4%	8.7%
19	24	5	Sanofi	Europe	Healthcare	6.6	15.1%	5.8%
20	23	3	Siemens	Europe	Industrials	6.1	6.2%	4.9%
						214.5	11.6%	7.3%

Source: 2018 Global Innovation 1000 Study, Capital IQ data, Thomson Reuters Eikon data

GLOBAL OVERVIEW AND EUROPE

- China's increase in RDI spending (percentage wise) in 2018 was larger than Europe's, North America's and Japan's combined
- Studies have shown that just RDI spending does not reflect the innovation efficiency (Volkswagen's relevant investments into RDI has not made the top 10 innovative companies list)

EU needs to bring the issue of innovation spending efficiency to the top of its agenda by:

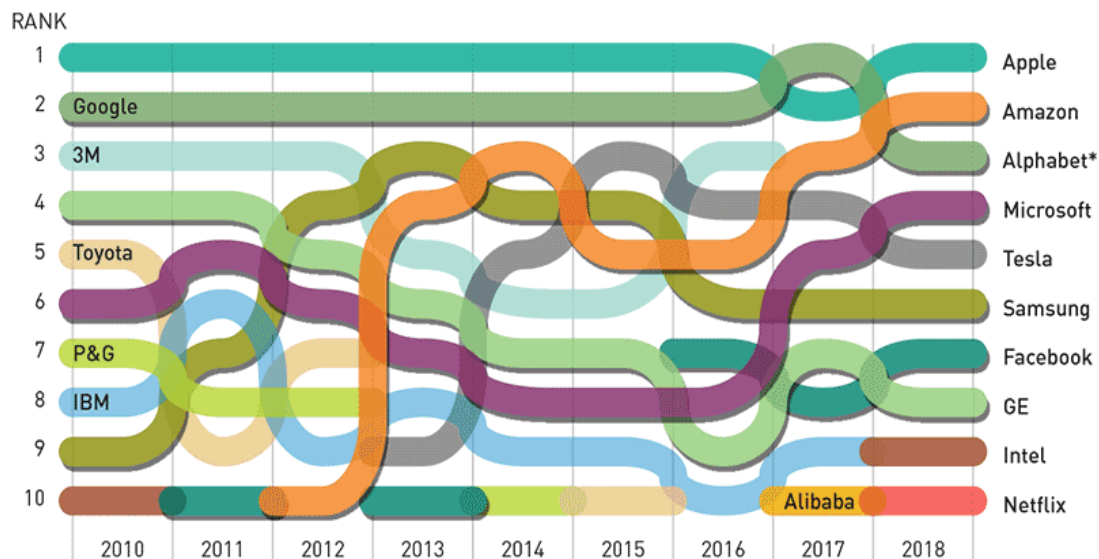
- Uniformation of RDI policies across all member states
- Supports RDI with risk relief
- RDI activities to be supported should be customer driven and more area focused

Clearly distinguishing between projects to be supported by grants and financial instruments

- **Paradigm shift**




The 10 Most Innovative Companies

Apple was selected by survey respondents as the world's most innovative company again, one year after Alphabet had been voted to the top of the list. Netflix joined the top 10 for the first time.



* In 2015, Google announced a corporate restructuring forming an umbrella company called Alphabet
Source: Strategy& analysis

INNOVATION – PARADIGM SHIFT

- Not Buzzword  Technological Evolution  Revolution
- Technological trajectory – New technology  (Paradigm Shift - Kuhn cycle)
- Innovations are much more than just technological, but also
 - Process innovation
 - Organizational innovation
 - Experience based innovation
 - Cultural innovation
- Innovators are primarily individuals, not organizations and corporations
- Human factor essential for innovation → innovation should focus on meeting (or creating) the needs of the consumer → such innovation will shorten the time to market gap and facilitate companies to become High Leverage Innovators
- Financial infrastructure is at the core of the innovation infrastructure → we must find ways to motivate innovators (especially from the public sector) to actively seek way to market their innovations through the private sector
- Some types of RDI project should have a privileged status, such as those that address i. e. circular economy and alike... sustainable development goals

