



RECLAIM

Refurbishment and re-manufacturing
of large industrial equipment

Communication & Dissemination Master Plan

December 2019 - M3

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¹ PU = Public

PP = Restricted to other programme participants (including the Commission Services)

RE = Restricted to a group specified by the consortium (including the Commission Services)

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Document history

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Summary

The 'Communication and Dissemination Master Plan' (CDMP) outlines how the project will achieve impact in these fields and the tools, channels and content used to do so. This document describes the overall communication framework for the consortium, and functions as a guide for project partners when speaking about or on behalf of the project.

- **A framework for C&D success**
- **Tools & channels (why, timing, deployment)**
- **Key messages & proof points**
- **Multipliers & stakeholders**

The CDMP will be updated in M19 (May 2021), as new synergies, media opportunities and interactions arise. As exploitation activities grow more detailed within the course of the project, the dissemination plan will be adapted if necessary to partners' exploitation strategies.

D9.1 also outlines tools to keep the dissemination and communication records of the project such as detailed analytics for web statistics, number of uptakes from multiplier platforms, and specific tools for measuring social media outreach.

Disclaimer

Any dissemination of results must indicate that it reflects only the author's view and that the Agency and the European Commission are not responsible for any use that may be made of the information it contains.





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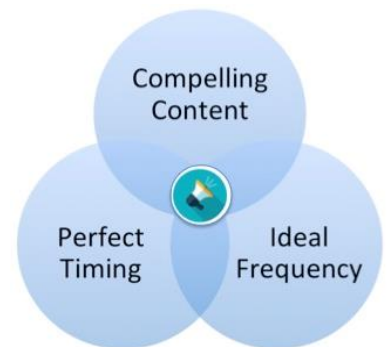
1. Creating lasting impact

RECLAIM will create impact with communication and dissemination actions to policy, technical, public and non-expert audiences that **build trust and accelerate transition to circular processes and digitalisation in industry.**

The project will profile and celebrate industries deploying new recycle and reuse techniques aim to reduce obsolescence of manufacturing machinery and prove the benefits of high-tech refurbishments and retrofitting.

This begins with RECLAIM's five pilot sites, where we will take pockets of proven performance and **share the knowledge and tools to make innovative new tools and solutions mainstream.**

Our mission is to do this across multiple on-line and in person channels using a creative mix of compelling and coherent content. **Consistent quality, frequency and timing of editorial, visual and academic outputs with clear calls to action** will help build awareness, understanding and uptake among the projects' target audiences.



Creating lasting impact with RECLAIM communication & dissemination content delivery principals

Dissemination

The RECLAIM dissemination strategy and activities work to ensure project outcomes - concepts, scientific results, tools, methodologies, results of validation work, standardisation punch-lists, policy and market recommendations - are widely disseminated to the appropriate target communities.

Dissemination will actively support and promote the exploitation and future success of project results. Driven by its innovative nature, RECLAIM is aligned with industry and market trends, and has the potential to impact the market shortly after project completion.

Close collaboration with exploitation actions will be critical to the adoption and uptake of RECLAIM solutions - by consortium companies, their suppliers and the wider marketplace. A roadmap for identified exploitable results (D8.2) and a plan for scale-up, uptake and replication (D8.3) due for the end of the project will both have significant impact on shaping dissemination and communication content and actions after project end.

RECLAIM has commercial ambitions in a transformative time for digital applications and tools in industry. Refurbishment and re-manufacturing have significant potential as a standalone industry. This could represent up to €90 billion turnover and associated employment of 600,000 by 2030 according to a recent market study. Uptake and use of project results during and after the project duration is considered as a major success indicator.

Communication

The RECLAIM communication strategy focuses on informing and demonstrating the **societal, environmental and economic benefits** generated to a wide range of audiences outside the core project group.





Communication focus will be on our journey and process, tangible results and “human” success stories to stimulate positive emotions and relatable progress.

Video, visuals, social media content, journalistic articles and news releases are some of the planned activities to bring the project’s story, ambitions and impacts to life. This proprietary content will be **distributed using our own media** (social, website), **activated by project ambassadors and partners** (their own social, web, networks, conferences, presentations etc.) and **promoted to trade and technical press** via ESCI’s network of journalists and public relations activation.

ESCI will deploy a three-stage development process and storytelling techniques to use this content and get high levels of engagement:

1. **AWARENESS:** of a credible and visible consortium working to create real value
2. **ACTIVATION:** understanding of RECLAIM and well informed of its solutions
3. **ACTION:** confident and committed to adopt digital retrofitting with RECLAIM tools

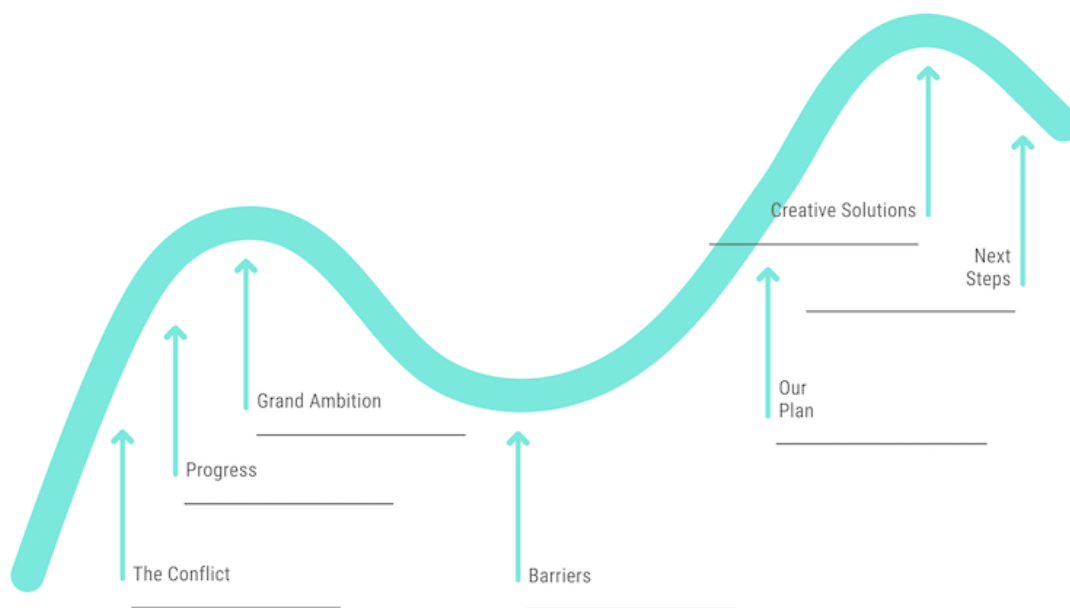


Figure 1 - Storytelling arch to give shape to our narrative, engage audiences and give a call to action





Planning and execution

A four-year plan of activities, expected impacts, impact assessment and key partners has been defined and created by the consortium.

