

Post COVID-19 Industry Cooperation Opportunities: IoT, AI, advanced technologies

Robert Keil

Business Development Manager for
Advanced Industrial Technologies at CzechInvest



**Connect
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2020

CzechInvest

Investment and business development agency

Business and Investment Development Agency CzechInvest, is an agency of the Ministry of Industry and Trade. Established in 1992, the agency contributes to attracting foreign investment and developing domestic companies through its services and development programs.

- Our Mission
- to **support** foreign direct investment
- to **develop** local companies
- to **implement** business-development programs
- to **improve** the business environment



Source: CzechInvest, 2020



CzechInvest's Investment Project Statistics

1993 - 2019



2,010

Approved projects



296,648

Number of new jobs



45,163 (USD million)

Expected total investment amount

Source: CzechInvest, 2020



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CZECHINVEST

I.

COVID-19

from the declaration of a state of emergency



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COVID-19 crisis development

from the declaration of a state of emergency

12th March

State of **emergency**



COVID-19 crisis development

from the declaration of a state of emergency



Free nationwide **hotline** set up by The Ministry of Industry and Trade

12th March  15th March

State of **emergency**



COVID-19 crisis development

from the declaration of a state of emergency



Free nationwide **hotline** set up by The Ministry of Industry and Trade

12th March  15th March  19th March

State of **emergency**

Portal connecting **excess capacities** with **demand** (both from state and private sector)



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COVID-19 crisis development

from the declaration of a state of emergency



Free nationwide **hotline** set up by The Ministry of Industry and Trade



Platform connecting the **initiatives** of **volunteers, associations** and **state** towards the public

12th March → 15th March → 19th March → 23rd March

State of **emergency**

Portal connecting **excess capacities** with **demand** (both from state and private sector)



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COVID-19 crisis development

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Platform connecting the **initiatives** of **volunteers, associations** and **state** towards the public

12th March

15th March

19th March

23rd March

2nd April

State of **emergency**

Portal connecting **excess capacities** with **demand** (both from state and private sector)



Czech Rise-Up - Support for the rapid **deployment of technologies** and solutions, both medical and non-medical, that will enable effective combat against COVID-19



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COVID-19 crisis development

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COVID-19 TECHNOLOGY support program, focused on the **production of medical devices** and **personal protective equipment** or the **disposal of infectious waste**

12th March

15th March

19th March

23rd March

2nd April

4th May

State of **emergency**

Portal connecting **excess capacities** with **demand** (both from state and private sector)



Czech Rise-Up - Support for the rapid **deployment of technologies** and solutions, both medical and non-medical, that will enable effective combat against COVID-19



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HACK THE CRISIS

Hackathons against COVID – 19: finding and supporting innovative solutions

206

Submitted projects

108

Supported projects

24

Flagship projects with which we still work closely



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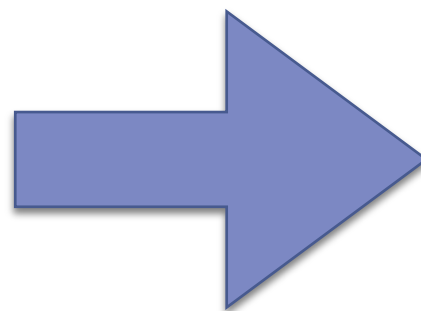
Source: CzechInvest, 2020


CZECHINVEST

Czech Nanofibre face mask & respirator manufacturers

BEFORE COVID-19

only a few thousands pieces per
month



SUMMER 2020

millions of pieces per month

 **NANOLOGIX**

 **NANO4FIBERS
PARDAM**

 **FILTREX®**

 **NANO4FIBERS
PARDAM**

 **NANO MEDICAL**

 **batist.
MEDICAL**

 **NAFIGATE®
nanofibers gateway**

IUVENIO

 **SPUR®**

 **SAFETY®
NANO
PROTECT**

 **N4H
NANO FOR HEALTH
NanoTrade
s.r.o.**

 **nanoSPACE®**

 **SCIMED
BIOTECHNOLOGIES**



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 **CZECHINVEST**

II.

