

# China Latvia Cooperation

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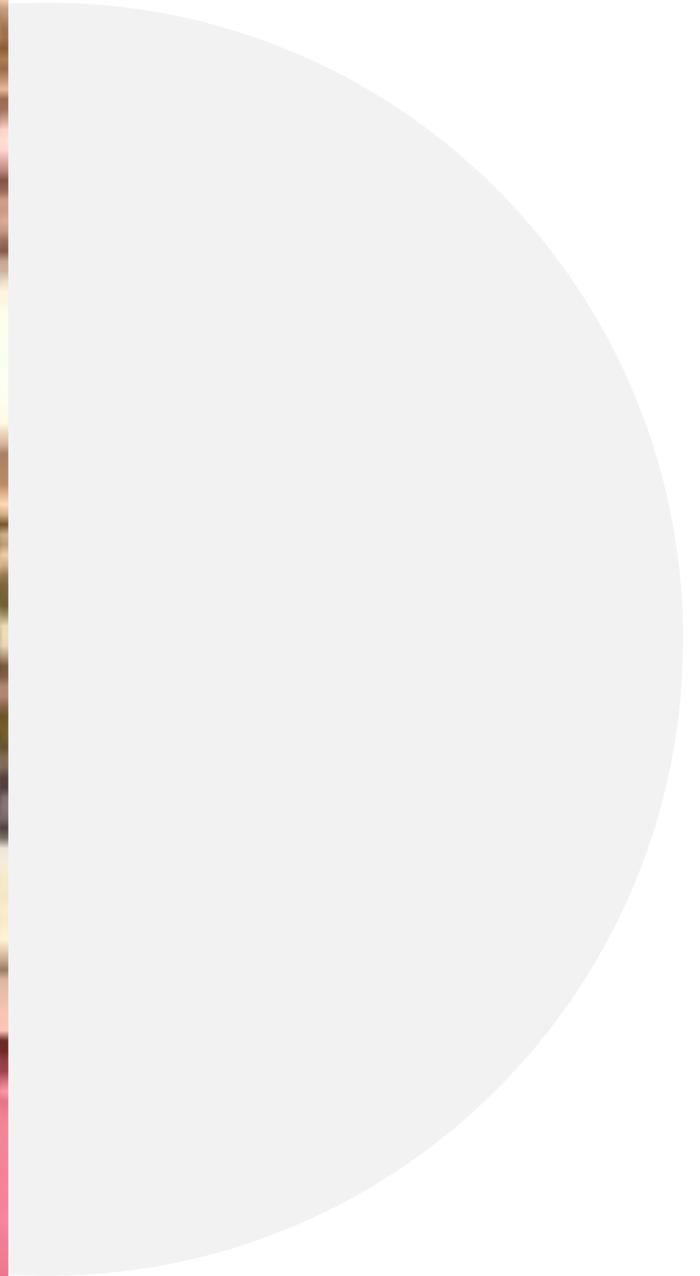
„...an ambitious multi-year program for the integration of education, research and industry...”



# 1. The Story







# Concerns of the Chinese Leadership

Consultation with the State Council Departments 24 January 2019

1. World economic outlook
2. Effect of macroeconomic changes on major economies
3. Tax reduction
4. Deleveraging
5. Financial Innovations
6. Reform of the multilateral trade system
- 7. Scientific and technological innovation**
8. Environmental protection
9. Rural recession and urban slums
10. Dealing with the aging populations
11. Sustainable real estate market
12. Reform and Opening up (general)

# This is what we would like to achieve in Latvia

## Breakthrough goals

1. Competitiveness of Baltic companies and their strengthening
2. Development of innovation and entrepreneurship in the Baltics, in line with Cluster and Smart Specialisation Schemes
3. New possibilities for rural areas and regions
4. Values in an age of upheaval and change
5. Revival of society in the face of depopulation, and overseas populations to help
6. Social innovation and involving people
7. Social and political transformation
8. Balancing of culture, nature and urbanisation
8. Sustainable ecosystem
9. Good framework for the laws of the country in an era of rapid transformation.

