Smart City Solution in turbulent times

Welcome

Věra-Karin Brázová, Head of Urban Policy and Strategy Unit, Ministry of Regional Development, Czechia

Building resilient cities of the future

Michal Postránecký, Head of City of the Future, Center of City of the Future - Czech Institute of Informatics, Robotics and Cybernetics, Czechia

Smart Cities concept at national level

Marie Zezůlková, Head of Regional Policy Department, Ministry of Regional Development, Czechia

Introducing a Systematic Approach to Financing Smart Solutions in the Czech Republic – Presentation of a joint NL and CZ project

Jarik Stollenga, Project Manager, VNG International, The Netherlands

SMART Cities concept - resilience through SMART solutions for municipalities, cities and regions

Rut Bízková, Consultant, ISFOR, Institut pro Společnost 4.0, Czechia
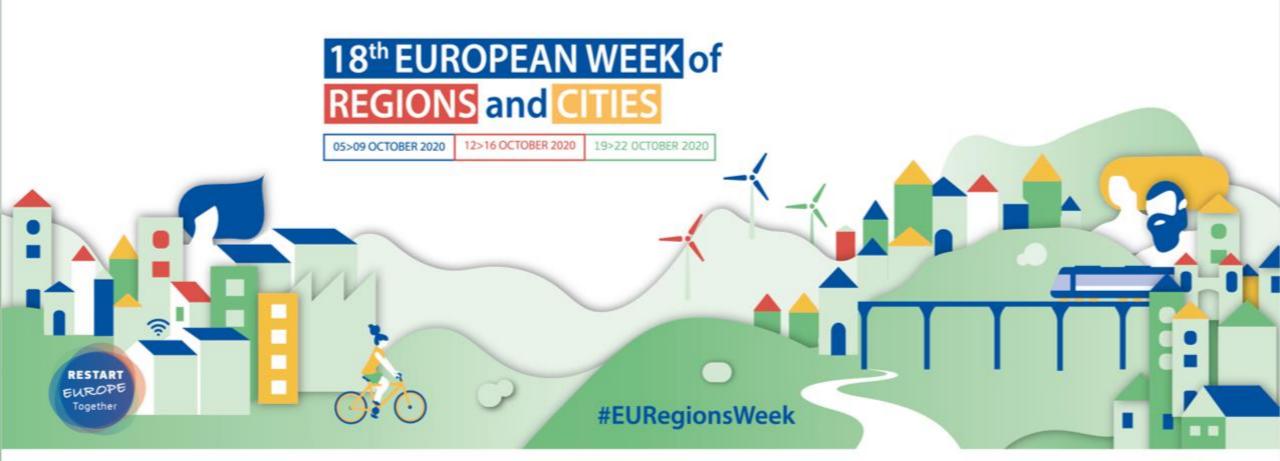
Discussion session, End of workshop (16:00)

REGIONS & CITIES

18th EUROPEAN WEEK of REGIONS and CITIES

05>09 OCTOBER 2020   12>16 OCTOBER 2020   19>22 OCTOBER 2020

RESTART EUROPE Together

#EURegionsWeek

European Committee of the Regions

MINISTRY OF REGIONAL DEVELOPMENT CZ

European Commission

COVID-19

We live for several long months in the midst of a pandemic situation that has affected the whole world in a previously unknown way, including countries with advanced economies. The invisible and insidious virus has brought with it some aspects that have already changed and will continue to change the behavior of entire societies and life in urban areas. The view of the structure and functioning of urban structures began to change overnight! What part of this change can "smart" technologies play?

18th EUROPEAN WEEK of REGIONS and CITIES
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SMART CITY SOLUTION IN TURBULENT TIMES

BASIC PRINCIPLES OF DEVELOPMENT OF URBAN SYSTEMS

DEVELOPMENT PROCESS OF URBAN INFRASTRUCTURE IN SPIRAL ABOVE THE BASIS OF THREE ELEMENTARY FACTORS
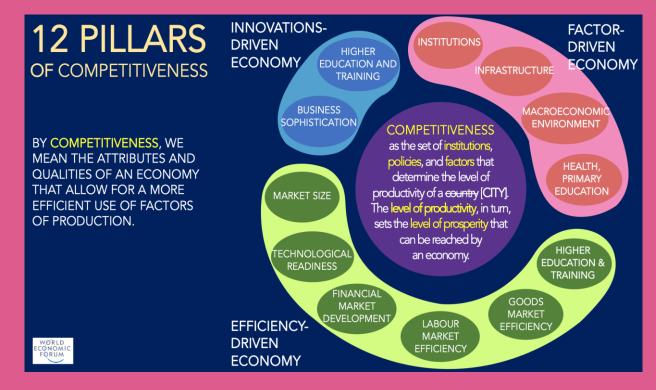

NEW RELATIONS INSIDE SYSTEM AND WITHIN SURROUNDINGS OF THE URBAN SYSTEM

INTERACTIONS, ACTIVITIES & TRANSACTIONS
ATRACTIVITY (METABOLISMUS)

MORE ATRACTIVE ACTIVITIES AND TRANSACTIONS CREATE MORE CONTENT (BIG DATA, ASSETS, ...)

CITIES ARE HOME FOR INNOVATION, DISRUPTIVE INNOVATIONS ARE CHANGING THE WORLD

BUILDINGS STRUCTURES, OPEN SPACES, CONNECTIONS BETWEEN SPACES, DISTRIBUTION SYSTEMS, DIGITAL TWINS

CITY INFRASTRUCTURE
PHYSICAL, DIGITAL & VIRTUAL

MORE CONTENT AND NEW ASSET REQUIRES MORE DEVELOPMENT AND NEW TECHNICAL INFRASTRUCTURE

CONTENT
VOLUME & QUALITY (WEALTH)

ABILITY TO EMBRACE INNOVATIONS & COMPETITIVNESS (ENERGY)

NEW BUILDINGS STRUCTURES, OPEN SPACES, TECHNICAL INFRASTRUCTURE, CONNECTIONS BETWEEN SPACES OR SURROUDINGS

European Committee of the Regions

MINISTERSTVO PRO MÍSTNÍ ROZVOJ ČR

CZECH INSTITUTE OF INFORMATICS ROBOTICS AND CYBERNETICS CTU IN PRAGUE   CCF CIIRC

European Commission

DYSTOPIC VISIONS

18th EUROPEAN WEEK of REGIONS and CITIES

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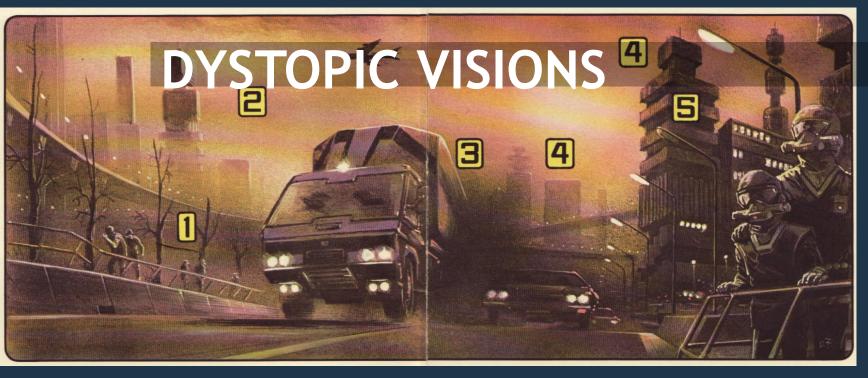
BUILDING RESILIENT CITIES OF THE FUTURE

ING. ARCH MICHAL POSTRANECKY
BRUSSELS, OCTOBER 13, 2020

SMART CITY SOLUTION IN TURBULENT TIMES

FUTURE FROM THE PAST

IDEAS FROM THE PAST

18th EUROPEAN WEEK of REGIONS and CITIES
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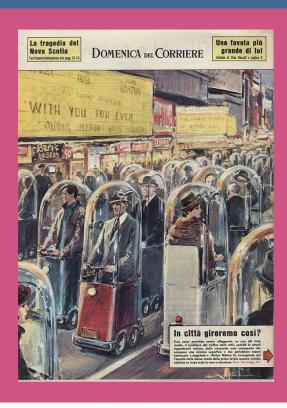
BUILDING RESILIENT CITIES OF THE FUTURE

ING. ARCH MICHAL POSTRANECKY
BRUSSELS, OCTOBER 13, 2020

SMART CITY SOLUTION IN TURBULENT TIMES

WHY RESILIENT?

THE LAST SIX MONTHS HAS PROVED THAT A CONCEPT OF SMART CITY IS NOT GREAT ENOUGH!

URBAN SYSTEMS (CITIES, TOWNS VILLAGES, REGIONS, AND ALL TECHNICAL INFRASTRUCTURE INTERCONNECTING THEM TOGETHER) MUST BE **RESILIENT READY!**

DIGITAL TECHNOLOGIES CAN HELP BE URBAN RESILIENT!

Smart Cities concept

SMART concept = Smart City, Smart Village, Smart Region

The involvement of modern technologies in urban management to improve the quality of life of the population and streamline and optimize governance, including resource efficiency, risk management, better communication and getting feedback from the public.

Two levels of the concept

Procedural : Governance, strategy and cooperation with key actors and the public

Technological : Added value of specific projects, technologies, new processes and solutions

Role of the Ministry

Implementation of Smart Cities concepts

Coordination of national and local actors

Methodological guidance (implementation, identification of barriers, impact assessment…)

Pilot projects (innovation features, testing of new processes and technologies, PPP projects)

Collaboration on research projects …

Activities of the Ministry

Methodological support : Smart Cities methodology

Smart Cities Working Group

Minister's board

Funding of Smart Cities activities

International cooperation

Seminars and conferences

Sharing of good practice and capacity building

Current tasks and priorities

Involvement in the Czech Republic's Innovation Strategy through the **Smart Cities concept**

Implementation of a pilot project **Supporting 5G networks in Smart Cities**

Marketing, PR and other activities to increase impact e.g. promoting the **Smart Cities for the Future competition**

SRSP project **Setting a Systematic Approach to Financing Smart Solutions in the Czech Republic**

Barriers to overcome

Underutilization of open data in public administration

Low awareness of the potential benefits of the Smart Cities concept and the benefits of innovative projects

Lack of funding for pilot projects to test the benefits of specific smart solutions in municipalities

Supporting 5G networks

Project goals :

Pilot testing and verification of readiness

Promotion of cooperation between key actors

5 pilot Cities :

Bílina

Jeseník

Karlovy Vary

Plzeň

Ústí n. Labem

Smart Villages

2018 : Introduction of the Smart Villages concept

2019: Creation of the Smart Villages Task Force

2020 : Smart Cities methodology addresses smaller municipalities

Cooperation with National Network of Local Action Groups in the Czech Republic

National meetings, working groups, concepts, …

Smart Regions

Focus on all 14 Czech regions

Taking into account regional specificities

Building partner networks

Promoting smart approaches and introducing innovations

Various regional development priorities :
Energy, transport, environment, smart governance,
health, smart accelerators, smart specialisation and more

Thank you for your attention

Marie ZEZULKOVA

Head of Regional Policy Department

The Ministry of Regional Development of the Czech Republic

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The Association of Netherlands Municipalities

- Represents 355 municipalities (100%)

- Brokers relations (and funding (!!)) between national government and municipalities

- Procures grouped services and goods

- **Offers in-house expertise, inc. on digitalization and Smart Cities**
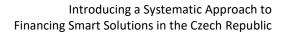
Municipalities of The Netherlands ranked to their quality of 'digital services'

≤ 5   ≤ 7.5   ≤ 9   ≤ 10.5   ≤ 12   ≤ 15

The Project: Adressing the gaps in the financing model

The Main Gap:

Smart City Projects & Governance often on local level, but funding on (inter)national level

>>>

Small, specific projects vs. large, general financing models

The Project: Adressing the gaps in the financing model

What VNG will contribute to bridge the gap:

1. JOIN TOGETHER

The Project: Adressing the gaps in the financing model

What VNG will contribute to bridge the gap:

2. COLLABORATE

LIVING-IN.NL
Samenwerking voor een snellere duurzame digitale transformatie in Europese steden en gemeenschappen

IMPACT
SAFETY &
SECURITY
COALITIE

European Committee
of the Regions

VNG
International

European
Commission

The Project: Adressing the gaps in the financing model

What VNG will contribute to bridge the gap:

3. BE OPEN

1   **Privacy first**
First and foremost, the privacy of the users and citizens should be guaranteed.

People should be given insight into the data that is collected and control over the way it is and will be used. Ethical aspects should be taken into accou

2   **Open data and interfaces**
We facilitate innovation by making data publicly available and enabling access to IoT & data systems through open interfaces.

We stimulate new business models and emerging services that rely on generating added value, rather than exploiting licenses on data or exclusive righ

3   **Embrace open standards**
Wherever available, the IoT infrastructure, connectivity, platforms, devices and services should be built on open or broadly agreed de-facto s

Using established standards will facilitate evolution of infrastructure and services, sustain a competitive market and prevent vendor lock-in. Where stan

4   **Share where possible**
We expect all IoT and Data developments to provide well-defined, easily accessible stable interfaces for sharing and reusing existing assets.

Shared use of grids, sensor networks, connectivity and software components will lower the barriers for their adoption, increase connectivity and stimul

5   **Support modularity**
We recommend adopting a modular architecture with well-defined open interfaces as the core of any IoT or data-driven development.

Modularity helps to ensure interoperability between platforms, services and applications and facilitates re-use and cooperation between partners.

6   **Maintain security**
The reliability of components, platforms, solutions and services must be constantly safeguarded.

Ensuring confidentiality, integrity and availability is vital to essential services and core parts of the infrastructure, which need to be safeguarded to the l

7   **Accept social responsibility**
Providing new technologies and services, and collecting and combining data may result in unforeseen effects on society or individuals.

We cannot predict the future. We encourage experimentation, provided responsibility is taken for the consequences.

Data residing in the public space:

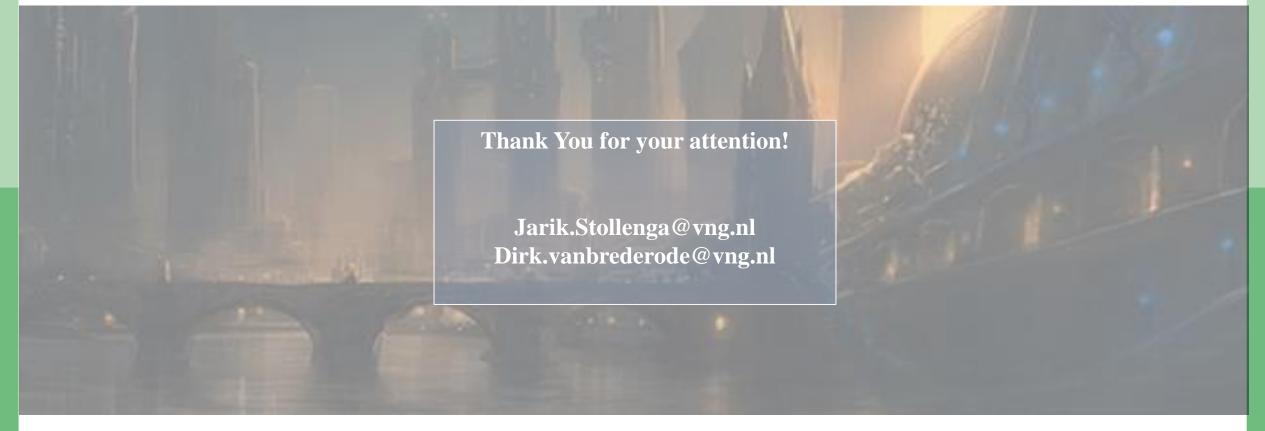*Eindhoven municipality 7 principles of Open Data Usage*

Thank You for your attention!
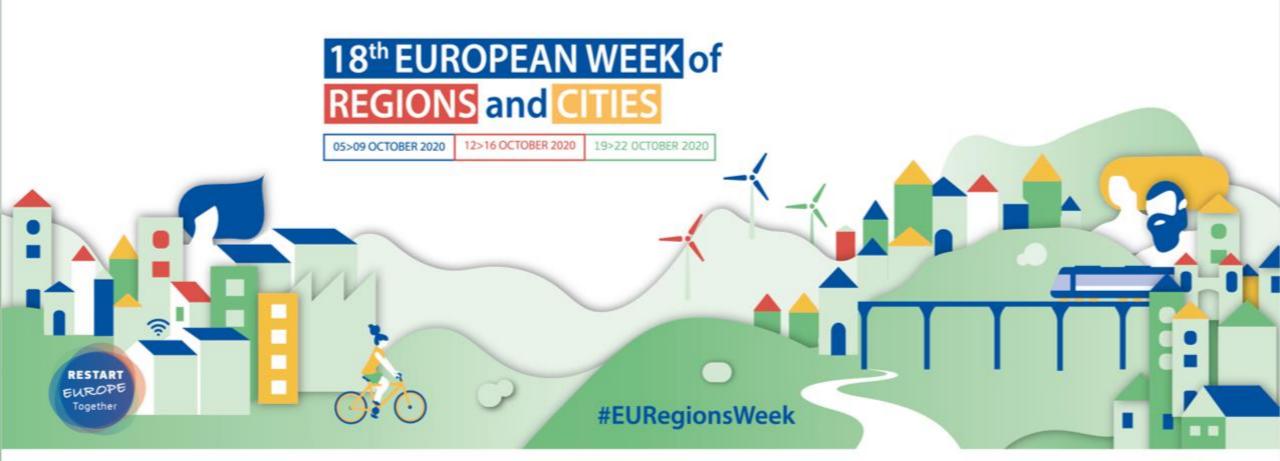

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SMART Cities concept - resilience through SMART solutions for municipalities, cities and regions

Rut Bizkova
ISFOR, Institute for Society 4.0

All images used are from the websites of the organizations mentioned in this presentation or from the Internet in general

SMART concept:

- Jobs and services follow people, not vice versa
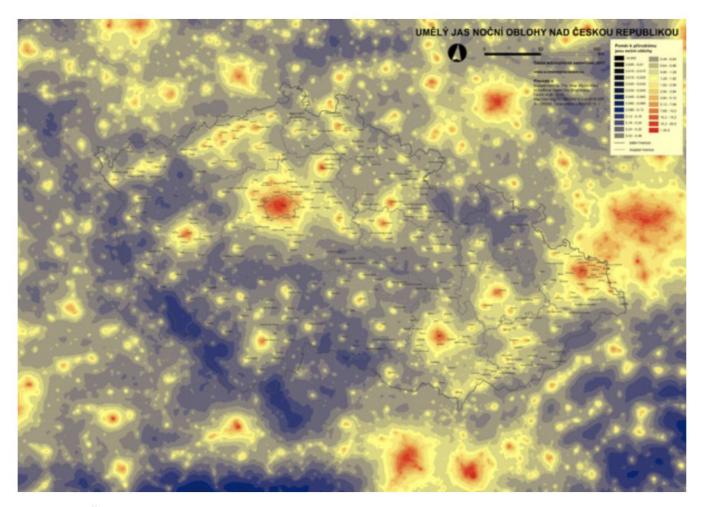- Local solutions – short distance principle
- Resilient communities – in digital era

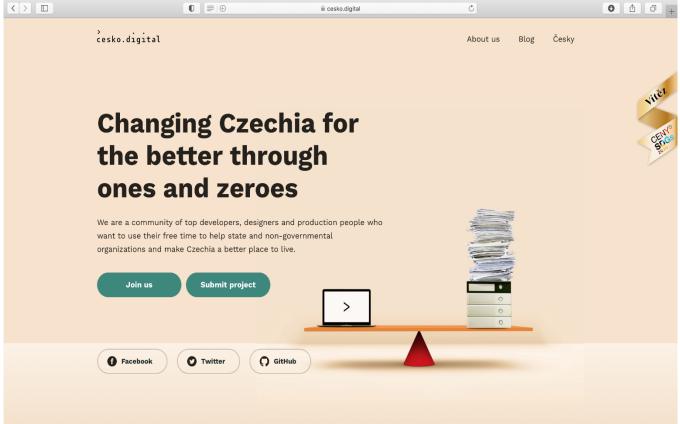**….with regard to climate protection**

CR – country of small villages, more than 6250 municipalities and expensive infrastructure

SMART solutions are possible with support of the Union of Towns and Municipalities of the Czech Republic

Lessons learned from COVID-19
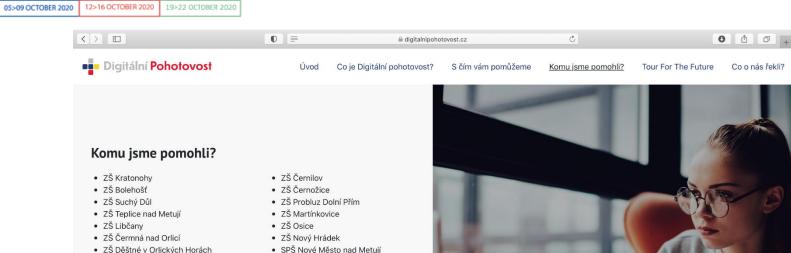
Remote learning – prepared by teachers

digitalnipohotovost.cz (digital emergency)

Lessons learned from COVID-19

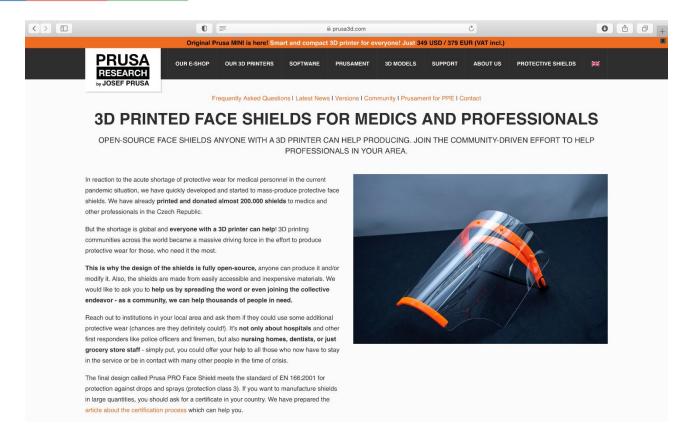The results of the research were quickly translated into practical solutions by young scientists
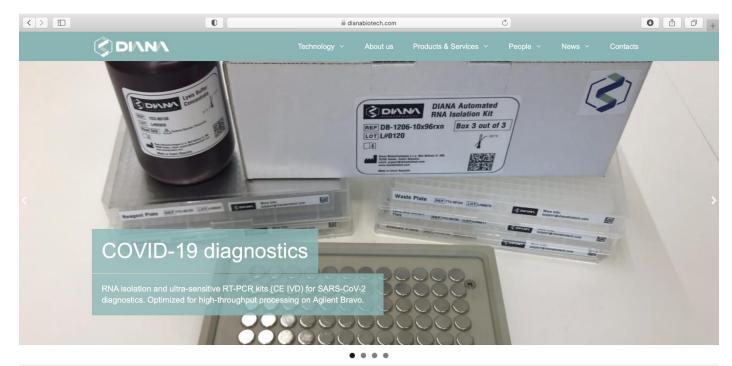
COVID-19 diagnostic method from Diana Biotechnologies start up

Lessons learned from COVID-19
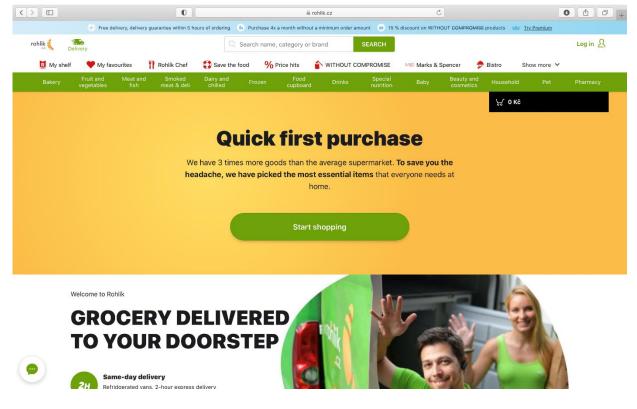
New challenges, new solutions, new businesses
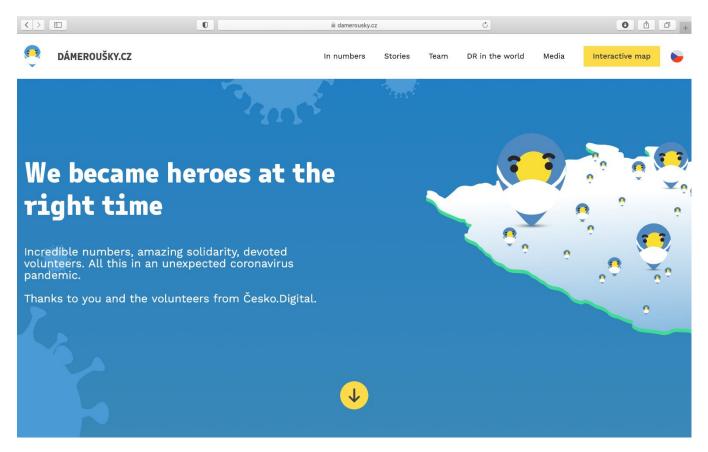
Prusa Research company, 3D printed products

Lessons learned from COVID-19

Services follow people – seniors are at home and shopping is delivered to them

E-shops as a social service in the countryside

**Lessons learned
from COVID-19**

The new solutions
created in the CR are used
also in other European
countries
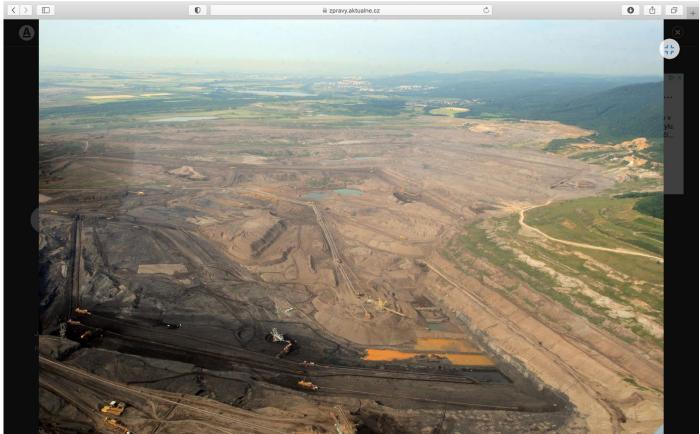
www.damerousky.cz
(we provide veils)

North Bohemian
region – looking
for new solutions
in coal mining region

**How does
the resilient territory
look like?**

"Most Lake" – 2020 reconstruction
of the mining area - what kind of activites will be here?

Resilient territory:
- biodiversity
- territorial systems of ecological stability
- services of ecosystems

Lake Milada – voluntary union of cities and villages Ústí nad Labem, Chabařovice, Trmice, Řehlovice

- revitalization
- building infrastructure for tourism,
- development of recreation and tourism,
- joint activities in nature and environmental protection, joint promotion of member municipalities and marketing activities

Resilience is an imperative! – lesson learned from COVID-19

- resilient population– educated people, resilient to "fake news", creating communities
- resilient economy – based on endogenous Czech companies, esp. digital ones and start ups
- resilient environment, territory and nature – not only floods, but also wind and water erosion, adaptation to climate change – necessity of biodiversity conservation, territorial systems of ecological stability, landscape creation

Thank you

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