Industry Cooperation Opportunities

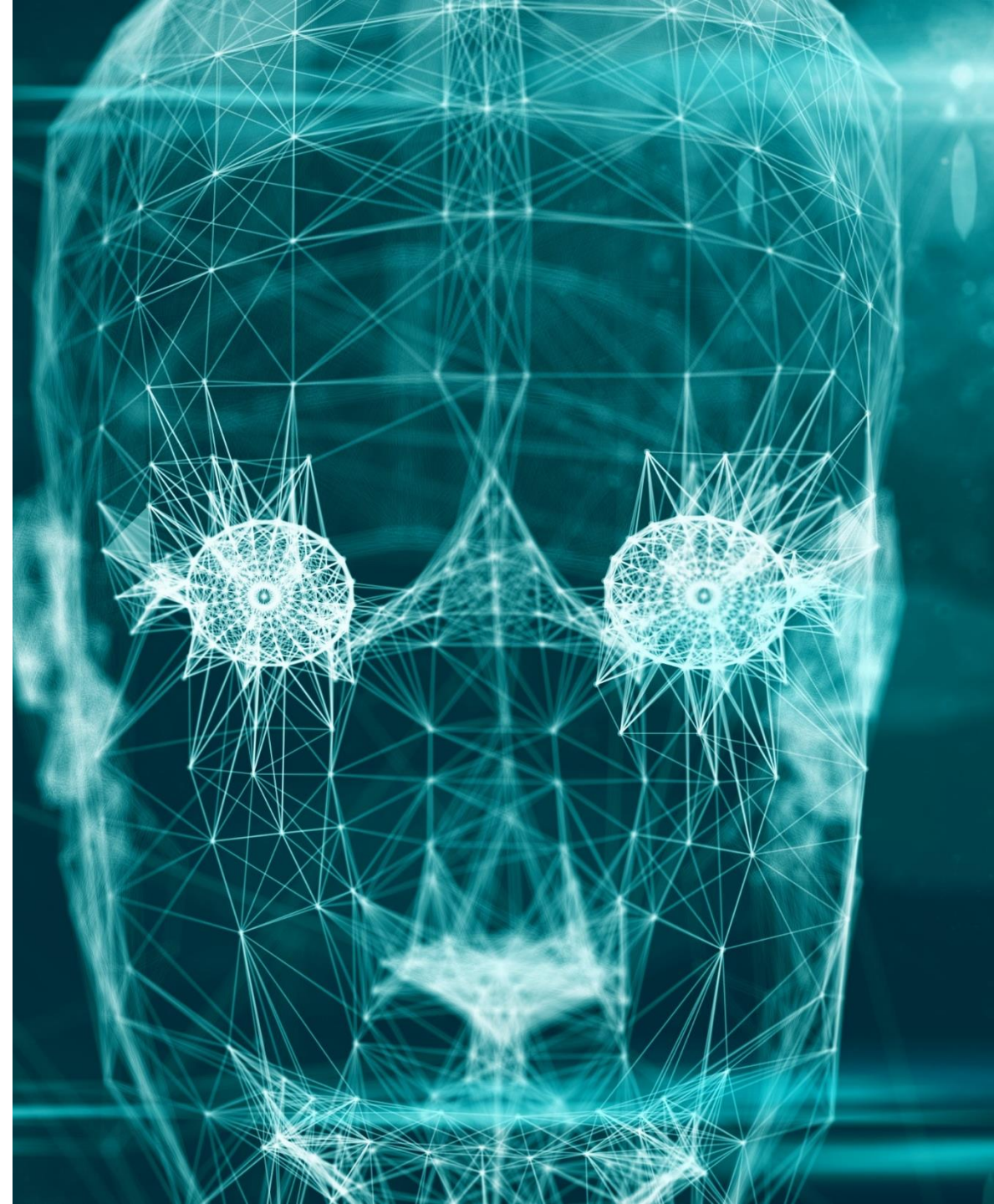
IoT, AI, Nanotechnologies



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AI in the Czech Republic

- **500+ AI researchers**, one of the largest concentrations of AI experts in the world
- Quality education
 - Excellent computing and mathematics skills
 - AI research, centers for robotics/AI/ML
- **200+ companies in AI / Big Data / IoT / IIoT**
- **80+ AI companies & start ups**
- AI R&D centers of global companies
- Two main AI hubs: Prague (capital city), Brno (second largest city)
 - Concentration of international and Czech IT companies
 - Almost 30,000 students in ICT study programs



Czech AI Landscape

Automotive / Transportation / Robotics



Incubator / Investor



Ads / Sales / CRM / Commerce / Marketing



IoT / Industrial IoT



Big Data / Business Intelligence & Analytics



Czech AI landscape

Cybersecurity



Text / speech / conversation analysis / bots



Healthcare / Biometrics



Vision / Image recognition



Other



Education



Fintech & Insurance



Academic Robotics and AI research in the Czech Republic

- **7 universities** and **2 institutes of Academy of Sciences**
- **1000 researchers** and **460 Ph.D. students** organized in **25 research labs**
- Total funding: **\$ 45M per year**
- Areas of strong expertise:
 - Machine learning, data mining
 - Autonomous robotics
 - Machine perception
 - Industrial applications of AI
 - Natural language processing, speech understanding
 - Formal methods and reasoning



T · Systems

Source: Prof. Vladimír Mařík, CIIRC CTU Prague, 2019; CzechInvest 2020



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Czech Institute of Informatics, Robotics and Cybernetics

Linking excellence with applicability



- **EU Structural Funding – Operational Program OP VVV**
 - 3 excellent teams funded for 6 years
 - Artificial Intelligence and Reasoning – 6 mil EUR
