

Business Forum Italy-Turkey 2014

Innovation Driven Growth in Turkey

December 12th, 2014

Michael Weiss

Five major business drivers are expected to shape the world in the upcoming years

Macro drivers and sub-drivers shaping the future

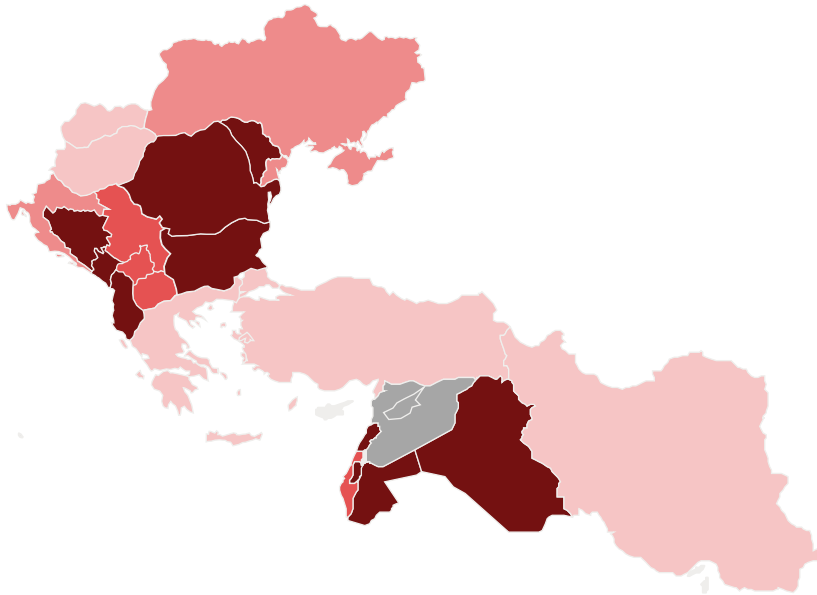
Globalization	Natural resources	Technology	Demographics	Consumer behavior
Moderate and uneven global economic progression	Increasing environmental issues and concerns	New paradigms in product design manufacturing	Rise in global population	Increasing consumer diversity
Reorganization of the supply chain	Volatile commodity markets	Path towards higher production flexibility	Aging population in developed countries	New models for consumer engagement
Easy access to information/knowledge	Increase in raw materials prices	Continuous research for new technologies	Global urbanization trend	New consumer segments
More inclusive globalization	Decrease in energy intensity across countries	Increasing importance of Big Data and Cyber Security	Changes in workforce structure	New era of squeezed profitability

How to drive innovation within this macro-trends best ?

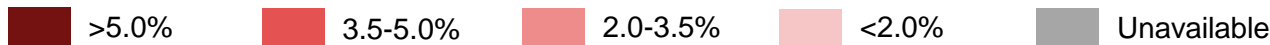
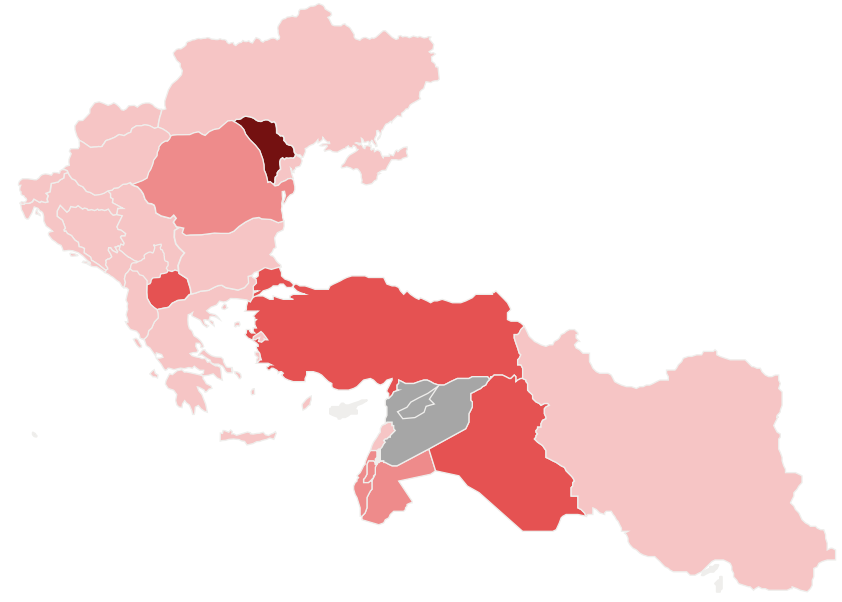
Turkey has set the 2023 vision to establish its economy in the global premier league – challenged by flat neighboring markets

GDP growth rates breakdown by country

Real GDP growth rate (2008)



Real GDP growth rate (2013)



These targets are challenged along three inter-related key pillars

Challenges towards 2023 targets

1

Trade imbalance

- **Limited product variety** offered by domestic industry
- **Imports rising faster than exports**, triggering a trade deficit

Export ambitions drive the need for resources, raw materials and energy

Consequently, export volume increases cannot always be translated to value increases

Limited access to these resources drive import of intermediate goods

Current manufacturing capabilities limit both domestic product variety and value add in exports

2

Insecure access to resources, raw materials and energy

- **High import dependency on scrap** (~70%) and lack of influence on prices
- **Dependence on four countries for energy supply:** Russia, Iran, Algeria and Azerbaijan

Efficiency issues further drive resource needs

3

Limited capability along selective parts of value chain

- **Limited technology, know-how and infrastructure** (labor competency, quality standards, education, research faculties, innovation,...) availability
- **Limited modularity, missing value chain elements** and lack of inter-industry integration

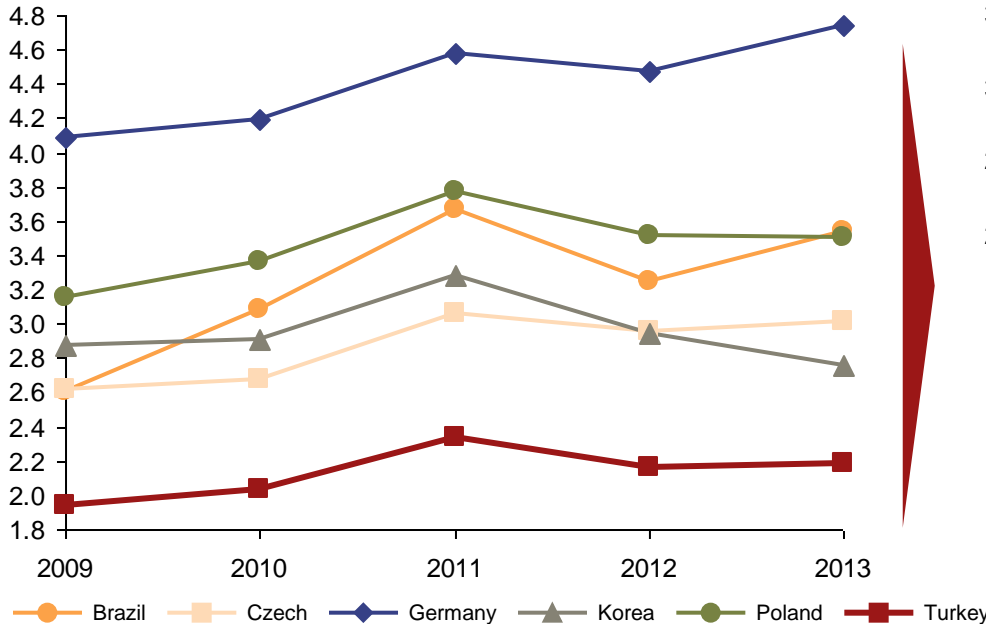
Domestic businesses are then even more dependent on external inputs, also challenging net exports

Turkey's growth ambition requires a significant uplift in value per unit exported

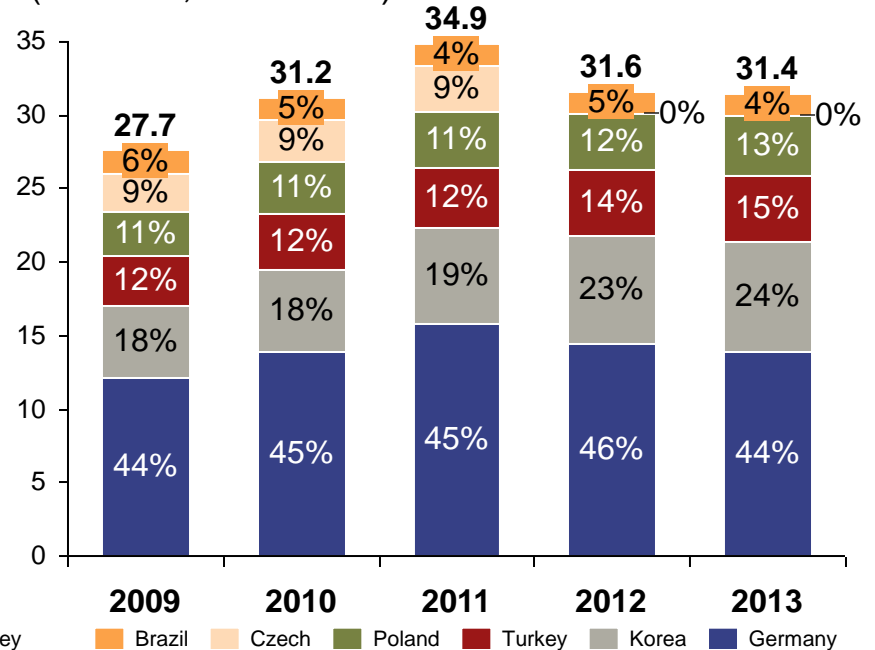
Export unit value and volume comparison

Metals industry - Example

Export unit values in selected countries
(US \$/kg, 2009-2013)


















Export volumes of selected countries
(mn units, 2009-2013)



TIM has started to launch several initiatives to improve innovation driven exports

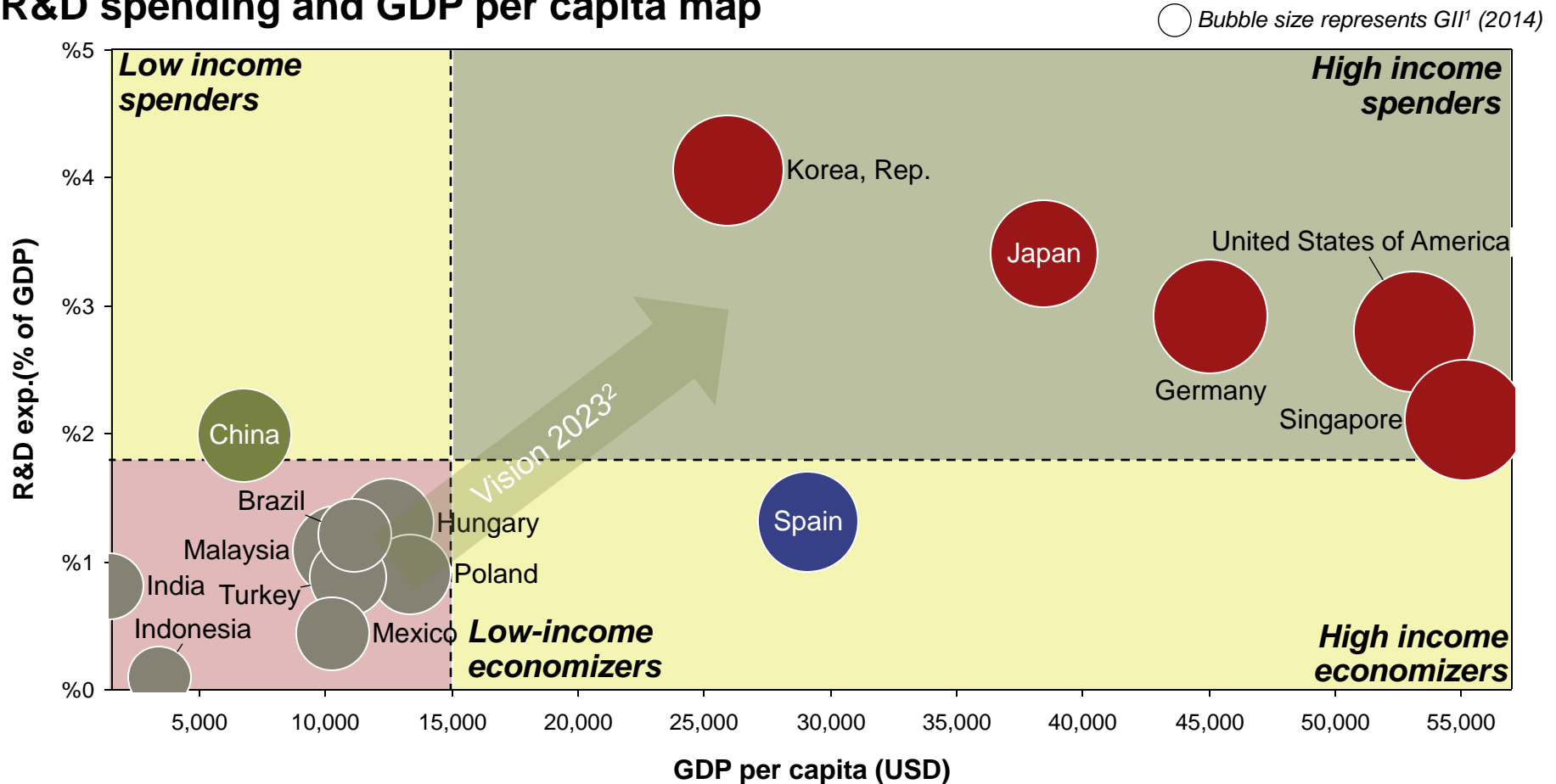
Further R&D investment and efficient innovation management are key

Innovation metrics analysis by country

Metrics	R&D expenditure (% of GDP)	# of researchers (per ths.)	Global Innovation Index score
 Turkey	0,9	1,0	38,2
 US	2,8	4,0	60,1
 Singapore	2,1	6,4	59,2
 Germany	2,9	4,1	56,0
 South Korea	4,0	5,9	55,3
 Japan	3,4	5,2	52,4
 Spain	1,3	2,7	49,3
 China	2,0	1,0	46,6
 Malaysia	1,1	1,6	45,6
 Hungary	1,3	2,4	44,6
 Poland	0,9	1,8	40,6
 Brazil	1,2	0,7	36,3
 Mexico	0,4	0,4	36,0
 India	0,8	0,2	33,7
 Indonesia	0,1	0,1	31,8

With translation of increased R&D expenditure on innovation, Turkey can ensure achieving 2023 vision targets in GDP

R&D spending and GDP per capita map

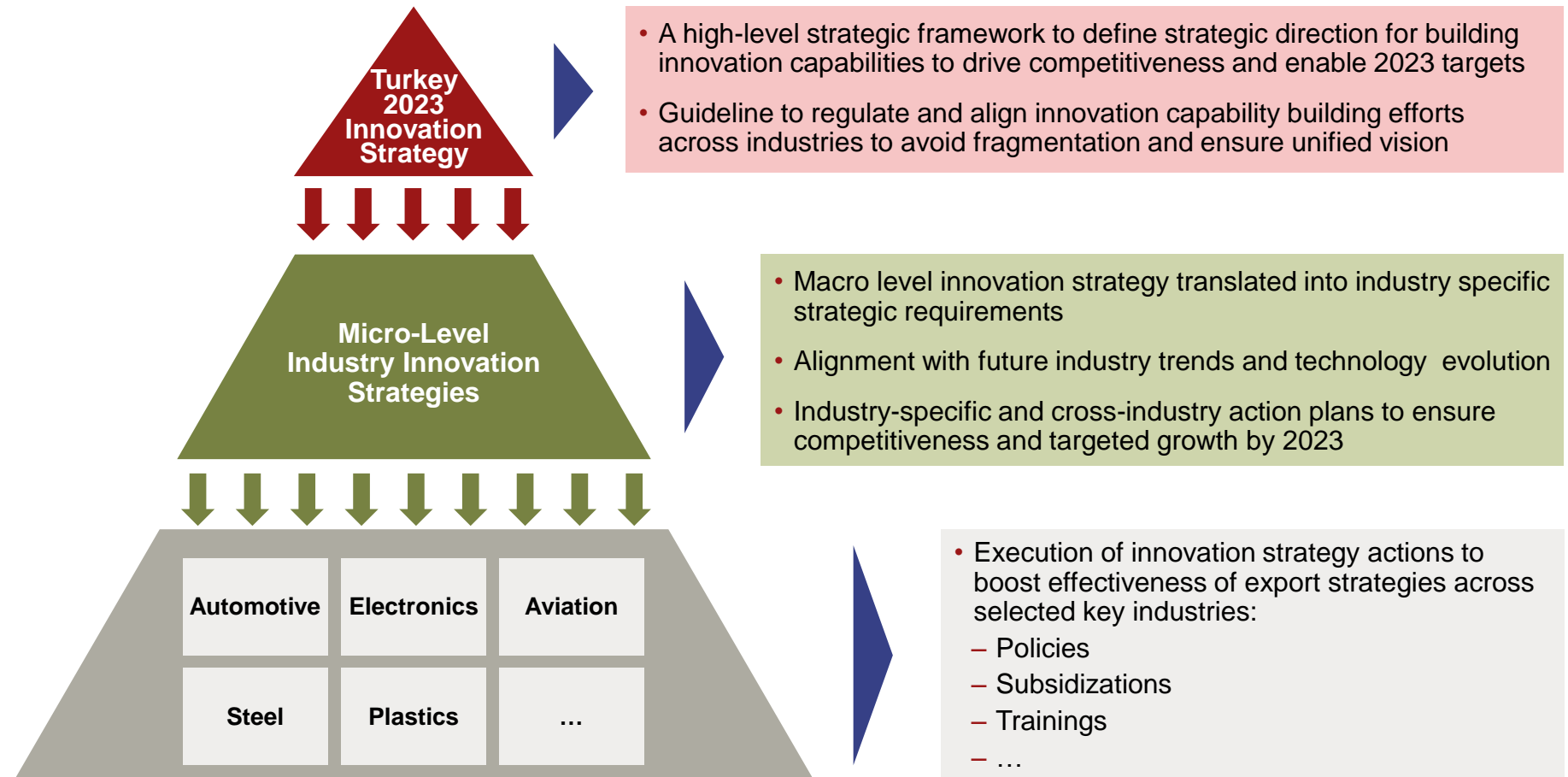


1. Global Innovation Index 2014
 2. R&D expenditure is aimed to be increased to 3% by 2023
 Source: World Bank, A.T. Kearney

● High income spenders ● High income economizers
 ● Low income spenders ● Low income economizers

Translation of this increased expenditure to value can be achieved by a solid innovation strategy, covering macro and micro elements

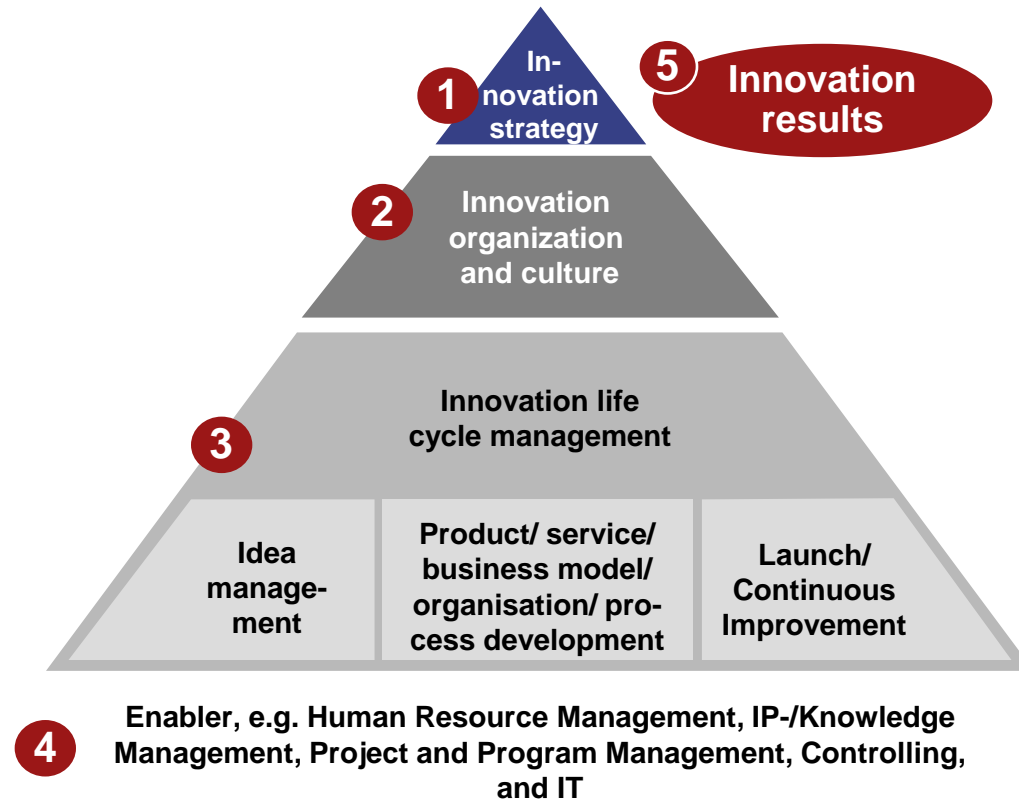
Multi-level strategy building for implementation



At the same time “InovaLIG” has been launched to strengthen the innovation management competence in Turkey



Assessment dimensions in InovaLIG project

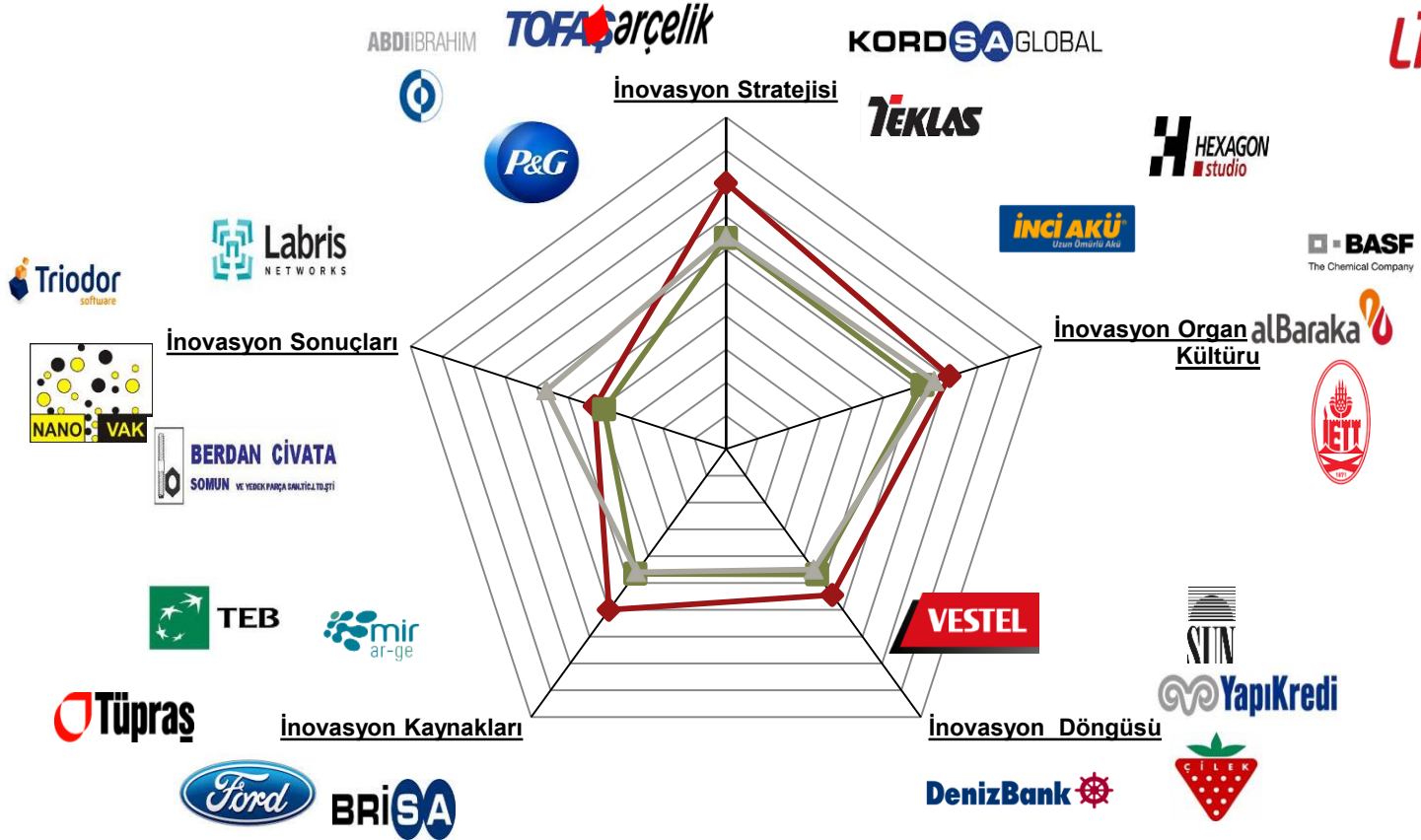


Description

- 1 Innovation strategy**
 - Vision and strategic focus on innovation
 - Implementation of strategy
- 2 Organization and culture**
 - Roles and responsibilities
 - Organizational structure
 - Organizational culture and climate
- 3 Innovation life cycle processes**
 - Idea management
 - Product/Service/Business Model/organizational or Process Development
 - Launch and Continuous Improvement
- 4 Enabling factors**
 - Project Management
 - Human Resources and Incentives
 - IT and Knowledge Management
- 5 Innovation results**

~460 companies participated to the debut year of the competition, and have been competing across 5 dimensions of innovation management

İnovaLİG - İnovasyon Liderleri Ödül Töreni – 6 Aralık 2014

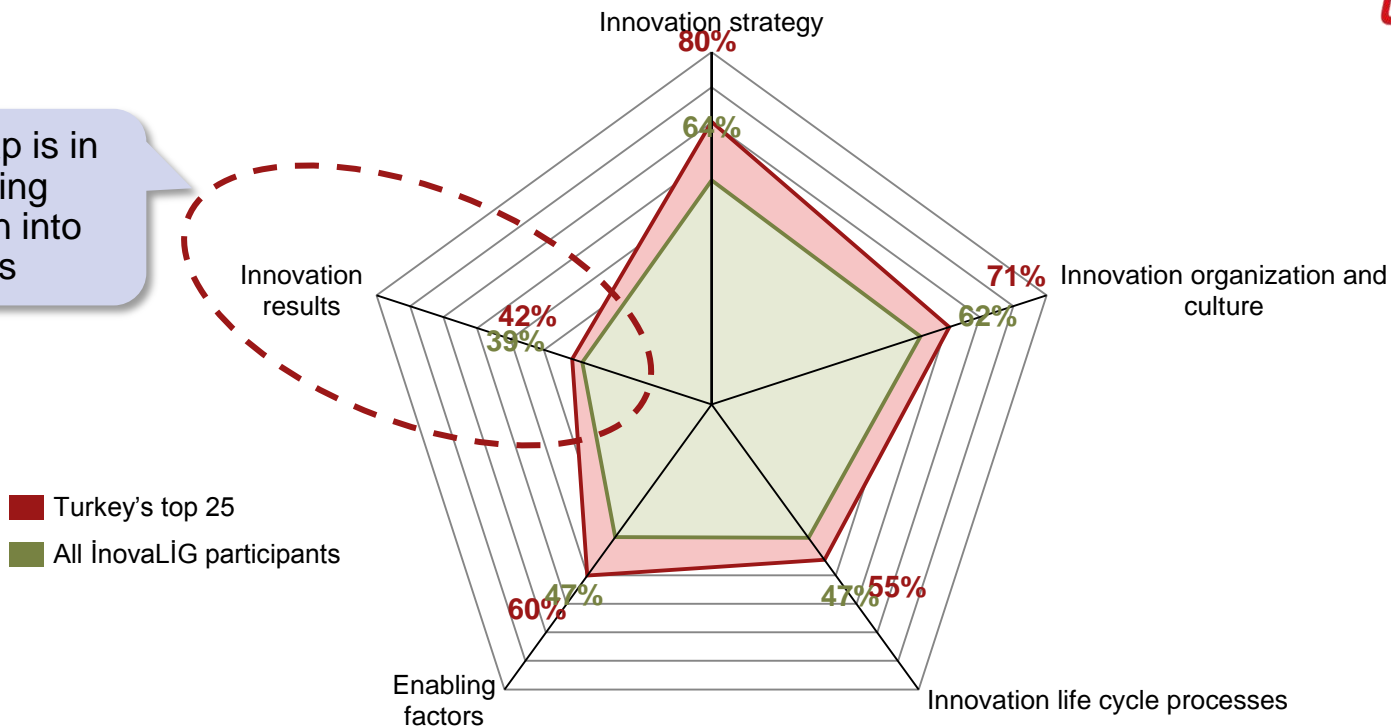
İNVA
LİG İnovasyon
Liderleri

While companies in Turkey are in key categories on peer level with EU markets, the impact has more upside opportunities

Comparison of top 25 companies and average



Biggest gap is in translating innovation into results



International Innovation partnerships could offer attractive opportunities to leverage joint opportunities in Turkey

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