It reflects connections with key deliverables and activities in work packages across the project and the building progress and resources in RECLAIMs active funded lifetime. This table gives our current roadmap for this M3 deliverable and will be revisited for M19.

Our editorial content and activation pathways will be under constant review to identify get the best opportunities and get communication and dissemination results. Our rolling reference points and editorial guidelines are highlighted below.


Year 1	Year 2	Year 3	Year 4
<ul style="list-style-type: none"> ○ Create general public awareness ○ Introduction in RTD networks & industrial cluster 	<ul style="list-style-type: none"> ○ Continue building awareness in SMEs ○ Publications of RECLAIM concepts and methods in scientific networks ○ RECLAIM technology demonstration 	<ul style="list-style-type: none"> ○ Building interest by demos ○ Promotion of RECLAIM prototypes in selected manufacturing domains 	<ul style="list-style-type: none"> ○ Promotion of RECLAIM Solution in selected manufacturing domains
Activities			
<ul style="list-style-type: none"> ○ Project Portal ○ Social Networks (LinkedIn, Twitter, Facebook, YouTube) ○ Press release, newsletter, events ○ Project workshops 	<ul style="list-style-type: none"> ○ Journal Publications (3 papers per year) ○ Seminars & EU workshops ○ Promotion activities (newsletters, etc.) ○ Conferences participation (2-3 conferences per year) 	<ul style="list-style-type: none"> ○ Demonstration in exhibitions ○ Industrial workshops ○ Clustering activities ○ Industrial Fairs ○ Online videos/articles 	<ul style="list-style-type: none"> ○ Demonstration in exhibitions ○ Industrial workshops ○ Clustering activities ○ Industrial Fairs ○ Online videos/articles
Expected Impact			
<ul style="list-style-type: none"> ○ Tweets, blog entries & social media to attract younger users ○ Increase industrial interest by highlights of production application ○ Increase scientific interest through major advances beyond SoA ○ Promotion of project findings 	<ul style="list-style-type: none"> ○ Benchmark with international SoA ○ Receive expert feedback through review ○ Achieve citations on RECLAIM work ○ General public, scientific & industrial awareness ○ Generate community interest in the investigated use cases 	<ul style="list-style-type: none"> ○ Receive feedback from potential users of the project results ○ Receive expert feedback – Track complementarity & differentiation of projects ○ Investigate findings of other projects ○ Achieve generalized outcomes (e.g. reference architecture) 	<ul style="list-style-type: none"> ○ Receive feedback from potential users of the project results ○ Receive expert feedback ○ Investigate findings of other projects
Impact Assessment			
<ul style="list-style-type: none"> ○ Re-tweets, Blog entries, Contact requests ○ Google analytics analysis, Visitor feedback by online survey 	<ul style="list-style-type: none"> ○ Paper citing the project research ○ No. of accepted peer-reviewed papers ○ Review comments to publications ○ Quality analysis of provided feedback 	<ul style="list-style-type: none"> ○ Participation in the workshops ○ Feedback report of workshops ○ Elements of commonality achieving great impact 	<ul style="list-style-type: none"> ○ Participation in the workshops ○ Replication RECLAIM's results
Partners			
<ul style="list-style-type: none"> ○ Academic & Research Institutes 	<ul style="list-style-type: none"> ○ Academic & Research Institutes ○ Technology Providers ○ End-users 	<ul style="list-style-type: none"> ○ End-users ○ Technology Providers ○ Academic & Research Institutes 	<ul style="list-style-type: none"> ○ End-users ○ Technology Providers ○ Academic & Research Institutes

Figure 2 - RECLAIM communication and dissemination roadmap

Rolling reference points and editorial guidelines for activation:

1. Key deliverables: not all deliverables are created equal in terms of their communication & dissemination potential. Together with the coordinator and WP9 stakeholders, focus deliverables for additional treatment - i.e. accompanying infographics - will be identified.

2. Event opportunities: an evolving list of 2-3 events per year for full WP9 support plus cultivating and supporting for project ambassadors and specialists in their own forums, events and spheres of influence.

3. Hot topics and conversations: RECLAIM remains a niche area of interest, with a concentrated group of recognised specialists. Wherever possible, we will need to hook into bigger spheres such as live tweeting at events, connecting to major legislative developments and trade or even mainstream interest in industry 4.0





2. Welcome to RECLAIM

Clear and consistent language, key messages and proof points are essential to creating the awareness, activation and action we seek!

Whether catching a target audience's attention via a LinkedIn post, developing a script for a project video, delivering a presentation or speaking to a colleague or end user... common key messages and narrative are vital. Providing a messaging house and supporting statements also guides website texts, print materials and more. Perhaps even more importantly, they are also a resource to allow all project partners to feel well equipped and confident ambassadors for RECLAIM - adding their own personal touch and expertise on top where they wish to.

These messages and supporting statements give different types of detail to address a range of stakeholders. From big picture angles to connect with the broader context and decision-makers, to more technical and solution driven material.

These will be fine-tuned and tested in editorial, events and media.

2.1 Narrative and discussion points

Elevator pitches and resources about the project from different perspectives based on a single, simple umbrella statement

RECLAIM productivity, resource efficiency and a competitive edge with high-tech refurbishment of industrial equipment

The European context for manufacturing and policy

Improvements in manufacturing are essential for Europe to generate value, but the natural resources it needs and protect its environment.