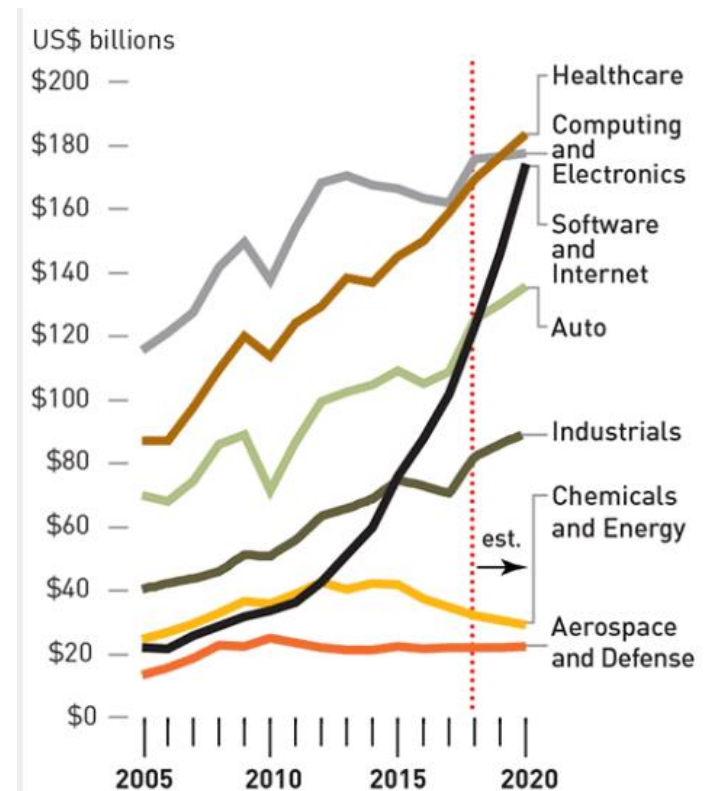
EUROPE'S GOALS

- To enable the **INNOVATION LEAP** by identifying and supporting projects with the potential to become High-leverage Innovators (companies whose business model and revenue growth is the greatest in comparison to their RDI spending and embody new paradigm)

Possible ways to achieve this would be by:

- Supporting of highly educated and open minded staff
- Risk taking to mitigate time to market
- Correlation between the market requirements and innovation projects
- Efficient organisation/innovative behavior/culture
- Early evaluation of innovation projects (EIC)
- Sector focused RDI

In 2016 PWC anticipated that by the end of 2020 Helathcare will overtake Computing and Electronics in overall RDI spending, however, this will probably be achieved even sooner, as the table shows.



Source: Capital IQ data, Thomson Reuters Eikon data, Strategy& analysis

- Money is just a facilitator for innovation, but money alone can't be innovative
- Innovation projects and new business models should be driven by the private sector
- State and EU intervention only in those sectors that require basic research...

Whenever possible, RDI (Innovation for sure) should be financed with financial instruments!



GRANTS – ADVANTAGES:

- Required mainly for base research where the risk of failure is the greatest
- Required also where there is a strategic reasoning, within the educational process or where otherwise justified by some other exceptional reasoning
- „Automatically“ involves the akademia



GRANTS – DISADVANTAGES:

- Over dependence on grants exclusively (has an exclusion effect rather than an inclusion effect)
- Typically subject to a lot of red tape where a great deal of most valuable hours of the most qualified people are spent at no added value
- Runs a risk of non critical feasibility confirmations without any leverage effect

RDI FINANCING IN SLOVENIA

In Slovenia, overdependence on grants (and EU projects), funding of profitable projects with grants and alike resulted in no interest on innovators' side for private funding → hence, weak financial infrastructure has been setup in Slovenia (basically no VC funds available in Slovenia)



Slovenia is among the countries that statistically invests the most in RDI



public spending for RDI has been in decline for years, thus a market gap to be addressed by FI



lack of alternative financing (private equity, VC, etc.)



SIPO extremely inefficient (IMD puts Slovenia on 58th place out of 61)



two thirds of Slovene SMEs are not considered innovative



the quality of the innovation infrastructure according to Research&Innovation Performance in EU 2016 is placed 20th/28

VC financing in Slovenia is 7 times lower than in EU average and 35 times lower than in USA.

In past 10 years Slovenia's GDP growth per capita has been almost inexistent, while some peer countries in EU had 5 – 10 % growth, and South Korea's GDP per capita has grown by 70%.

