



# **How to Boost Automation and Robotics in Slovakia?**

## **Steps Towards Smart Specialization**

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Areas of **economic** specialisation

**Prospective areas** of specialisation

Areas of specialisation from the point of view of **available scientific and research capacities**



# Why?

Estimated worldwide annual shipments of industrial robots

200  
180  
160  
140



In **2013**, the sale value increased by **12% to US\$ 9,5 billion**.

Cost of software, peripherals and systems engineering is not included.

The worldwide market value for robot system is app. **US\$ 29 billion**.

Source: World Robotics 2014



# Strategic GOAL

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**To achieve global leadership in certain technology domains  
and growing market share.**



# Firms

## AT + R

KLASTER



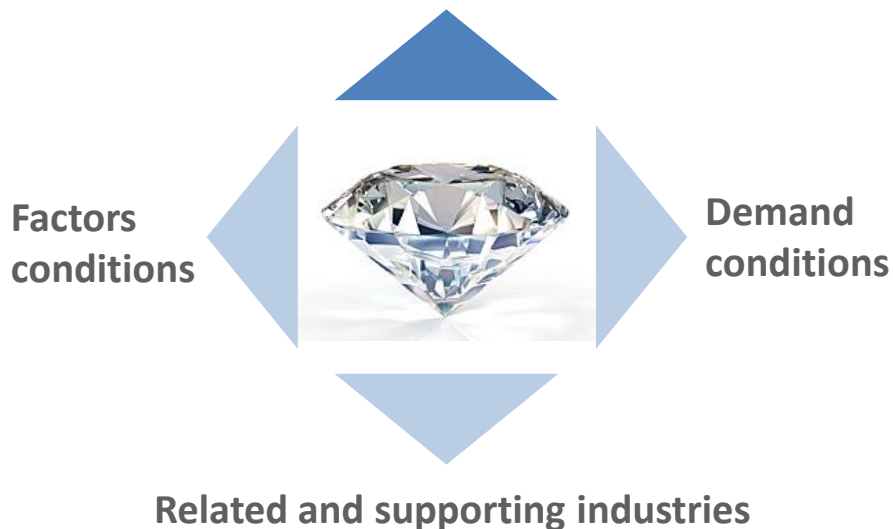




# Porter Diamond



## Firm strategy and rivalry



### Strengths

Know how, market position, unique solutions, own R&D

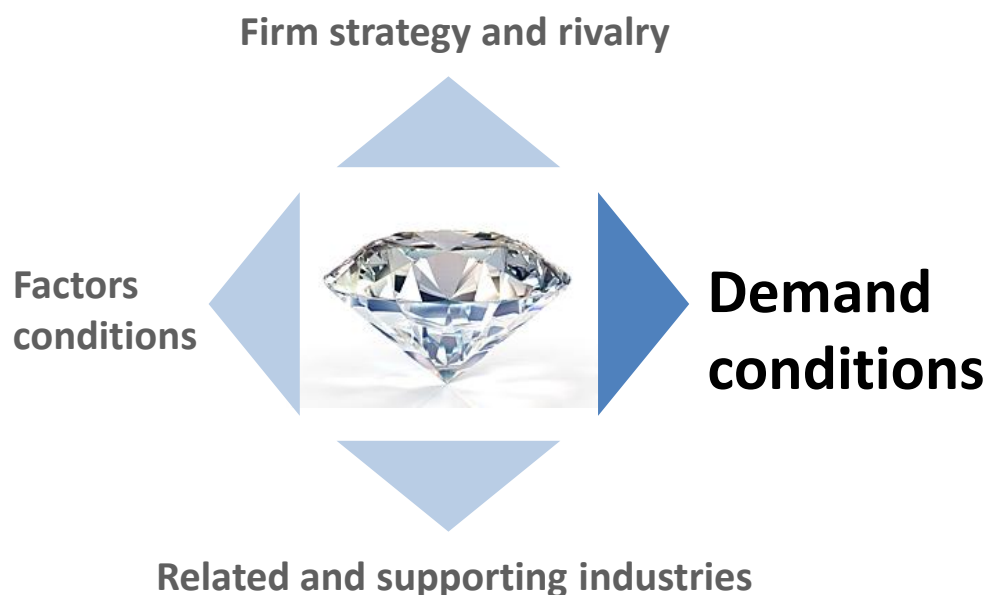
### Weaknesses

Barriers to entry (e.g. know how, capital intensity), lack of cooperation, internationalization

