MARTEL AND GREEN DIGITAL

Engagement for Sustainable Digital Transformation

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Green Digital for Sustainable Transformation workshop – 31st May 2022

WHO WE ARE

A *DYNAMIC* SWISS-BASED COMPANY — DUTCH SUBSIDIARY

25+ YEARS EXPERIENCE
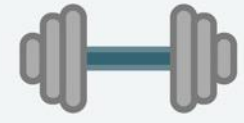
100+ RESEARCH & INNOVATION PROJECTS

GLOBAL PARTNERSHIPS

MARTEL innovate

WHAT WE DO

RESEARCH & INNOVATION

EU FUNDING

CONSULTING

MEDIA & COMMUNICATION

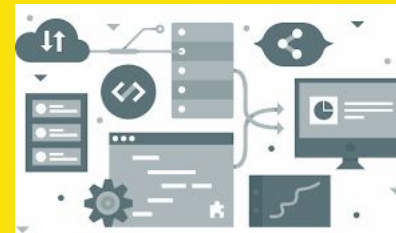TRAINING

AN AMBITIOUS PLAN

To empower our partners and customers in the design and implementation
of innovation strategies and plans, supporting them throughout their journey from novel
ideas to technological implementation, media and market strategy

Boosting Digital Transformation
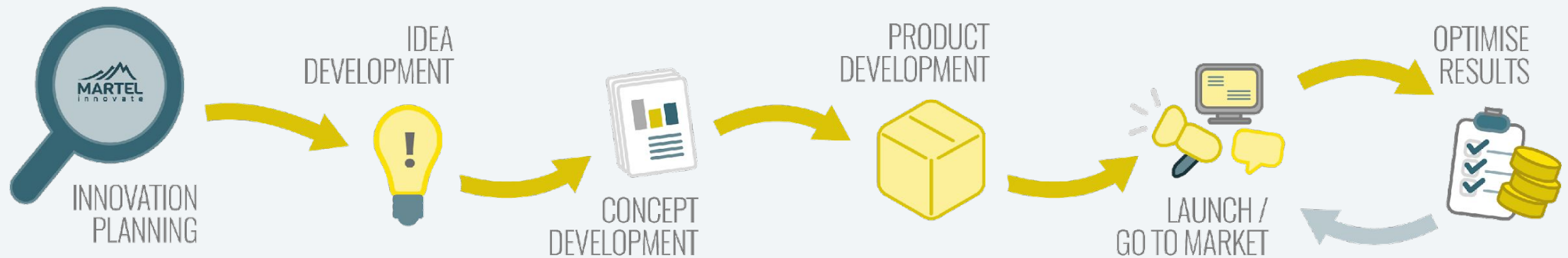

Outreach and Impact Creation

Embracing Open Technologies

ICT for Sustainable Development

OUR VALUE PROPOSITION

A comprehensive value driven approach supporting all innovation stages from idea to execution:

Martel's value proposition is delivered via our People, Know-how, Services, Technology, Processes and Partnerships

An agile combination of business, technology and media services lead by an international team of highly skilled and committed professionals

MARTEL IN EC FUNDED R&I PROJECTS

QUALIFIED EXPERTISE, CREDIBILITY, STRONG CONNECTIONS AND VISIBILITY

MARTEL'S MAIN ROLES

+ Project Coordinator
+ Project Management
+ Strategies / Roadmapping
+ Communication/Dissemination
+ Community building
+ Technical Management
+ R&D Lead / Contributor

R&I AREAS OF EXPERTISE

+ Next Generation Internet
+ Advanced media and content
+ Digital Education
+ Cloud, IoT, Edge, AI, 5G/6G, Big Data
+ Smart Cities / FIWARE
+ Satellite Communication
+ International Cooperation