RDI FINANCING by SID Banka

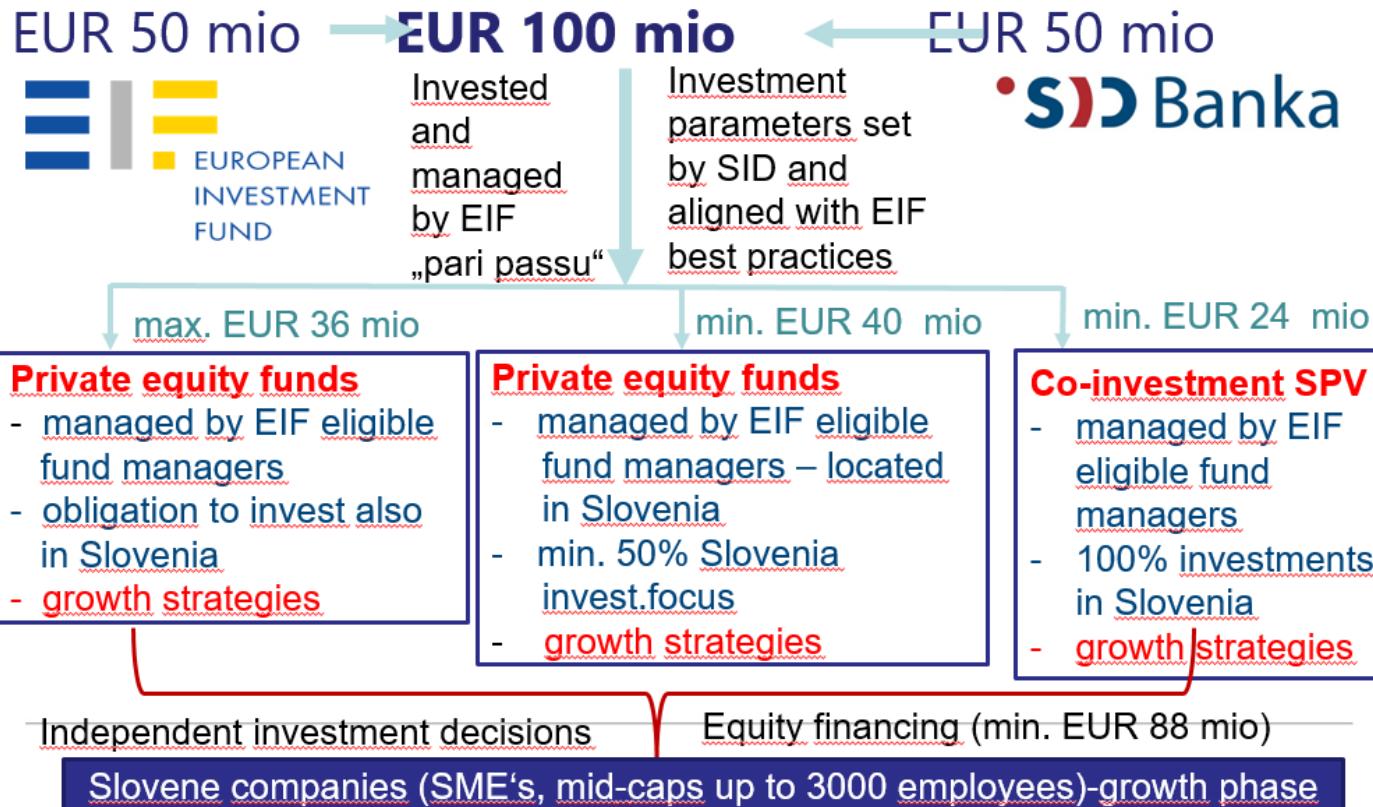
- In the past 7 year SID Banka alone has approved over 166 mil € of loans (financial instruments) specifically aimed at RDI
- In 2018 alone, SID Banka has approved approximately 50 mil € of fresh RDI loans
- SID Banka, together with EIF (EFSI supported), introduced a 100 mil € program called **SEGIP (Slovene Equity Growth Investment Program)**, a program to support Slovene innovative companies in their growth phase, which, among other, resulted in:
 - 2 new local fund managers and 2 new private equity funds
 - The 2 funds will share a 50 mil € investment from EIF and SID Banka combined
 - In addition, those funds will raise private investments from institutionalized investors
 - Each fund expected to raise 60+ mil € of investments from investors
 - Funds will thereby provide leverage of approximately 4 times SID's investment so that each fund will end up of a size of 60+ mil €, meaning that the leverage effect will be more than twice the contribution from EIF and SID Banka and thereby more than 4 times SID Banka's investment.

SEGIP – a great example that an offer needs to present itself in order to catalyse demand.

RDI FINANCING by SID Banka - SEGIP



Slovene Equity Growth Investment Programme (EFSl)



- 140 mil € of RDI financing will be made available to companies until 2023 via Fund of Funds, a cohesion fund managed by SID Banka
 - In a form of loan via onlending
 - In a form of portfolio guarantees for loans provide by commercial banks
- SID Banka plans to introduce the following instruments:
 - A state-aid free InnovFin loan program (supported by EFSI)
 - A state-aid free Venture Capital financing program (if supported by EFSI and/or ESIF)
 - A tech-transfer fund platform (EFSI and/or ESIF supported regional fund) aimed at identifying innovation projects within the academia to support industrialization and commercialization of the same
- All of the above are pilot projects with a possibility of enhancement if adequate risk sharing and risk taking will be provided
- They should achieve high leveraging by private investors, the riskier the product, the more favorable the terms of SID Banka's engagement

- Although Europe's RDI investments have risen, we are still far behind China, North America (about 2/3) and unable of the INNOVATION LEAP
- Financial infrastructure is an integral part of the innovation infrastructure → lack thereof means that innovative projects are up for (fire) sale, if they can't be monetized
- No financial infrastructure means no experts and absence of know-how, synergies, access to markets experts etc.
- In USA, some more riskier projects are supported by the state with a more than 50% stake
- In order to make innovation more efficient, Europe should make a clear distinction what kind of projects should be funded by grants and which with other forms of financing

It is imperative that we as a society, start working hard on the change of culture.

The question of setting up the innovation infrastructure is part of the culture and the financial instruments to support investments in RDI are an integral part of the innovation infrastructure.

Such a big change may only be done if offered an extensive political support, both on a national and the EU level.