### What is needed?

strengthen cooperation (+ foreign clusters & firms), partner search, joint innovation projects, support strategic decision making





## Strengths

Customers available (automotive), sector in growth, Firms at global markets

## Weaknesses

Limited domestic market (including public sector), low global market share, insufficient promotion abroad, high cost of entering new market, no joint activities (export consortia, clusters)

## What is needed?

Build up domestic market (firm, public sector), export promotion

Firm strategy and rivalry

Factors  
conditions



Demand  
conditions

**Related and supporting industries**

## Strengths

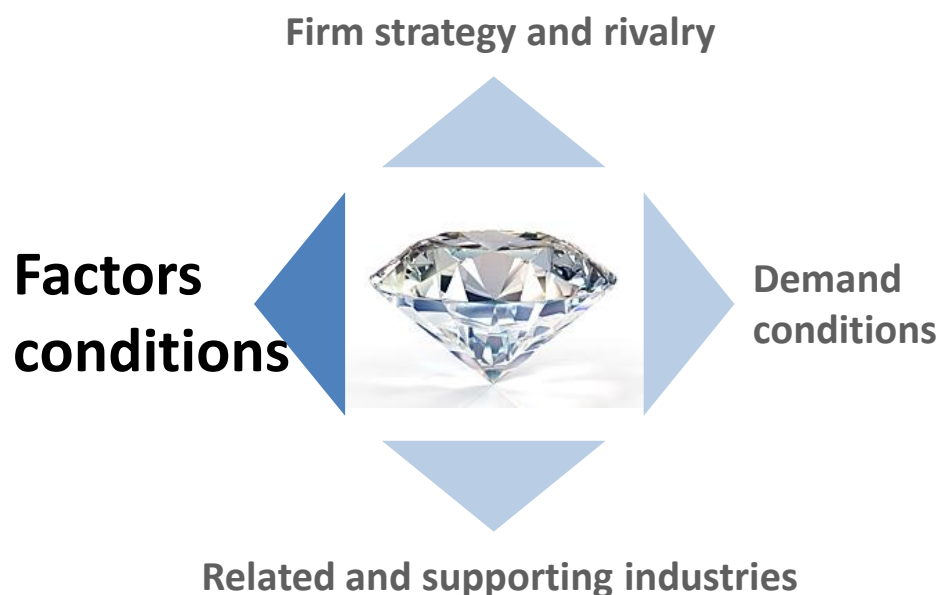
Access to state of the art technologies (e.g. business representations of technology leaders in Slovakia)

## Weaknesses

Lack of local suppliers/subcontractors and cooperation, insufficient technological level

## What is needed?

Strengthen cooperation, action for partner search, technology upgrading, support FDI



## Strengths

Low labor cost, universities available, bank loans, „dual“ education in progress, scientific infrastructure

## Weaknesses

Shortages of skilled labor, low quality of graduates, lack of cooperation academia-industry, brain drain, The focus of R&D organization outside the industry needs, weak TT

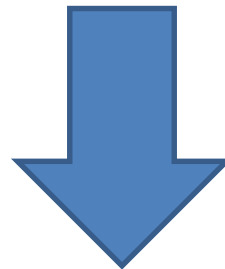
## What is needed?

Curricula according the business needs, mobility programs, development of new measures against brain drain, building shared infrastructure, upgrade R&D infrastructure in certain technology domains



## What is urgently needed:

- enhance cooperation between academia and industry
- capitalize knowledge/technology transfer
- upgrade infrastructure in certain technological domains
- shared infrastructure
- joint RDI projects (A-I, international...)
- selection of technology (scientific) priorities/tech domains



**60-100 M€**



**...coming soon...**

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Tailor-made support in regions

Foresight

Industrial Mobility Program

IPR Program

Bilateral Cooperation R&D Programme

Slovak Technology Leadership Platform  
*(WG 1 – Automation & Robotics)*

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■ Thank you