## 2. Digitalization China`s Digital Rise

# China`s Bold Ambitions to lead in Digital Technologies

- China is making headway in achieving global leadership in 5G, AI, quantum computing and other digital and disruptive technologies
- The Chinese Government (CCP) is pursuing a comprehensive digital strategy including the search for new economic growth drivers, cyber governance and global power projection
- Selected leading Chinese ICT companies are co-shaping the global digital architecture
- With a proactive approach to standardization, China sets operational rules for the world`s businesses
- „First implement, then regulate“ has many consequences

# Some key policy initiatives

**National (2015-18):** Made in China 2025, Big Data, National Informatization Strategy, Cyber Security, Cloud computing, New Generation AI

**Official Concepts:** From Digital Fujian Province to Digital China, Digital Silk Road, ...

**Leading Small Groups:** Science & Technology (Li Keqiang), Constructing a Manufacturing Superpower (Ma Kai), Reform of Science and Technology and Build-up of Innovation System (Liu He)

**Talents!**

Self reliance in core technologies + global market

Integrated circuit packaging

IC design

Telecommunications system equipment

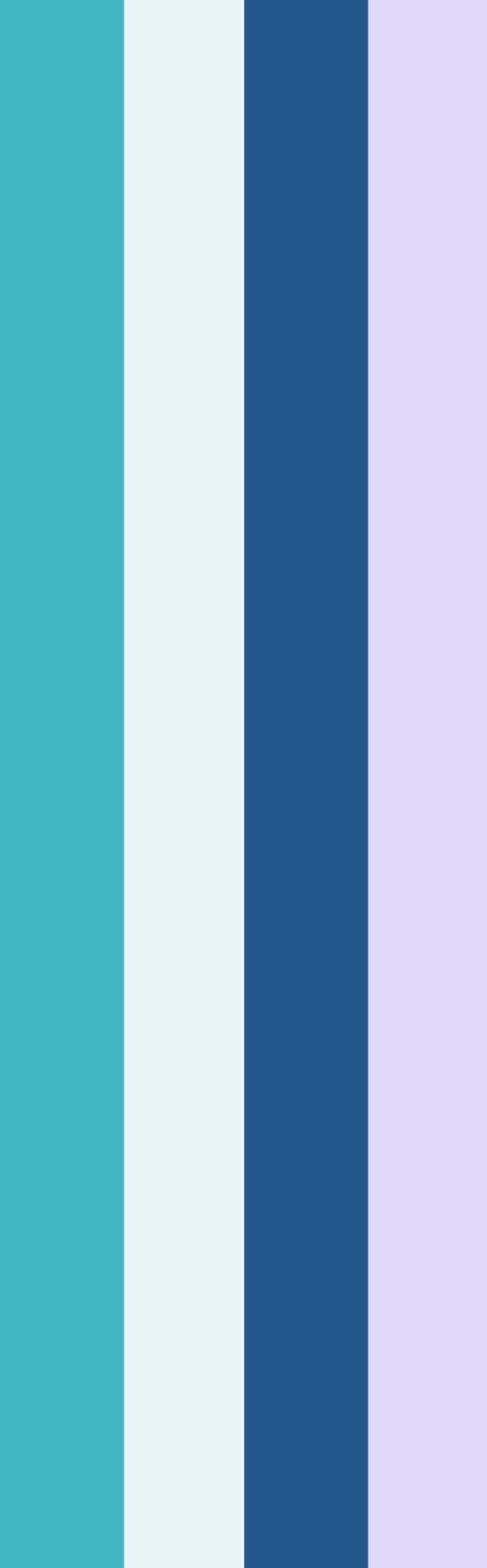
Fibre optical telecommunications equipment

High performance computers and servers

Mobile device chips

Routers and switches

*Global infrastructure – standards – research  
collaboration – global internet governance*



Digitalization is now happening  
in all fields, including agriculture  
and forestry!