 - Intelligent Machine Perception – 5,2 mil EUR
 - Robotics for Industry 4.0 – 7 mil EUR
 - Key researchers are highly respected personalities with excellent international track records
- **The very first testbed for Industry 4.0 in the Czech Republic**
(support by Siemens, Škoda Auto and SMEs)
- **RICAIP EU Project** – 50 mil EUR, 4 partners: CIIRC, BUT Brno, DFKI Saarbruecken, ZEMA Saarbruecken
- **EU AIT Project “Manufacturing“** – 50 partners, 300 mil EUR funding for 5 years
- **National Center of Competence “Cybernetics and AI“** – 3 mil EUR per year
- **European Digital Innovation Hub for AI**



Source: CIIRC, 2020



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PIKATEC®

NANOLOGIX

nanopharma

FILTREX®

Advanced Materials JJ

INGMEDICAL s.r.o.

NAFIGATE®
nanofibers gateway

ACO

RETAP®

N4H
NANO FOR HEALTH

nanopeople

nanospace®

NANO4FIBERS
PARDAM

NANO MEDICAL

CONTIPRO
GROUP

LAM·X

SAFETY®
NANO
PROTECT

SPUR®

NANObala®
technologie budoucnosti již dnes

NANOCIHLA

ADVAMAT

Czech is nano

SMART
COATINGS

Bochemie.

IQ
STRUCTURES

LADA
FASHION

SVCS

JIMiplet

NanoTrade
s.r.o.

SCIMED
BIOTECHNOLOGIES

NenoVision

Bringing future closer
HE3DA
High Energy 3D Accumulator

NANO
CHEMIGROUP

TESCAN
PERFORMANCE IN NANOSPACE

PRAGOTHERM
SERVIS FAŠÁD



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Why the Czech Republic

- Proven success of multinational companies
- World-class academic and institutional framework with considerable past and present results in basic and applied research
- Close links between industry, universities, R&D centres and the public healthcare system
- High quality and cost competitive location
- Regulatory and patent environment harmonious with the EU
- One of the European AI hubs
- Attractive living environment



Thank you for your attention

Robert Keil



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2020