The European Union and its 'Factories of the Future' program is working towards a smart, green and inclusive economy. RECLAIM helps to address and innovate in its key areas:

- **energy- and resource-efficient manufacturing processes**
- **socially sustainable, safe and attractive workplaces**
- **high-tech companies involved in innovative manufacturing**

Factories of the Future must improve their environmental credentials by minimizing energy consumption, embracing closed loops for products and production and improving sustainability in materials and production processes

RECLAIM solutions can help economic as well as environmental sustainability by improving productivity and reconfiguring production facilities to meet new challenges in a cost-effective way.





Global statement

Manufacturing is a pillar of innovation and growth for Europe, representing 15% total employment and 80% of exports. Manufacturing is equally essential for production of innovative products and systems that affect every one of us - transportation, household appliances, health products, just to name a few.

Well-functioning equipment is a key to industrial productivity. However, a significant share of equipment in European production lines is approaching the end of their designed lifetime.

These ageing machines can suffer **unplanned downtime causing significant losses** - in financial terms and of the resources in production when they fail. Simple disposal of the outdated machinery is costly and carries a large environmental footprint. **New approaches are needed to ensure European manufacturing remains competitive and protects the environment.**

Researchers and industry representatives from nine European countries formed RECLAIM with an ambitious goal to provide **replicable solutions that could help European manufacturing sector meet these and future demands.**

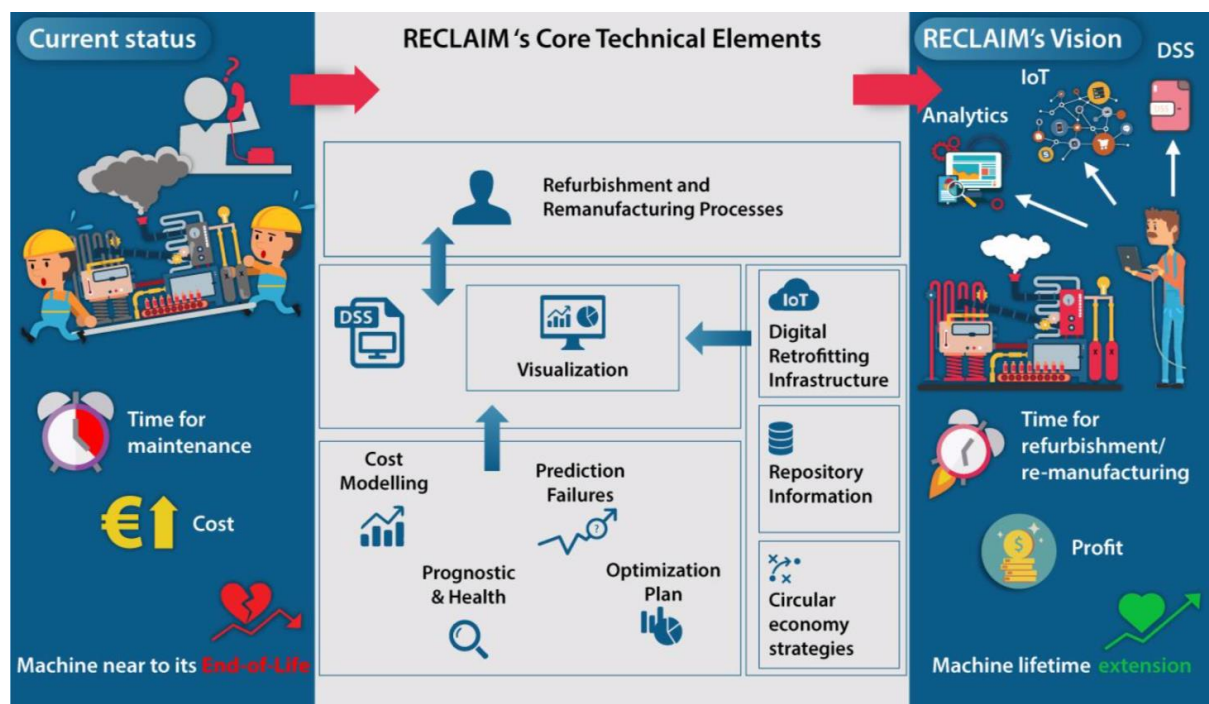


Figure 3 - RECLAIM added value & concept

Big picture pitch

The way we manage supply chains and produce goods is undergoing a significant change - big enough to be considered 'the fourth industrial revolution' (Industry 4.0). A **digital transformation of industrial processes** based on the seamless and timely exchange of information across supply chain participants, the extensive deployment of virtual operations and maintenance and a connected Industrial Internet of Things (IIoT) technologies in manufacturing.





The promise and benefits are considerable - smart factories, machines and supply chains that become more efficient, productive and less wasteful. But there are significant gaps in knowledge, skills and adoption. European manufacturing is losing global market and export share, inefficient use of resources has been calculated to cost European industry €630 billion annually and industry is still a significant burden on our environment in terms of pollution and generation of waste.

Within this context, RECLAIM acts specifically to deploy digital retrofitting to machinery and production lines - **keeping resources in the system and increasing their effectiveness at the same time.**

Deployed correctly, it will **make European industry more sustainable, productive, cost-efficient and competitive.**

Project pitch

RECLAIM focuses on the **important role well-functioning equipment has in industrial productivity.** This is especially important as a significant share of European manufacturing machinery is approaching the end of their designed lifetime.

Ageing machines can suffer unplanned downtime causing significant losses - in financial terms and of the resources in production when they fail. Simple disposal of the outdated machinery is costly and carries a large environmental footprint.

RECLAIM will **build awareness, skills and replicable solutions in refurbishment and remanufacturing techniques.** Digital retrofitting demonstrations in five different industries will increase cooperation and capacity at these sites and prove a range of solutions available to accelerate impact at sites across Europe.

The project hopes to **benefit the environment and the economy with new recycle and reuse techniques for machinery** - reducing obsolescence and proving the advantages of high-tech refurbishment.

Benefits include up to **15 years more useful lifetime** for machinery, with **greater resource efficiency and less incident disruptions**; major increases in operational efficiency; reduced maintenance costs and more value-added services and competitiveness.

Technical pitch

RECLAIM solutions aim to both extend machinery lifetime while also improving productivity and performance. The project will focus on **harnessing digital analytics, the Internet of Things (IoT) and circular economy strategies to improve predictive maintenance and upgrade legacy machines responsibly and effectively.**

Improving informed analysis and decision-making is a key objective. RECLAIM will create a novel *Decision Support Framework* to assess the health status of machinery and propose methods, tools or services for the appropriate lifetime extension strategy. The framework uses IoT sensors, novel prediction and process optimisation techniques to strengthen real-time evaluation and bring implications of strategic choices to life.





Nine specific RECLAIM solutions are grouped into modules and components of technical excellence, comprised of:

- A **physical layer** of smart sensors and cybersecurity
- A **real-time decision-making layer** featuring analytics, prognostics, maintenance and planning
- A **user layer** to visualise and localise information on equipment refurbishment and re-manufacturing operations

RECLAIM solutions & innovations in full

Physical Layer

Building block 1: Smart sensors & digital retrofitting

Building Block 2: Cybersecurity for IoT

Real Time Decision-Making Layer

Building block 3: Decision Support Framework (DSF)

Building block 4: Financial Analysis

Building block 5: Prognostics Toolkit

Building block 6: Predictive Maintenance

Building block 7: Refurbishment & Re-manufacturing Planning

Building block 8: Data Analytics

User Layer

Building block 9: Augmented Reality interface

Physical Layer

- **Building block 1: Smart sensors & digital retrofitting**

An adaptive sensor network and digital retrofitting infrastructure attached to the refurbished or remanufactured machines will retrieve data and accelerate predictive maintenance tasks.

Main innovations: RECLAIM includes IoT controllers with hardware acceleration capabilities. A network of low-cost programmable logic IoT devices will deliver high performance analytics and health monitoring for operation profiling and predictive maintenance tasks. Those IoT devices will offer a sweet spot between performance, flexibility and power consumption.

- **Building Block 2: Cybersecurity for IoT devices**

Cybersecurity endpoint protection will be embedded both into digital retrofitting infrastructure design. Secure IoT devices protect sensitive and personal data.





Main innovations: Security by design mechanisms will secure user and device authentication, encryption, intrusion detection/intrusion prevention, and overall enhanced cyber-secure operation.

Real Time Decision-Making Layer

- **Building block 3: Decision Support Framework to optimise lifetime-extension strategies**

The Decision Support Framework (DSF) is designed to support and improve refurbishment and re-manufacturing of machinery decisions. DSF will identify and propose strategies based on different criteria such as the impact and value of refurbishment, extension to asset life, optimal timing, machine condition and possible upcoming failures, production planning, and resource allocation.

The DSF will bundle all the tools in the real-time decision-making layer together into one, easily navigable tool. It will have attributes from both knowledge and model-driven type decision making tools, including scoring mechanisms, rule-based decision making and AI algorithms. Data mining algorithms will help propose decision trees, genetic algorithm, and ensure the extraction of valuable information from IoT data.

A visual analytics suite to capture and translate insights will provide users with actionable strategies, alternatives process models, KPIs visualisation and real-time health assessment of different production aspects.

Main innovations: Flexible knowledge- and model-driven DSF which is adaptive and reliable in real-time momentary situations to a) improve competitiveness; b) maximize productivity; c) increase resource use efficiency; and d) increase awareness of resource use efficiency deviations for the existing or future control process units.

- **Building block 4: Cost modelling and financial analysis toolkit**

Short presentation: This component provides an effective cost estimation tool for cost and financial impact. It will take into account all types of life extension strategies and activities - helping to estimate the resources needed for each activity. The modelling will be linked to incoming data generated, providing real time life cycle cost estimation.

The toolkit will be developed to perform these functions across multiple industries, expanding their benefits and impact to European manufacturing.

Main innovations: Monte-Carlo Simulation statistical modelling and discrete event simulation will deliver a precise cost and financial analysis to support reliable decision-making on refurbishment and re-manufacturing strategies. Multiple real time cost implications may be visualised based on monitoring of the equipment health status.

- **Building block 5: Prognostic and health management toolkit**

A component-level prognostics and health management tool will be developed to increase equipment lifetime, productivity and service quality. RECLAIM will use shop floor data in order to calculate overall equipment efficiency and extract other meaningful information for prediction and prevention capabilities.





Main innovations: Capturing data from devices to improve the decision-making process for predictive maintenance, leveraging the interactions and relationships between device data and expert data.

Creating integrated equipment degradation and quality probability based on system level and influence diagrams using both expert knowledge and operational data.

- **Building block 6: Fault diagnosis and predictive maintenance digital twin**

A factory environment digital twin will monitor and predict performance and status of factory assets. This will provide all the information needed to perform proper maintenance planning, optimising production throughput and reducing stoppages.

The system will monitor patterns in real time and compare them with historical data, to autonomously identify repeated scenarios and create rules to handle them.

Main innovations: Training, testing and adoption of predictive maintenance algorithms to better predict future outcomes.

- **Building block 7: Refurbishment & re-manufacturing toolkit**

Production planning optimisation using IoT data will create high value information for monitoring production as a precursor to deploying improvement and control steps. Smart sensors (building block 3) together with system constraint and behaviour recognition ensure the best possible outcomes.

Main innovations: Machine learning techniques will make long-term optimisation of production planning possible - preventing failures, malfunctions and abnormalities, as well as obtaining better predictive performance.

- **Building block 8: In-situ repair data analytics**

Industrial analytics are used to identify and recognise machine operational and behavioural patterns to make fast and accurate predictions and act with confidence when needed. A visual analytics suite will use a) perception (monitoring) elements on the shop-floor and 2) comprehension (inspection, exploring) thanks to an extensive network of sensors.

Main innovations: Tailored solutions for existing data structures added to new batch and streaming visual analytics will give powerful repair and drill-down analysis.