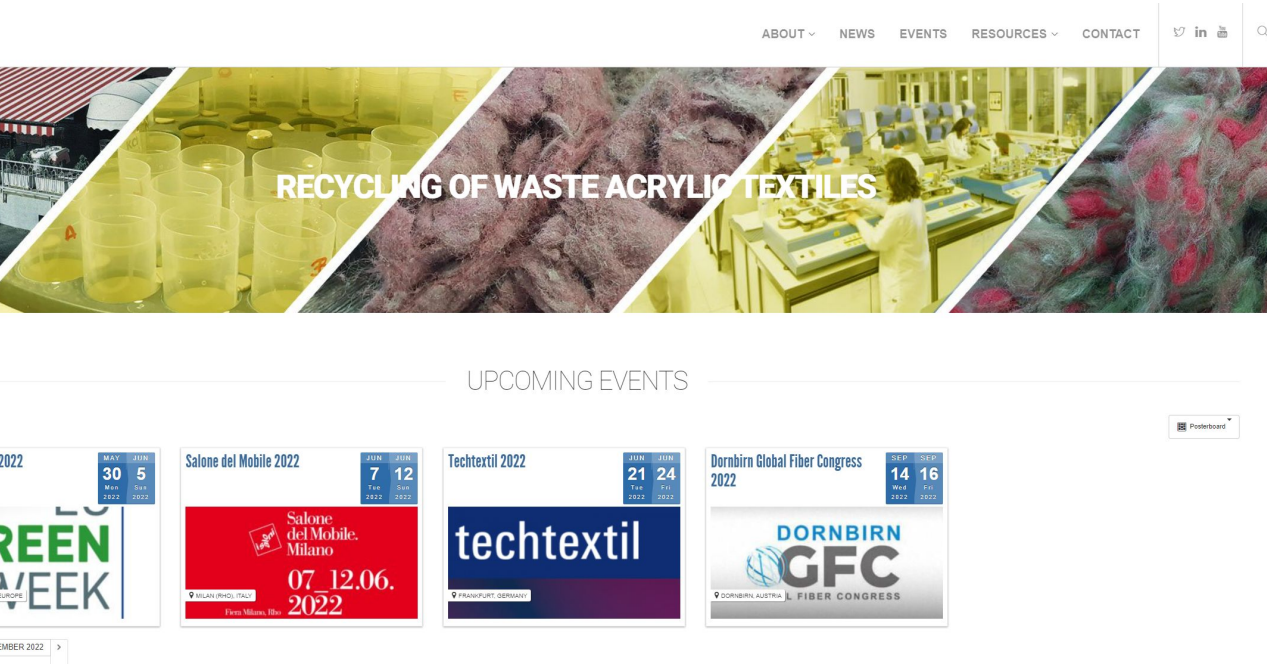**40** H2020 projects | **16.5 M€** in 6 years | **30%** success rate (!)

OUR PROJECTS
https://www.martel-innovate.com/projects/

REACT PROJECT – MANAGING THE WASTE ACRYLIC TEXTILES

＋ Research and Innovation Action
https://www.react-project.net/

– To remove hazardous substances affecting quality of the secondary raw materials and prevent their recycling

– To obtain textile products from 100% recycled fibre

– To re-use textiles for other production cycles, also with virgin fibres, to reach 30 % of waste prevented from disposal

– To produce recommendations on production chain implementation, technology transfer and standards.

HORIZON CLOUD – THE EUROPEAN CLOUD COMPUTING HUB
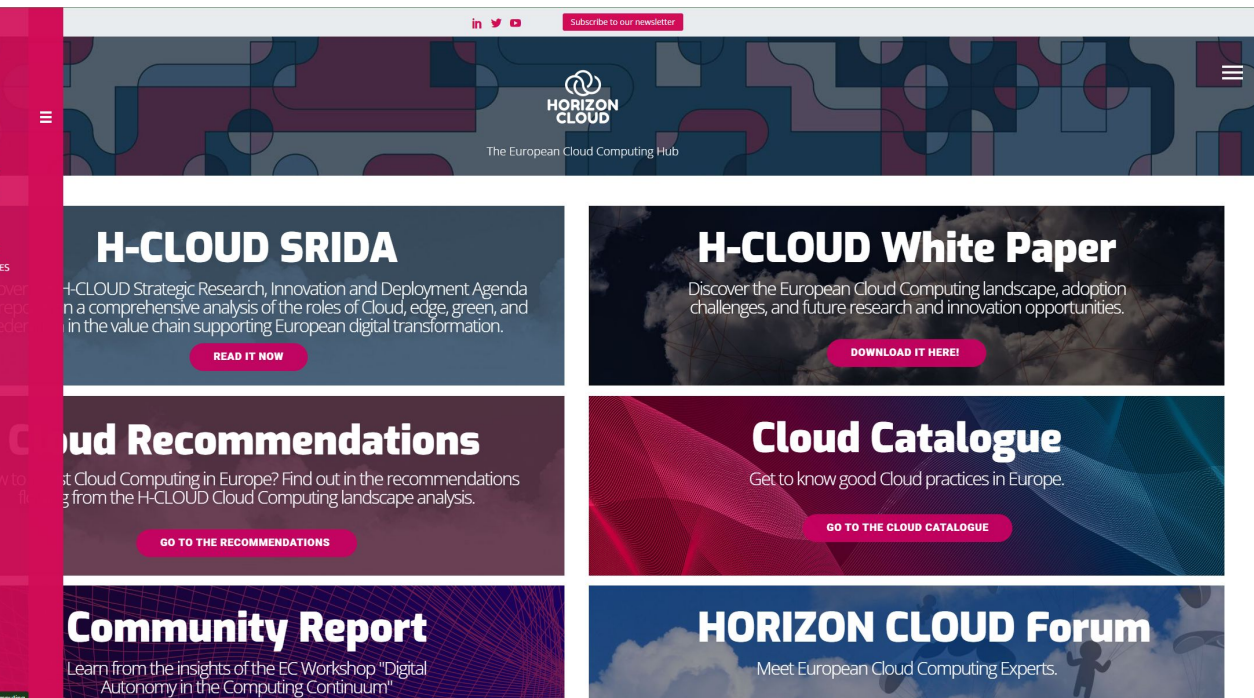
+ Coordination and Support Action
https://www.h-cloud.eu/

- EC initiative to consolidate and grow the Cloud Computing research and innovation community in Europe

- Landscaping and analysing research, market, skill gap, Open Source, etc.

- Community building and engagement

- **Green Cloud** is one of the main topics:
  + Which KPI for true end-to-end assessment?
  + Balancing Green Cloud and Edge Computing
  + Considering Cloud Core, Network, and Devices
  + Bigger picture: policies, circular economy, ...

CONNECTED TO THE INTERNATIONAL INNOVATION SCENE

ORCHESTRA CITIES FOR SUSTAINABLE SMART CITIES SERVICES

orchestracities.com

- **+** It allows cities to easily **collect, process and share data, analytics insights and services**

- **+** It provides the foundation for a citizen-centric IoT-based platform to help **reduce costs** and **drive their digital transformation**

- **+** It allows definition, offering and monitoring of several services and applications such as **waste and water management**, **transportation, air quality monitoring, traffic and parking**, etc.

ORCHESTRA CITIES FEATURES

MARTEL innovate

OPEN SOURCE SOFTWARE, OPEN APIS AND OPEN DATA MODELS

MULTIDIMENSIONAL DATA AT SCALE: SCENARIO, LOCATION AND TIME

MODULAR AND SCALABLE CLOUD SERVICES

SHARING OF DATA AND METRICS AMONG CITIES

COST-SHARING AMONG CITIES

REALTIME CITY MONITORING

OPEN
API

OPEN
DATA
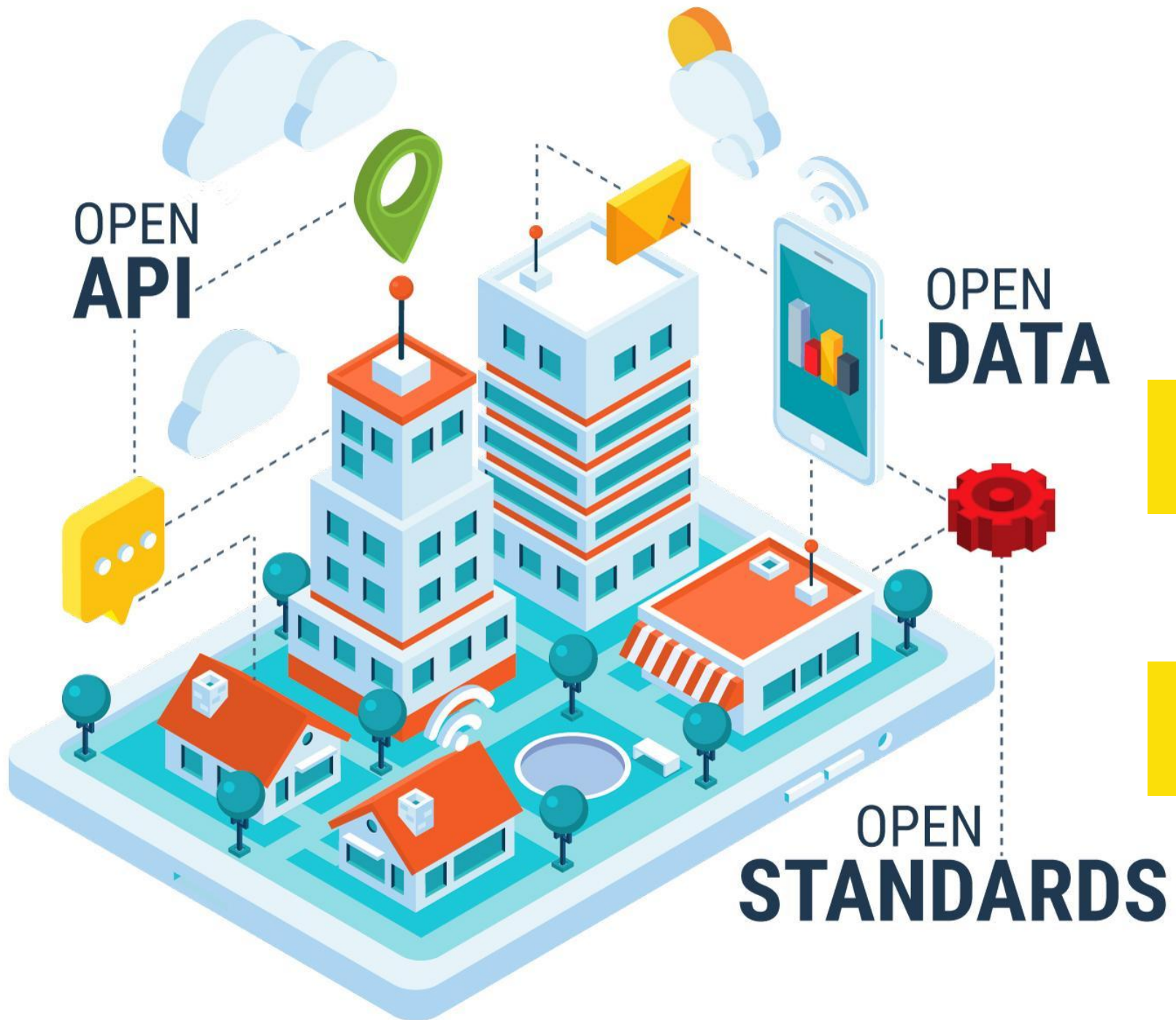
OPEN
STANDARDS

CREATE AN
"OPEN"
PLATFORM

APPLICATION SCENARIOS

Air quality management

- Monitoring and alarm triggering

Waste management

- Monitoring and analytics
- End-user application with waste-container-aware route planning

EV charging / Parking

- Monitoring and analytics
- Parking violation detection
- End-user application with recharging-aware route planning

AI Approach

Probabilistic reasoning
Causal models for insights beyond raw data analysis
Well-suited to time series

Causal Inference

Transparent, explainable
Human-on-the-loop DSS
Microservices enable AI data in auditable DBs

Compliant with EU trustworthy AI blueprint

Automation for continuous learning

AutoML toolchain for fast idea-to-execution path
MLOps for cloud-native runtime adaptation

Features and Benefits

+ **AI boosts CO_2 emission monitoring**
  - Improves time series data with inference
  - Combines measured and calculated CO_2

+ **AI supports decision- and policy-making**
  - Assesses overall impact of city actions
  - Intervention and counterfactual scenarios

+ **AI provides system-wide improvements**
  - Enhances data assets for all city actors

A HOLISTIC VIEW OF DIGITAL AND GREEN TRANSFORMATION

+ Martel does not jump head-first into tech solutionism

+ The multiple aspects of systemic challenges are considered

- Technology can be part of the problem, and is never the solution alone

- Combining dynamically many perspectives and expertise is key

+ Martel's positioning, values, and approaches are a good fit

- Multi-faceted (tech, media, consulting, processes, business, products)

- Ecosystem-orientated (work with clients, partners, competitors, society)

- End-to-end, goal-driven (avoid tunnel vision, keep eyes on the end result)