# 3. Collaboration & Invitation



国际智能制造联盟  
ICIM International Coalition of Intelligent Manufacturing

Kick-off Meeting of International  
Coalition of Intelligent Manufacturing

国际智能制造联盟启动会

May 8, 2019, B

管理学院 | AAOCMS  
School of Management



区块链

The Implications of Intelligent  
Manufacturing and Blockchain  
for Management

智能制造与区块链  
在管理学中的应用

2019/05/10  
14:30-16:00  
2号教学楼2110

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# International Innovation Center @Hankou University

- Collaboration with Latvian and other institutions
- To date, more than 60 R&D projects across all aspects of industrialization, science, new materials, medicine, culture, lifelong learning
- Exchanges, get-to-know visits, advisory meetings, research and development work
- A large scientific lab and offices as a base for field work in China
- Access to industrial parks and municipal funding
  - Wuhan Economic Development Zone talents and parks
  - Hubei province, other towns
  - Jiangxia District talents and industrial parks
  - Other places in China
- Access to talent and partners: NEW partners, new opportunities

# Issues in Collaboration

- Expectations matching
- Unequal partnership
- Modes of Collaboration
  - 2+2
  - Academic vs Commercial
  - - Involvement of Companies
  - Individual vs institutional
  - \*Policies\*

# Continuing optimisation & new fields

- Intelligent manufacturing
- GreenTech
- Blockchain
- IP issues (universities / research, industries, international practice)
- Carbon financing (EU-China project)
- Multinational / international projects
- More aggressive PR and publications in this field
  
- China financed Incubator / Accelerator in the Baltics

# Lead markets for Environmental Technologies / GreenTech - A Special Case for Collaboration

## 德国环境技术/绿色技术的六个领先市场

1. Environmentally friendly power generation, storage and distribution 环保发电、储存和分配
2. Energy efficiency 能源效率
3. Material Efficiency 材料效率
4. Sustainable mobility 可持续运输
5. Waste management and recycling 废物管理与回收利用
6. Sustainable water management 可持续水资源管理

# IIC: Environmental Research, Development and Industrial Projects 国际创新中心环保研发产业项目

- Member Executive Committee, International Circular Economy Task Force
- PN6020 Shared Lab in Jiangxia District 江夏区共享实验室
- PN5005 Environmentally friendly battery production and recycling 环保电池生产与回收利用
- PN5006 Smart Energy 智能能源
- PN5008 Certification and Quality Assurance 认证和质保
- PN5010 Intelligent City Management with Big Data 大数据智慧城市管理
- PN5012 Cybersecurity 网络安全
- PN7002 New robotics 新机器人技术
- PN5013 Intelligent Logistics 智能物流
- PN6010 Internet of Things 物联网
- PN5014 Cobalt Battery Advances 钴电池开发
- PN5013 Lithium Battery Advances 锂电池开发
- PN5016 New Skills for Engineers 工程师新技能
- PN4010 Disaster Prevention and Reaction Center 灾害防范与应对中心
- PN5016 Intelligent Water Projects 智能水资源项目
- PN4015 Underwater Robotics 水下机器人
- PN4017 Advanced Smart City Exchanges 先进智慧城市交流

**求高而失败并不危险，**

**危险的是就低而成功。**

**皮特·萨赫逊院士**

The Danger is not that  
we aim too high and fail

The Danger is that  
we aim too low and succeed

800 Scientific Staff (target)

Exchanges, Field Work

Conferences, Refereed Journals

10000 sqm initial shared lab space

+500 sq km industrial area

Talent identification and

placement  
# 100 collaborative projects

+100 partner institutes and

companies

Our future collaboration:

Long term – high impact!

International Innovation Center

Hankou University & Industrial Park

Wuhan Economic Development

Zone

Hubei Province

Jingmen

Jiangxia District

# 4. Digital Transformation

# Thank You!

ANY QUESTIONS?

# Digital Transformation of everything

## **Transforming the Customer Experience**

- Customer Understanding
- Top line growth
- Customer Touch points

## **Transforming Operational Processes**

- Process Digitization
- Worker Enablement
- Performance Management

## **Transforming Business Models**

- Digitally Modified Businesses
- New Digital businesses
- Digital Globalization

## Remember:

- Unbundle / tailor demand NOW
- Find new supply and new capacity
- Find new markets
- Change the supply side business/ cost structure
- Create new value for the customers
- Hyperscale (opportunities / relationships / information)

# Motivation, Background, Action, Impact

## Element One

I have a strong personal family related interest in the well being and flourishing of the Baltic States. Depopulation and talent exits threaten their survival.

## Element Two

The digital economy creates big shifts

- More benefits for the customers than for companies
- Creates big winners at the top (winner takes all) and big losers at the bottom
- Rewards first movers and fast followers (multiple growth rates)

## Element Three

Fast prototypes of collaboration between Baltic Institutions and China

- Clusters
- Smart Specialisation
- Co-Invention, Invitation!

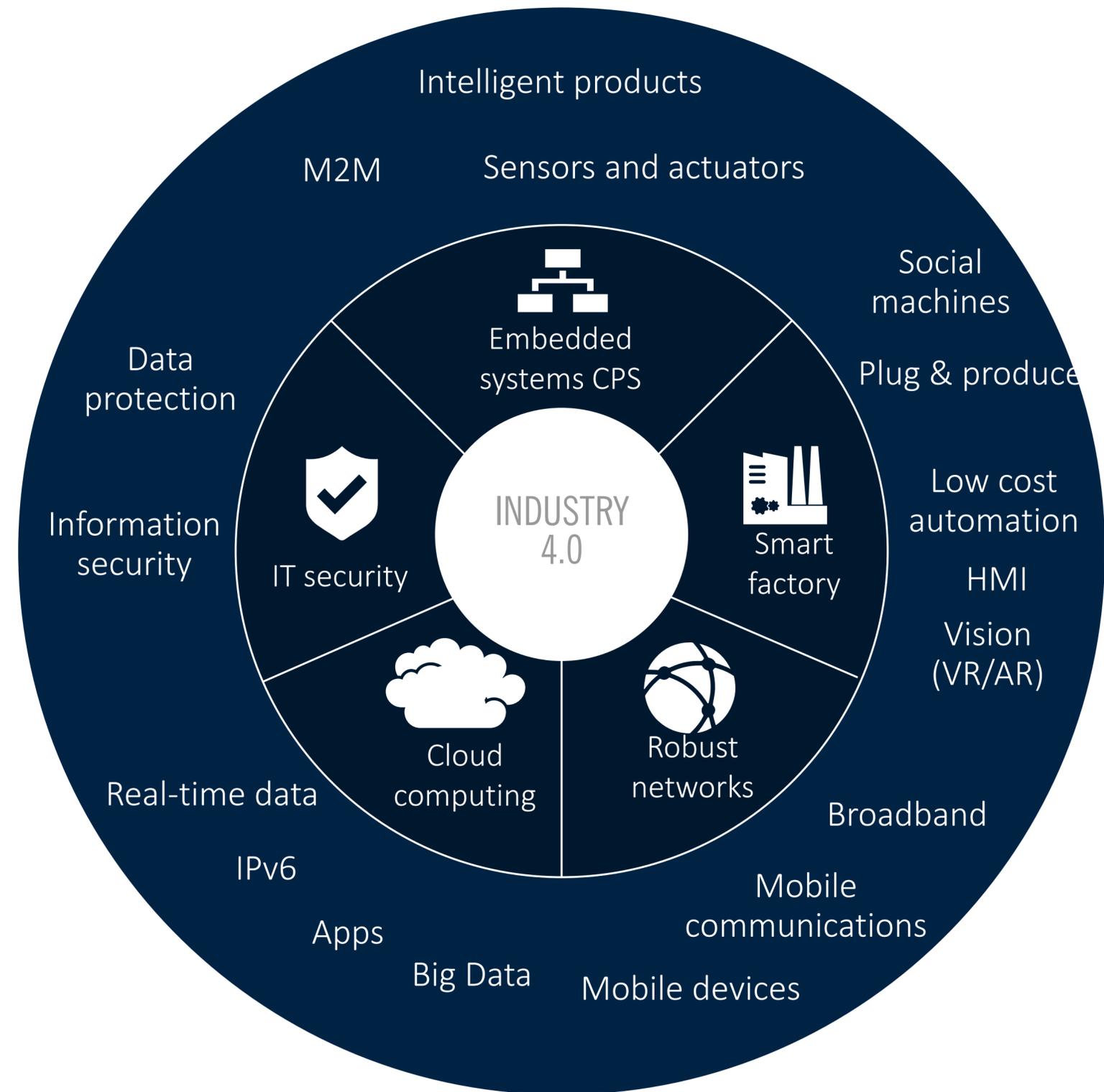
## Element Four

Becoming successful in the digital economy:

- Unbundle / tailor demand NOW
- Find new supply and new capacity
- Find new markets
- Change the supply side business/ cost structure
- Create new value for the customers
- Hyperscale (opportunities / relationships / information)

# Digitalization 数字化转型

- Digital Data
- Automation
- Connectivity
- Digital User Interfaces



## Digital data

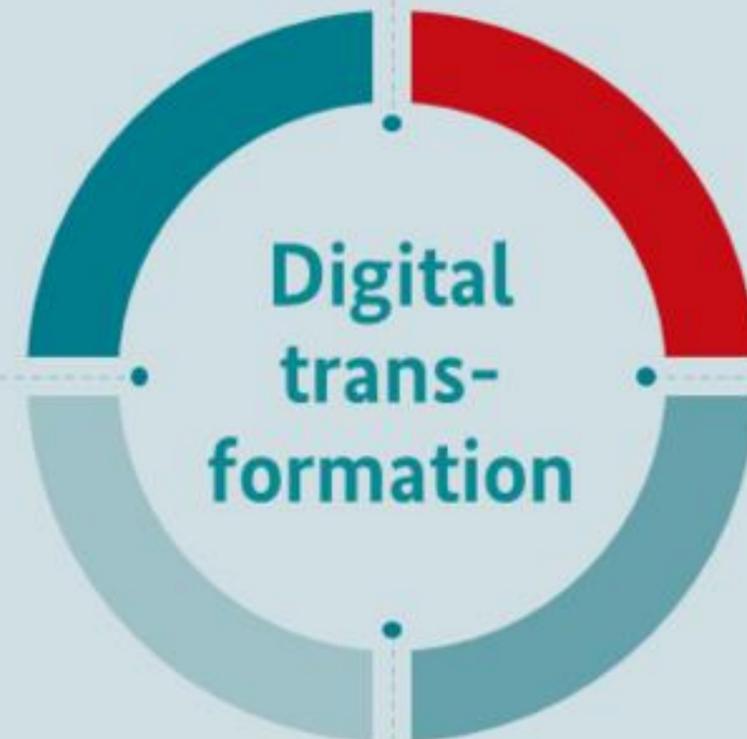
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- Big data
- Data generation/sensor systems
- Data-based optimization
- Image recognition and analysis
- etc.

## Automation

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- Robotics
- Drones
- Autonomous driving
- 3D printing
- etc.



## Connectivity

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- Cloud computing
- Cyber-physical systems
- Digital platforms
- Virtual companies
- etc.

## Digital user interfaces

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- Mobile Internet
- Apps
- E-commerce
- Infotainment
- etc.

# Market segments 市场份额

## 1 Environmentally friendly power generation, storage and distribution

- Renewable energy
- Ecofriendly use of fossil fuels
- Storage technologies
- Efficient grids

## 2 Energy efficiency

- Energy-efficient production processes
- Energy-efficient buildings
- Energy-efficient appliances
- Cross-sector components

## 3 Material efficiency

- Material-efficient processes
- Cross-application technologies
- Renewable resources
- Protection of environmental goods
- Climate-adapted infrastructure

## 4 Sustainable mobility

- Alternative drive technologies
- Renewable fuels
- Technologies to increase efficiency
- Transportation infrastructure and traffic management

## 5 Waste management and recycling

- Waste collection, transportation and separation
- Material recovery
- Energy recovery
- Landfill technologies

## 6 Sustainable water management

- Water production and treatment
- Water system
- Wastewater cleaning
- Wastewater treatment methods
- Efficiency gains in water usage