User Layer

- **Building block 9: AR-enabled multimodal interaction mechanisms**

A novel way to visualise and localise information on equipment refurbishment and re-manufacturing operations.

Using a network of sensors and proposals from the decision support framework, technicians will be able to vision an augmented reality of several streams of data.

During refurbishment and re-manufacturing, the system will provide animated 3D stepwise instructions on disassembly and reassembly required, as well as support in the form of on-





the-job remote assistance with real-time audio-visual communication and 3D annotation to technicians during the procedure.

Main innovations: Real-time localisation and 3D augmented reality with natural language, hand gesture and gaze input interaction algorithms and real-time AR annotation for remote assistance.





Proof points in sustainability, productivity, cost efficiency & competitiveness

	SUSTAINABILITY	PRODUCTIVITY	COST EFFICIENCY	COMPETITIVITY
TOP LINE	<ul style="list-style-type: none">• Industry today is still responsible for a significant burden on our environment in terms of pollution and generation of waste• Factories of the Future must improve their environmental credentials by minimizing energy consumption, embracing closed loops for products and production and improving sustainability in materials and production processes• Legislation to improve waste prevention and reuse could save 8% on annual business turnover in industry¹	<ul style="list-style-type: none">• Since the financial crisis, labour productivity in the 28 EU member states has grown just 0.7 percent annually²• Well-functioning equipment is a key to industrial productivity. However, a significant share of machinery in the European production lines is approaching the end of their designed lifetime - increasing failures and down time	<ul style="list-style-type: none">• Current inefficient use of resources has been calculated to cost EU industry €630 billion annually³• Operation, maintenance of equipment is one of the biggest expenses in the manufacturing – unplanned downtime cost nearly \$50 billion to plants and factories worldwide, 42% of it is because of asset failure• 60% of wasted expenses come from unnecessary operation and maintenance costs⁴	<ul style="list-style-type: none">• Today around 50% of costs in the manufacturing sector are related to raw materials, energy and water used in industrial processes• European manufacturing is losing global market and export share due to strong growth of Chinese and other Asian producers

¹ Industry in Europe: facts and figures on competitiveness & innovation, 2017, EC

² Information Technology and Innovation Foundation, 2018

³ Guide to resource efficiency in manufacturing, Europe Inova

⁴ SPD Group, AI and Machine Learning in Manufacturing





	SUSTAINABILITY	PRODUCTIVITY	COST EFFICIENCY	COMPETITIVITY
PROJECT LEVEL	<ul style="list-style-type: none">• Extending the lifespan of large industrial equipment in factories using refurbishment and re-manufacturing techniques can significantly reduce environmental footprint and resource consumption. RECLAIM demo cases in 5 industries will add up to 10-15 years to the expected useful lifetime• Lower defect and wastage in manufacturing enables circular economy by minimising waste and resources use in the entire product lifecycle. RECLAIM solutions at a textile bleaching site will reduce wasted materials by 10%	<ul style="list-style-type: none">• Outdated machinery and unplanned downtime can cause significant losses for companies and employees. RECLAIM solutions are targeting between 10 - 50% less incident disruptions.• RECLAIM solutions to monitor quality, identify deviations and predict failures at a high-end kitchen production line aim to increase operational effectiveness by 60%	<ul style="list-style-type: none">• Ageing equipment often requires time-consuming manual data crunching and analysis to gain any real performance and maintenance insights. RECLAIM demo cases will reduce repair costs by between 10-50%• RECLAIM's re-use and remanufacturing approach requires some initial investment; but fundamentally reduces equipment costs in medium-to-longer term and increases ROI on high capital expenditure machinery• Remote inspection, diagnosis and assistance using Augmented Reality improves response times, reduces travel costs and mutualises key staffing	<ul style="list-style-type: none">• Refurbishment and re-manufacturing have significant potential as a standalone industry. This could represent up to €90 billion turnover and associated employment of 600,000 by 2030 according to a recent market study• RECLAIM's suite of solutions improve key global manufacturing index criteria such as quality of physical infrastructure and develop innovative new IoT and AI innovations• RECLAIM helps EU industry move from an equipment-based business to a value-add business





	SUSTAINABILITY	PRODUCTIVITY	COST EFFICIENCY	COMPETITIVITY
TECHNICAL LEVEL	<ul style="list-style-type: none">• Smart sensors and digital retrofitting monitor operations will help optimise power consumption and better manage doses of chemicals and other resource-intensive elements of the production process• A Decision Support Framework (DSF) will support and improve refurbishment and re-manufacturing of machinery decisions, helping to extend the useful life of machinery and reduce consumption of new resources	<ul style="list-style-type: none">• Data mining algorithms will help propose decision trees, genetic algorithm, and ensure the extraction of valuable information from IoT data, giving a real-time health assessment of different production aspects• RECLAIM's prognostics and health management tool will capture data to calculate overall equipment efficiency and other useful production and predictive maintenance data	<ul style="list-style-type: none">• A cost modelling and financial analysis toolkit will estimate resources needed for multiple strategic choices and allow multiple real time cost implications to be visualised based on the equipment health status• Machine learning techniques, sensors and real-time visualisations in one decision support framework improves ability to manage and predict equipment and production quality and effectiveness - improving management of supply chain and investments	<ul style="list-style-type: none">• RECLAIM's fault diagnosis and predictive maintenance digital twin opens up new services, business models and optimization• Machine learning and augmented reality enabled interaction give European machinery companies a high-tech edge

Figure 4 - Proof points in sustainability, productivity, cost efficiency & competitiveness





2.2 Branding & visual identity

An attractive and consistent RECLAIM visual identity will facilitate meeting communication and dissemination objectives and reflect project values and goals. This includes logos, info graphics and standard templates such as PowerPoint presentations, Word report styles and letterheads. It also advises the consortium on correct acknowledgements of EU funding and on the correct use of the EU logos.

A strong and dynamic visual identity is important in many ways and spheres. Notably:

Professionally - to

- Provide an easily identifiable and attractive design to facilitate dialogue and recognition with key stakeholders and influencers
- Give a brand platform for improved market knowledge of RECLAIM solutions to support replication and take up - including continued commercial development, exploitation and investment well beyond the lifetime of the project
- Enhance exploitation potential for RECLAIM results
- Support collaboration activities with relevant projects and initiatives at a local, nation and European or international level

Publicly - to

- Support local initiatives and engagement particularly at demonstration site and interventions
- Develop an identifier of investment, change and progress for local stakeholders, employees and supply chain partners
- Give a visual identity for demonstration sites to use as appropriate in their local communications

RECLAIM Logo

A range of logos in dark, white and yellow key colours have been produced to stand out on a range of digital and print media.

They exist in horizontal and square formats with and without the full project name baseline. Icon format logos for twitter and YouTube handles also present. Files are available in .png .pdf .ai and .svg formats to cover all needs and applications.



Figure 5 - RECLAIM logo block in yellow





Figure 6 - Three colour ways



Figure 7 - Square and horizontal with baseline



Figure 8 - Social media banner

Design and fonts

Inspiration for the design came from turning cogs of machinery, their movement and the physical act of repair indicated by the wrench. Laid over each other and used as a background, they evoke the topological lines of a mapped landscape - just as RECLAIM seeks to give tools and solutions to navigate the new industry 4.0 landscape and challenges.

Professional and non-professional fonts exist. So that ESCI design teams can get the best look and print quality; and regular users have a 'day-to-day' font within immediate reach on all their devices for Word, PowerPoint, etc. Professional fonts are Jost and Teka. The daily font is Trebuchet MS.



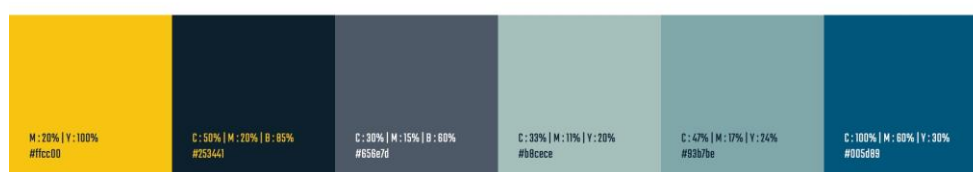


Figure 9 - RECLAIM professional fonts & colour palette

Icons and graphics



Figure 10 - RECLAIM sector graphics

To help differentiate and bring to life the different sectors being demonstrated in RECLAIM, an icon for each has been developed. These will also be used in PowerPoint, graphical maps and info graphics to make communicating in person and on line more visual, informative and engaging.





2.3 Website & social media

Deliverable 9.4 in production for January 2020 (M4) will treat these topics in detail. A brief overview:

RECLAIM will be a **modern and dynamic website** that moves away from being a repository and towards being a ‘digital anchor’ for RECLAIM content is a pillar of the dissemination and communication strategy. Priority is being given to an easy to update and well-connected website, giving a prominent online home to content featured and distributed in the media or sectorial sites, twitter feeds, interviews and blog posts.

It is publicly available reclaim-project.eu and will be hosted by web server facilities in France. An important characteristic of this layout is that it is responsive to smart devices such as smart phones and tablets, allowing easy use and facilitating presentation of information.

The website will embody the key messages, calls to action, branding and design features already detailed in this document. While under development, the site already drives interested parties to LinkedIn, twitter, displays the European Union flag and funding mention and a brief opening statement.



Figure 11 - Website holding page

Social media channels & training

Due to the industrial and professional nature of the project, [LinkedIn](#) and [twitter](#) will be the focus social media outreach and distribution channels. The project may also use SlideShare to distribute professional presentations, infographics and solution factsheets.





YouTube will host project video content, allowing it to be piped using XML into websites, social media posts, as well as generate some organic reach of its own thanks to the platform's users and search.



Figure 12 - Twitter channel after 2 months

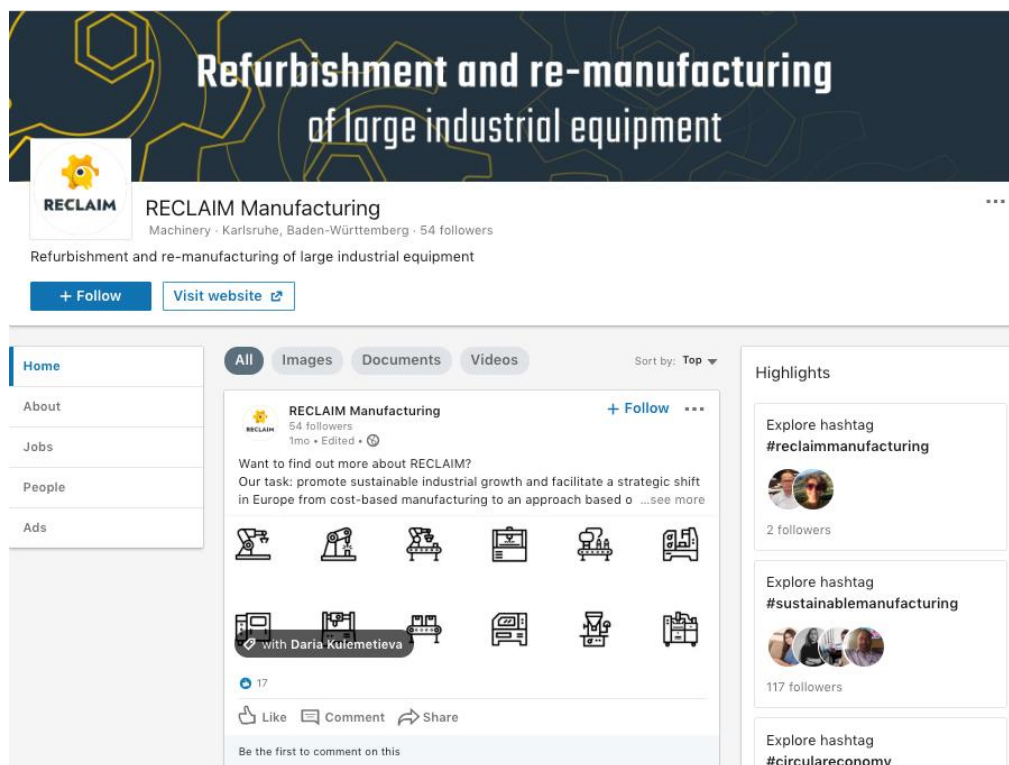


Figure 13 - LinkedIn channel after 2 months

A **communication training** for project partners and associated pilot sites will be provided during the first six months. It will outline tips and tools on how to use social media channels like Twitter, LinkedIn, Instagram or YouTube to communicate about RECLAIM and related themes to maximize the outreach and also ensure visibility among the partner's network of industry stakeholders. This will ensure the existing social network channels of consortium partners will be widely exploited to enhance the dissemination of project activities and deliver results towards the target audiences.





2.4 Publicity & dissemination activities

Technical publications

The RECLAIM consortium will aim to generate at least 10 articles in peer-reviewed scientific papers, submitted to open-access scientific journals and technical papers.

Researchers and PhD students from the academic partners but also from the industrial organisations will further disseminate their achievements as open access publications in international journals such as Engineering Applications of Artificial Intelligence (IF55 2.368), Expert Systems with Applications (IF 2.981) or IEEE journals like IEEE Intelligent Systems (IF 3.532) or IEEE Transactions on Automatic Control (IF 2.777). All publications will be issued in accordance to the IP management plan of the consortium.

Open access policy

In the academic sphere, the project will monitor and participate in academic conferences and publications at every suitable opportunity and fully support EC Open Access Strategy obligations and use of the OpenAIRE platform to better build research on previously published research results, achieve greater efficiency by fostering collaboration and avoiding duplication and accelerating innovation. Research and academic institutions will also aide transfer with self-archiving publications and their own technical libraries.

According to [H2020 rules on the Open Access Policy](#), Open Access (OA) refers to the practice of providing online access to scientific information that is free of charge to the end-user and reusable. In particular, regarding research data, open access refers to the right to access and reuse digital research data under the terms and conditions set out in the project's Grant Agreement.

To further elaborate on the term, open access to scientific publication and research data in the wider context of dissemination and exploitation can be illustrated by the following figure: Routes to Open Access. The term "Green OA" in the figure refers to the case when beneficiaries can deposit the final peer-reviewed manuscript in a repository of their choice. Similarly, "Gold OA" refers to open access publishing, meaning that researchers can also publish in open access journals or hybrid journals (journals which both sell subscription and offer the option of making individual articles openly accessible). It is important to mention that the term research data is used to describe information, which can have the form of facts or numbers, that are considered as a basis for reasoning, discussion or further calculation and elaboration.

In the "*Model Grant Agreement*" official document it is stated that each beneficiary should disseminate its results (including scientific publications) by appropriate means, unless this would be against its legitimate interests. In the same document, there are concrete guidelines regarding the Open Access Policy divided into two steps. In particular, as a first step it is stated that each beneficiary must ensure free of charge online access for any user to all peer-reviewed scientific publications related to its results. Regarding the second step, the beneficiary should render the results accessible as soon as possible in a repository of scientific publications and ensure open access to the data. Furthermore, beneficiaries should





provide as many options as possible related to the right to copy, distribute, search, link and mine the public documents.

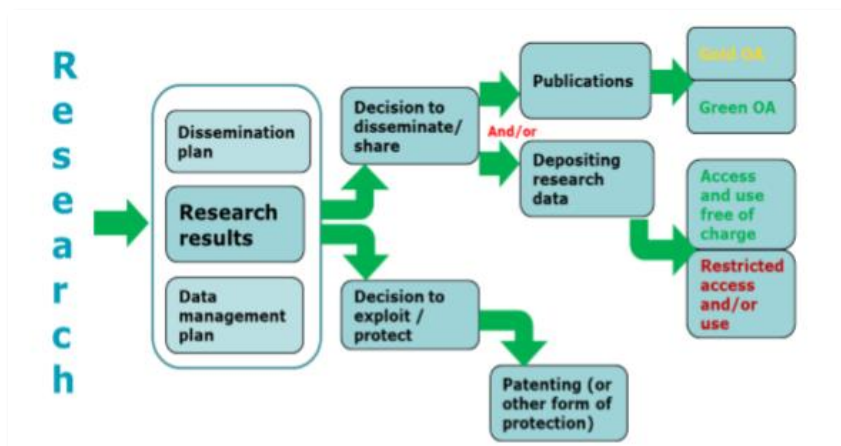


Figure 14 - Routes to Open Access

Editorial content

An array of editorial content will be produced by ESCI to increase visibility of the project and raise awareness on the theme of re-engineering and refurbishment.

This editorial content will include communication material (**posters, rollups, postcards** and a **brochure**) to strengthen the visual impact of the project as well as high-end presentation templates and graphics for project ambassadors.

In addition, 1 **introductory video**, 8 **info-graphics**, 4 **journalistic articles** and 8 **quick-fire interviews** with experts in the refurbishment industry, innovators, first adopters of the RECLAIM approach and other stakeholders will be produced.

Furthermore 4 **videos** on selected pilot cases will be produced to raise awareness of benefits of the goals of RECLAIM to various target groups. Material and initiatives need to be presented in an understandable manner, while targeted content needs to be translated in languages relevant to the project, i.e. Slovenian, Czech, Spanish, German, Switzerland and Turkish.

All of these supports will build upon the RECLAIM key messaging and visual identity and a majority of print and video actions complete for M19 update of this document.

An introductory video is already in production for January 2020 (M4) and onsite filming with the coordinator at a plant in Hamburg, Germany already took place in early December 2019.

Overview of selected content formats & purpose

Info graphics

In a modern multi-channel environment, it is difficult to get someone's attention, to capture their imagination, especially in the fast-paced digital world. By working with RECLAIM content, consortium experts and a lively design team, a series of info graphics on topical and substantive issues will be produced. A total of **eight info graphics** over duration of the contract will be





	deployed to attract new interest, increase engagement and deliver powerful messages clearly.
Journalistic articles	A total of four original journalistic articles will profile the skills, experiences, credibility and performance of the demonstration sites and project in more detail. Always anchored on the project website, they will be shared with influential multiplier websites in specialist media, stakeholder networks and established online groups or platforms like LinkedIn. If the opportunity arises, the articles will be pitched to local, national or international mass media in the European Science Communication Institute network
Quick fire interviews	Throughout the project, key technical experts, end users and stakeholders will respond to quick-fire interviews relating to their experiences, ambitions and challenges in achieving project solutions and objectives. These will primarily draw on the demonstration site ecosystems and interview people both internal and external to the project's consortium. One-three interviews per year and a total of 8 will be produced. Initially published on the project website, quotes, images and points of view expressed will drive social media activities and promotion.
Rolling news items	A project like RECLAIM generates lots of developments, insights and news. Not just directly linked to the project; but also the lively academic, policy and commercial achievements of consortium members. Several news items a year generated directly by WP9 partners and a number more from consortium members are expected each year to define a lively pace of news that reflects positively on the project
Postcard flyers	Easy to distribute, postcard flyers provide information on printed material for face-to-face meetings at fairs, workshops and conferences. The format is also cost effective for each partner to print and maintain their own stocks to distribute individually to potential end-users and other stakeholders during the duration of the project. The support will give simple call to action to remain up to date over time and drive people towards RECLAIM social media channels.

Figure 15 - Overview of selected content formats & purpose

Conferences, workshops and events

Every year the project will take part in a **major forum or trade show** in the field of industrial automation as well as relevant co-events organised by respective exhibitions under the guidance of FEUP.

Partners will present the RECLAIM solutions also in co-located thematic conferences or workshops, which will be organized in parallel with project plenary meetings (whenever possible) in order to reduce travel costs and foster collaboration among all partners and participants.

Led by FEUP, RECLAIM will support different innovation communities at these events, by seeking to co-host or present at workshops to share ideas and results. In addition, the project will develop a more industrial dissemination in order to reach its exploitation and adoption





by the market participating in meet-ups, supporting hackathons with the proposed platform, providing tutorials, and webinars.

The participation in international conferences is also considered. Special sessions and tutorials around the core themes of RECLAIM will be organised in international recognised conferences like INDIN (IEEE International Conference on Industrial Informatics), ETFA (IEEE Conference on Emerging Technologies & Factory Automation), ICPS (IEEE International Conference on Industrial Cyber-Physical Systems) and MFI (IEEE International Conference on Multisensor Fusion and Integration for Intelligent Systems).

Clustering & networking activities

To further bundle benefits and create impact, opportunities to use synergies with projects financed under the same topic, further relevant Horizon 2020 and national projects will also be identified and assessed from the starting point of this task on - December 2019. The RECLAIM partners will discuss cross-fertilisation and the implementation of at least one joint activity, aiming at maximising the projects impact in common areas, strengthening the Factories of the Future community and supporting the European Factories of the Future Research Association (EFFRA).

RECLAIM already identified its sister project, the further project funded under the same call topic of the Horizon 2020 research and innovation programme of the European Commission: [DT-FOF-06-2019 - Refurbishment and re-manufacturing of large industrial equipment \(IA\)](#). The project is called [LEVEL-UP](#) (Grant Agreement No. 869991) and is about Protocols and Strategies for extending the useful Life of major capital investments and Large Industrial Equipment. LEVEL-UP is coordinated by the research organization AIMEN from Spain and will be demonstrated in 7 demonstration sites from different sectors together with 31 further consortium partners. LEVEL-UP started in October 2019 like RECLAIM and will last six months more than RECLAIM until end of September 2023, which still gives much time for discussing and finding synergies. Direct contact is already established via common partners; discussion will be started from January 2020 on.

RECLAIM will further connect with main multipliers, such as national industrial clusters and technology platforms, in order to present RECLAIM knowledge or results and benefit from their wider communities to multiply dissemination efforts. This will happen in the frame of meetings or presentations at primary events of these multipliers, such as “Made in Europe Partnership Event” or “Industrial Technologies 2020 - Transition to a Sustainable Prosperity” co-organised by EFFRA.

An initial list of relevant projects and multiplier organisations, as well as primary events from these multipliers, is currently being compiled from the proposal phase of RECLAIM. This list will be circulated within the RECLAIM consortium at the beginning of 2020 for internal update and internal strategic planning of the contacts. In order to respect personal data privacy, this list will only entail names and details about projects and organisations, not individuals.

Webinars & tutorials

Various training opportunities will be organised to support industries, SMEs, entrepreneurs and end-users via hackathons lead by FEUP. At least one hackathon will be hosted after M26, end of initial execution of the trials in WP7 and together with the partners, 6 webinars and 4 training opportunities will be targeted.





The project will also try to piggyback on established meet-ups and networking events to make sure emerging markets will benefit from RECLAIM insights, test usability and see how the solutions work. FEUP will also contribute to the promotion of RECLAIM with a closing event open to the public at the European Parliament, which will present results and outcomes of the project to policymakers. This will be a vital opportunity to raise the profile of RECLAIM at its conclusion and present the final results to a prestigious audience from the European institutions.

Final event

A **final workshop** will be organised by FEUP and project partners in conjunction with a relevant International or European event concerning Open Innovation and Collaborative Engineering to illustrate the overall outcomes of the project.

The workshop will target business and IT communities of the European manufacturing industry as well as the Fab-Lab and Makers domains, to present the legacy of the project and its plans for further developments.

The event will be a culmination and showcase for all the content, insights, videos and materials generated by RECLAIM, as well as a spring board for future commercial ventures.

2.6 Monitoring activities

A range of tools will be applied to keep the dissemination and communication record of the project such as detailed analytics for web statistics, number of uptakes from multiplier platforms, and specific tools for measuring social media outreach.

As RECLAIM aims to distribute content and engage on numerous platforms, tracking data where possible is important to evaluate actions and impact. But capturing the overall footprint and impact of RECLAIM across multiple countries is a difficult task. