



The relevance of data for water management and sustainable service provision

THE IMPORTANCE OF WATER SECTOR DATA IN THE DIGITAL AGE

Joachim D'Eugenio

Directorate General Environment

Policy Assistant in Directorate for 'Quality of Life' (ENV C)

Danube Water Forum 2020 | 27 October 2020

A green and digital recovery from the crisis

“NextGenerationEU is shaping the world we want to live in.

A world served by an economy that cuts emissions, boosts competitiveness, reduces energy poverty, creates rewarding jobs and improves quality of life.

A world where we use digital technologies to build a healthier, greener society.

This can only be achieved if we all do it together and I will insist that recovery plans don't just bring us out the crisis but also help us propel Europe forward to the world of tomorrow.”



Ursula von der Leyen, 16 Sept 2020

Source: [‘State of the Union’ speech](#)



European
Commission

SHAPING EUROPE'S DIGITAL FUTURE

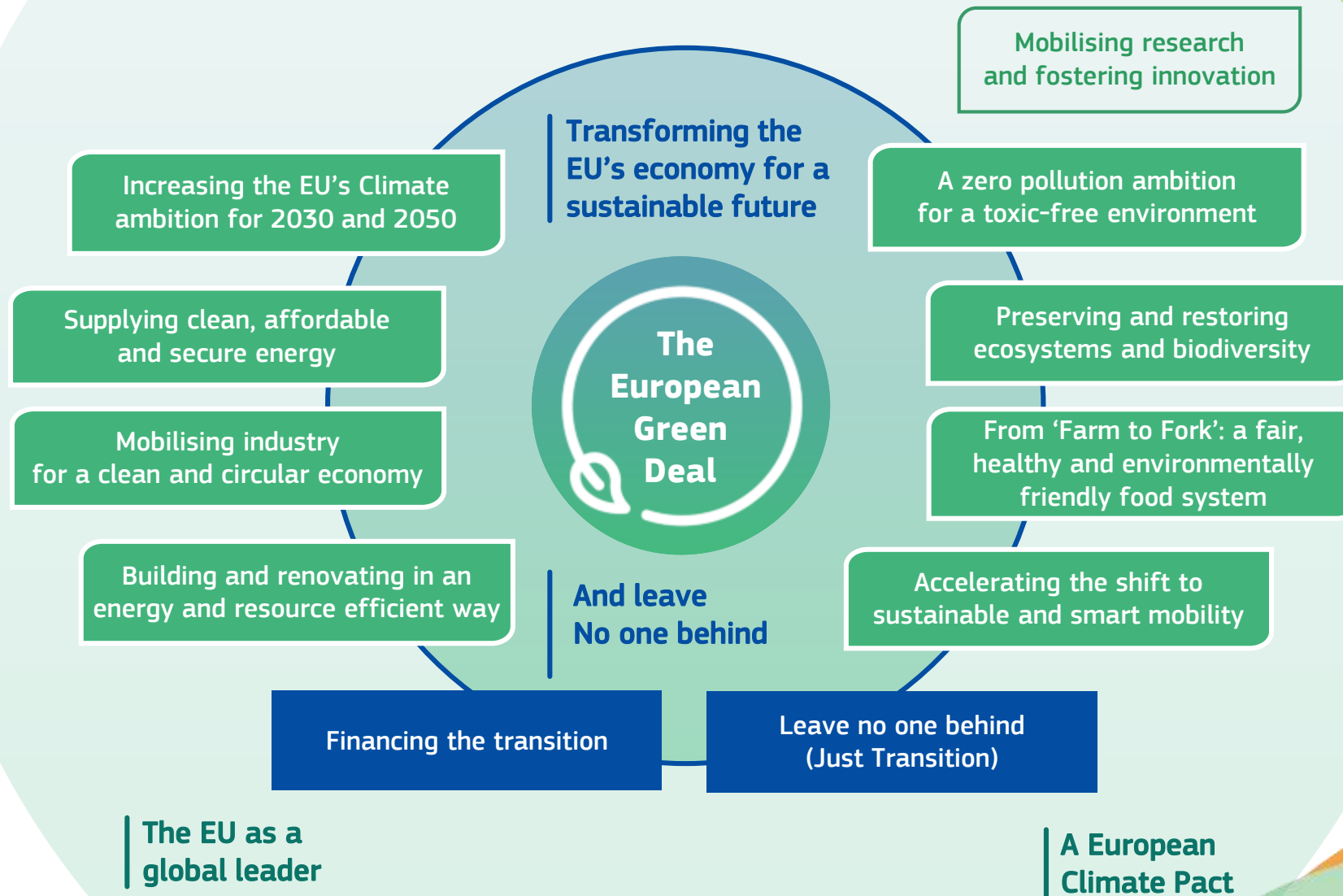
The **European Green Deal**

Transforming the
EU's economy for a
sustainable future

The
European
Green
Deal

And leave
No one behind

The European Green Deal



The European Green Deal



Biodiversity Strategy for 2030 - Bringing nature back into our lives

COM(2020) 380 final

It addresses main drivers of biodiversity loss, but also establishes targets of relevance for water policy, in particular the restoration and river continuity target



Farm to Fork (F2F) Strategy for a fair, healthy and environmentally- friendly food system

COM(2020) 381 final

It safeguards food security and access to a sustainable EU food system, but also establishes targets of relevance for water policy, in particular reductions in use of pesticides and fertilisers that help achieving the objectives set by EU water law



Closing the loop - An EU action plan for the Circular Economy

COM(2015) 614 final

It presents new initiatives along the entire life cycle of products in order to transform our economy while protecting the environment.
Water, as key element in product value chain, is addressed through the recently adopted Water Reuse Regulation



Chemical Strategy

new

EU's chemicals strategy for sustainability towards a toxic-free environment

COM(2020) 667 final

It intends to minimise the risks associated with the production and use of chemicals and will further protect citizens and the environment from hazardous chemical, also including all relevant water-related issues

#ChemicalsStrategy

#EUGreenDeal

Zero Pollution Action Plan

Zero Pollution Action Plan for air,
water and soil

It builds on initiatives in the field of energy, industry, mobility, agriculture, biodiversity, and in particular climate that tackle pollution factors to secure clean air, water and soil, healthy ecosystems and a healthy living environment for Europeans.

EU Water Policy developments



New Drinking Water Directive



Updated health related parameters



Materials in contact with water



Access to water



Transparency

Risk-based approach considered for the whole water supply chain
(abstraction, supply, distribution)

WFD, EQDS, GWD, FD – Fitness Check Evaluation

Findings of Fitness Check (FC)

Follow-up action addressing chemical pollution, complying with legal obligation to keep up with science

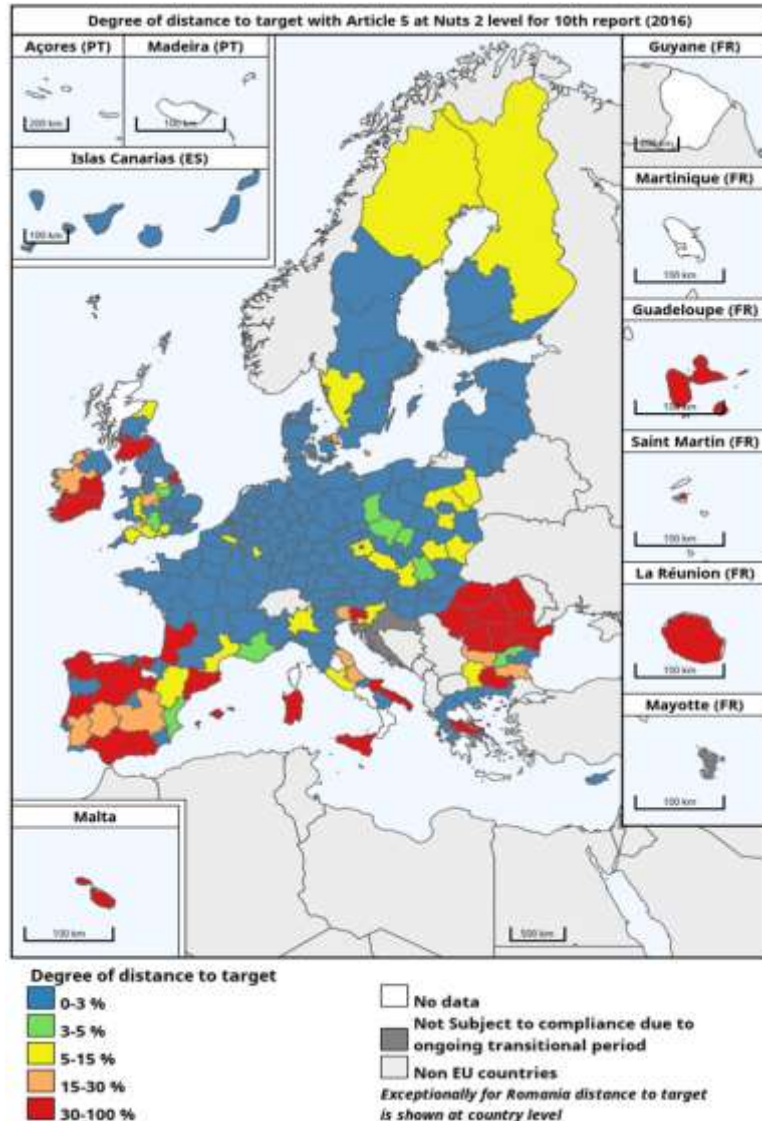
Impact assessment supporting the Commission's decisions to take legislative action to update:

- the list of Priority Substances in surface waters (Annex X to the WFD) and their environmental quality standards (EQS), set in the EQSD;
- the lists of groundwater pollutants (Annexes I and II to the GWD).

Follow-up in other areas (without changing the Directives themselves)

- Ensuring **increased investment** in water management and nature restoration;
Use “green and digital” EU Recovery package to focus attention on the benefits of smart investments in water infrastructures, river and wetlands restoration, as well as water decontamination
- Better implementing the existing rules (**implementation gap**);
Ensure Member States intensify their efforts on the ground and where necessary, step up use of penalties for breaches of the WFD
- Better integrating water objectives into other EU policies;
*Take horizontal measures to **integrate** water objectives into areas like agriculture, energy, and transport*
- Achieve **administrative simplification and digitalisation**, e.g. by using more real-time observations

Review of the Urban Wastewater Treatment Directive



Remaining implementation, overflows, individual systems + non-connection, sensitive areas (links with WFD / ND)



Contaminants of emerging concern, polluter pays principle



Circular economy, sludge management, energy use



Reporting, monitoring, information to the public



Investment needs, investment planning, affordability

- *Impact assessment on a possible review of the UWWTD*
- *Public consultation to be launched*
- *Continued discussion in expert group meetings*



European
Commission



SHAPING EUROPE'S DIGITAL FUTURE

THE EUROPEAN
DATA STRATEGY

The value of the data economy (EU27)



The number of data professionals (EU27)



Percentage of EU population with basic digital skills

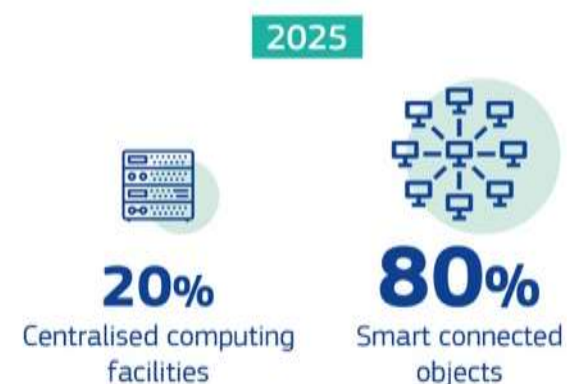


THE EUROPEAN DATA STRATEGY

Global data volume will grow:



Data processing:



With the right policies and investments from the Commission, Member States and businesses, Europe can seize the opportunities associated with this paradigm shift and become a leader in data if the EU, Member States and businesses invest adequately:

€4-6 billion to be invested in total

in common European data spaces and a European federation of cloud infrastructure and services

1

What are the problems?

Not enough data available for reuse

- ◆ More public sector data can be made available
- ◆ Low uptake of voluntary data sharing among companies
- ◆ No clarity on the use of private sector data for the common good

No real user empowerment

- ◆ imperfect data portability mechanisms

Lack of European data processing & storage solutions

Absence of comprehensive data governance approaches

- ◆ To address legal and technical barriers within and across sectors (e.g. standardisation & interoperability)

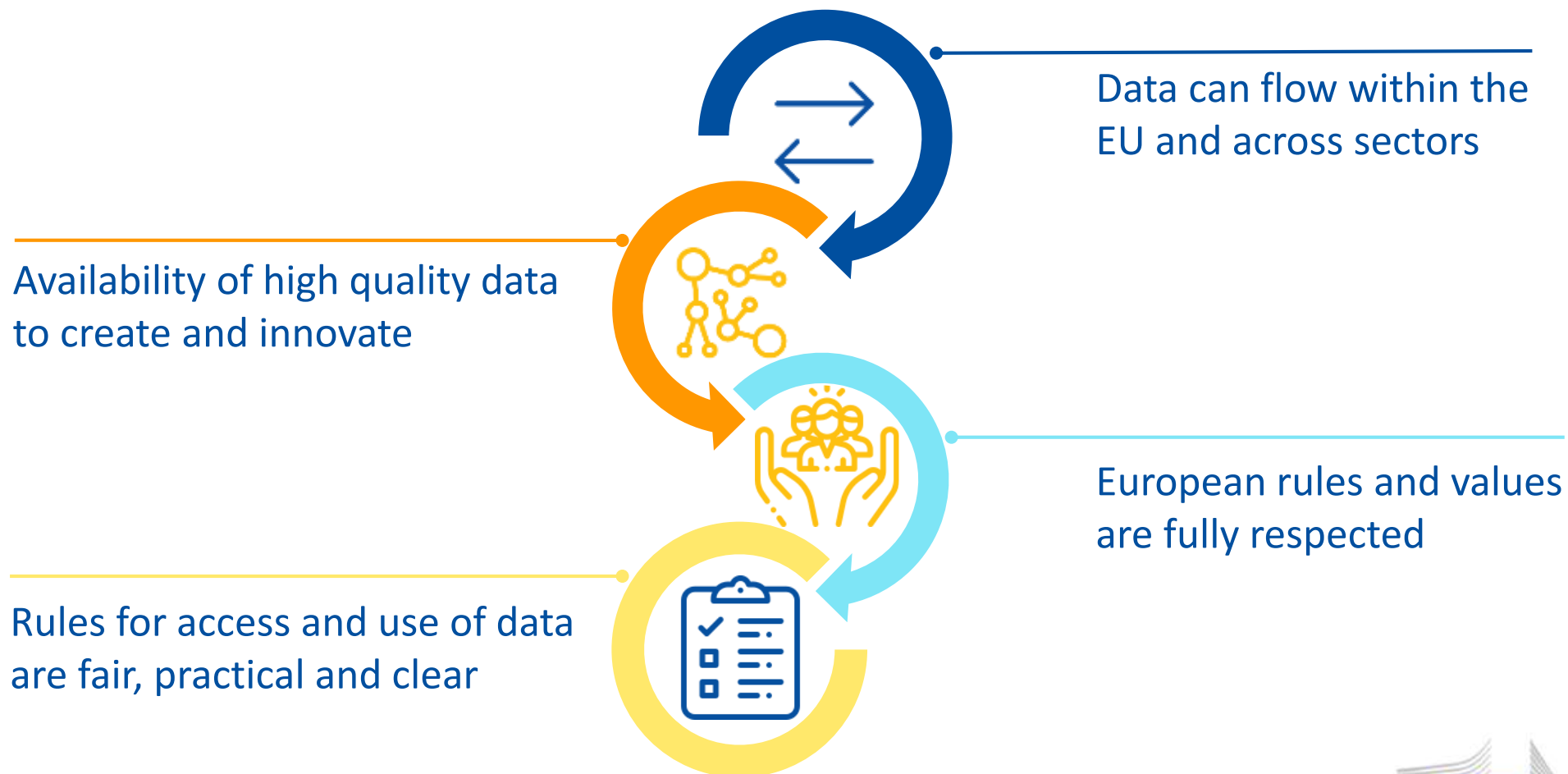
Skills shortage and low data literacy

Fragmentation of the single market

2

European Strategy for Data

A common European data space, a single market for data



3

Common European data spaces

Rich pool of data
(varying degree
of accessibility)

Free flow of data
across sectors
and countries

Full respect
of GDPR

Horizontal
framework for
data governance
and data access



Health



Industrial &
Manufacturing



Agriculture



Finance



Mobility



Green Deal



Energy



Public
Administration



Skills

- ◆ Technical tools for data pooling and sharing
- ◆ Standards & interoperability (technical, semantic)
- ◆ Sectoral Data Governance (contracts, licenses, access rights, usage rights)
- ◆ IT capacity, including Cloud storage, processing and services

GreenData4All

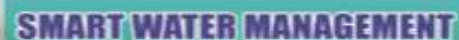
Towards a data sharing framework in support of the common EU green deal data space

The vision for INSPIRE has not changed

- Promote data sharing and put in place easy-to-use, transparent, interoperable spatial data services to help improving the quality of the environment and leading to effectiveness gains and more simplification.

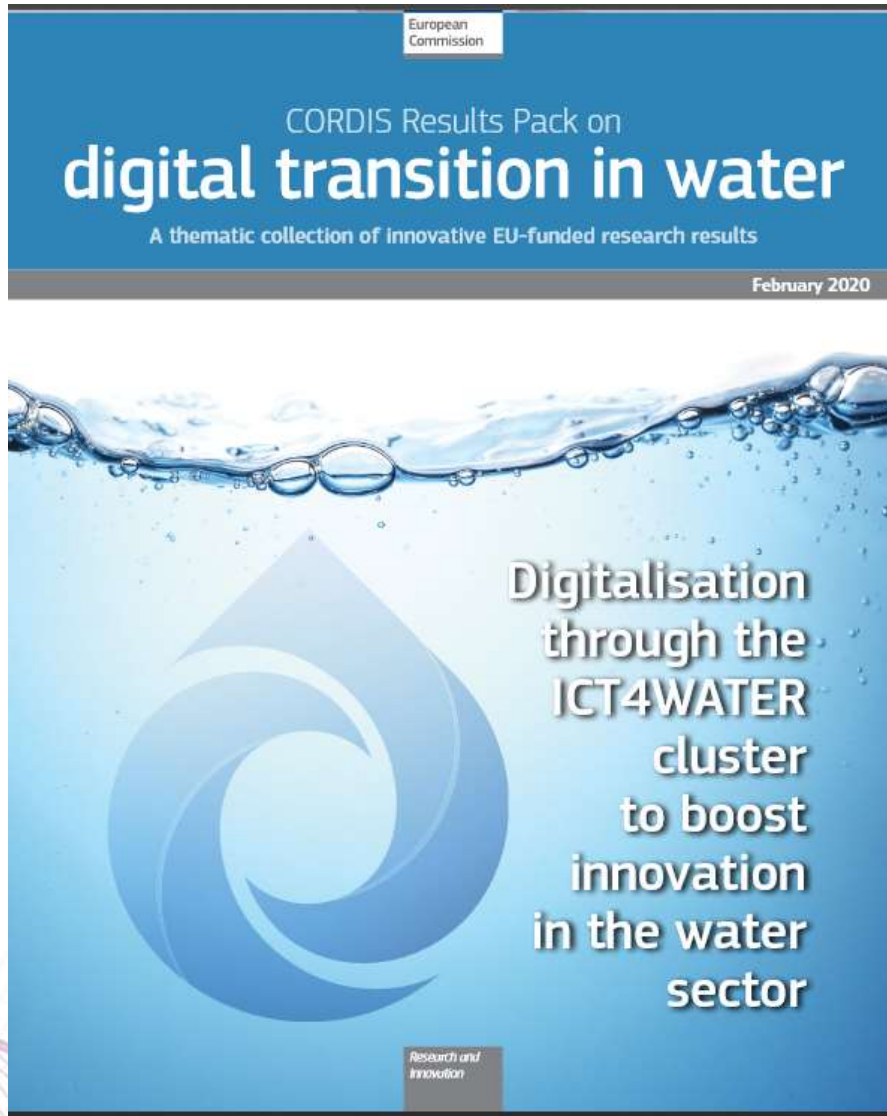
GreenData4All – Ambition level

- The von der Leyen Commission (2019-2024) stressed the need for Europe to lead the transition to a healthy planet and a new digital world. Data is at the centre of this transformation and data-driven innovation will contribute to the implementation of the [European Green Deal](#).
- To use the major potential of data in support of the Green Deal priority actions a [Common European Green Deal data space](#) will be developed. The “GreenData4All” initiative, which (following an evaluation/impact assessment) will aim to review and possibly revise two pieces of existing legislation: Access to Environmental Information Directive (**2003/4/EC**) & INSPIRE Directive (**2007/2/EC**)
- GreenData4All will update both Directives to a more contemporary state of technology, promote active dissemination and sharing of government private-held public data in support of the environmental acquis and the Green Deal objectives, and define and implement interoperable building stones for the Green Deal data space and other data spaces,



- Proactive operational response
- Predictive analytics for: maintenance; process optimis, leak & spill detection; investment planning

ICT Water – Results



Projects:

- Flexible IoT platform supports open innovation in farmland irrigation
- Multi-sector natural resource management – the nexus concept and serious games
- Recruiting microorganisms in wastewater treatments
- Closing the loop: Wastewater treatment becomes more sustainable and nearly carbon neutral
- Drones can support massive reductions in lost drinking water
- User-friendly boats seek out water pollutants in European rivers and lakes
- Co-designing citizen participation in environmental monitoring
- Water-savvy knowledge is POWER – for citizens, communities and policymakers
- Innovative technologies take the ‘waste’ out of wastewater
- Smart water treatment solution expands water reuse in the oil and gas industry
- Nature gives technology a hand to enhance water treatment processes
- Adaptable, scalable and cost-effective local solution to urban flooding prevention

Conclusion & Outlook

- The Green and Digital transition is top priority for the European Commission, they are closely linked
- Data are the foundation for digitalisations – the value of (non-personal) data should be exploited much better in the EU, this is a joint endeavour of the public and the private sector
- Investments in the water sector should be forward looking, using the recovery to modernise and digitise all parts of the water management
- Necessity for water administrations to modernise (eGovernment) and for water business sector to use opportunities from digitalisation

More information

- The **European Green Deal** - [COM\(2019\) 640](#)
 - Closing the loop: 2nd **Circular Economy Action Plan** (CEAP) – [COM\(2020\) 98](#)
 - **Biodiversity Strategy** for 2030 - Bringing nature back into our lives – [COM\(2020\) 380](#)
 - A **Farm to Fork Strategy** (F2F) for a fair, healthy and environmentally-friendly food system – [COM\(2020\) 381](#)
 - EU **Chemicals Strategy** for sustainability - [COM\(2020\) 667](#)
 - **Zero Pollution Action Plan** for air, water and soil (2021) – [Roadmap](#)
 - Possible revision of the Urban Wastewater Treatment Directive – [Roadmap for impact assessment](#)
 - Possible revision of the Industrial Emissions Directive – [Roadmap for impact assessment](#)
 - Possible revision of WFD priority substances and groundwater lists – [Roadmap for impact assessment](#)
 - Possible revision of the INSPIRE Directive (Green Data4All initiative) – [Roadmap for an evaluation](#)
- **European Digital Strategy**, **European Industrial Strategy** and **European Data Strategy**

Thank you

© European Union 2020

Unless otherwise noted the reuse of this presentation is authorised under the [CC BY 4.0](https://creativecommons.org/licenses/by/4.0/) license. For any use or reproduction of elements that are not owned by the EU, permission may need to be sought directly from the respective right holders.