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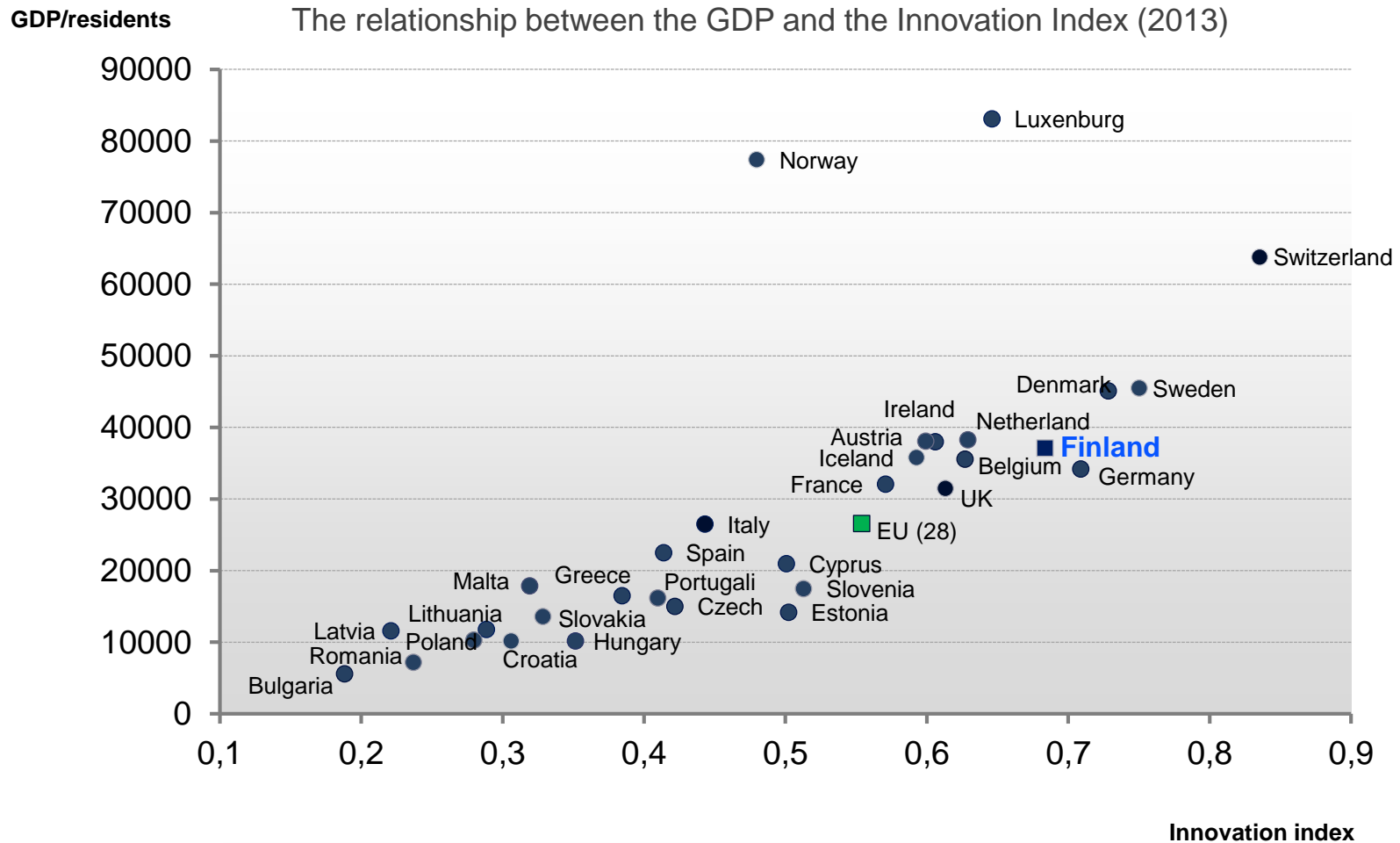
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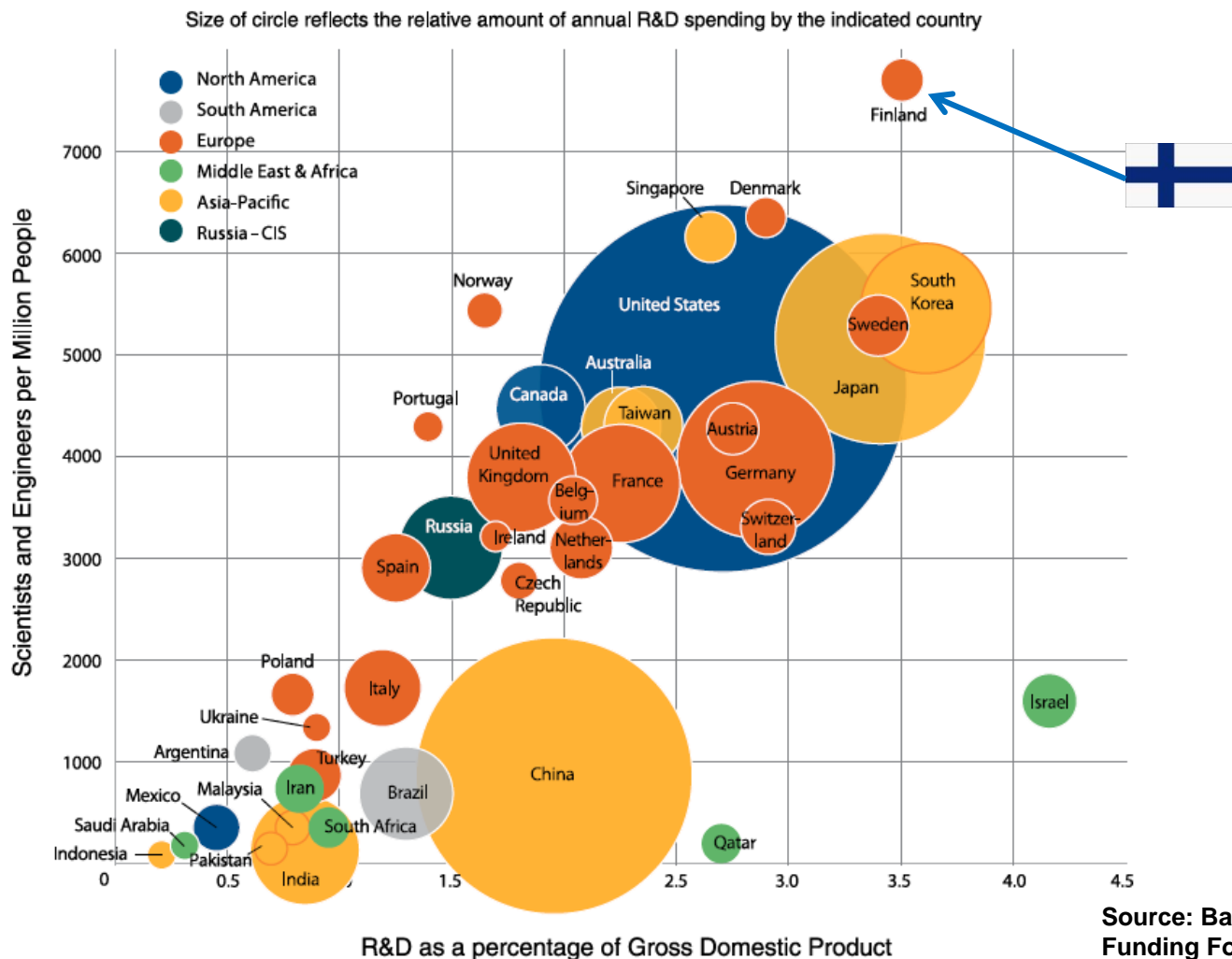
Innovation gives a boost to the economy



Source: Innovation Union Scoreboard 2014, Eurostat

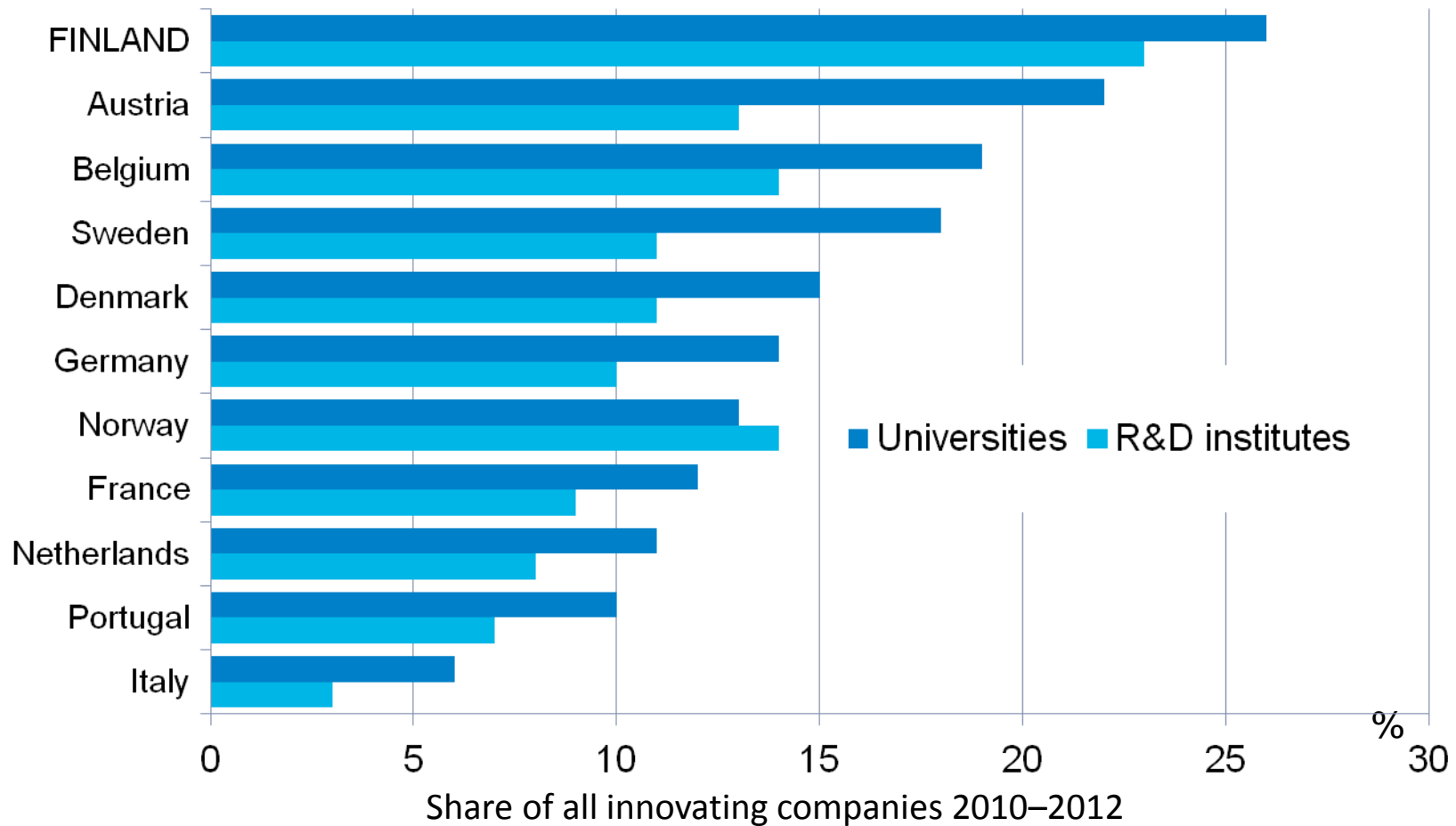
World of R&D 2014

97,3 % of the world's R&D is performed by the top 40 nations



Finland is the leading country regarding innovation cooperation between companies and academia

Innovation cooperation between companies, universities and R&D institutes



Source: Eurostat, Community Innovation Survey

Sources of growth

B + C + D + H

Major restructuring of the economy going on: growth to be sought from new areas

- Traditional cornerstones of our economy (paper and pulp, electronics industry) are decreasing in their role.
- Other industries have not been able to make up for the loss from these two sectors
- Need for new sources of growth with high value-added production and export opportunities
- Success in international competition requires specialising in our strengths
- New growth will be increasingly based on services, information and skills

Sources of the new growth



Bioeconomy and cleantech solutions

Healthcare industry

Intangible value creation

Digitalisation

Finland a globally leading country in cleantech solutions

- **Cleantech solutions cover products, services and processes that promote the sustainable use of natural resources and reduce emissions**
- **Strengths of Finnish companies:**
 - energy from waste/biomass
 - energy efficiency services
 - smart electricity metering
 - indoor air cleaning
- **Objectives of the strategic programme**
 - Promotes the business, growth, innovation and internationalisation in the field

The global market growth forecast is over **€800 billion** in 2014–2020.

2012: Turnover of the field in Finland **€25 billion; 2,000** enterprises.

Target 2020: Turnover of the field in Finland **€50 billion, 3,000** enterprises, **40,000** new jobs.

Bioeconomy will be the next wave of economy

- **Bioeconomy uses biological natural resources in a sustainable manner**
 - Reduces dependence on fossil fuels, prevents impoverishment of ecosystems, promotes economic development and creates new jobs
- **Finland has great potential to become a global pioneer in bioeconomy**
- **Current project pipeline in bio-economy over €2 billion**
- **Aims of the Finnish Bioeconomy Strategy**
 - Competitive operating environment
 - New business
 - Solid competence foundation
 - Accessibility and sustainability of biomasses

Turnover **€60 billion**
Share of employed people **13%**
Share of export **26%**

Target 2025:
Turnover grows to **€100 billion** and
Creates **100,000** new
bioeconomy jobs.

Digitalization: data centers, networks, applications...



80–90 % of traffic will be video/TV streaming in the next few years, causing network congestion



Big Data and analytics

**Digitalization Connects
– 5G Enables**



Real-time remote monitoring and car-to-car communications require low latency and high reliability



Cyber security

Tekes



Number of devices on the net is expected to be 50 BN by 2020 – far beyond the current network capability



”Using current solutions the battery of a terminal device will be drained in about 3 minutes in a 5G network environment”

New growth from the health sector

Growth strategy for the health sector's research and innovation activities

- Finland has excellent possibilities for being a global leader in health and well-being research, business and renewing services
- **Goal:** to expedite the growth of health business for the benefit of enterprises, research and the health of the citizens
- **Means:** the growth is based on Finnish innovations, research and developing operating environment. New investments are important for the sector.

The health sector is one of the fastest-growing markets in the world.

A new glimmer in Finland's export statistics

€5 billion in turnover
500 enterprises
20,000 employees
€2.8 billion exports

Implementation:
MEE, MSAH, MEC,
Academy of Finland
Tekes

Start-up ecosystem in Finland

NOBODY IN THEIR RIGHT MIND WOULD COME TO HELSINKI IN NOVEMBER. Well, except for these 15,000 tech-heads

<http://www.slush.org/>



Credit:: Team Finland, Prime Minister's office

Technology trends

Figure 1. 40 key and emerging technologies for the future

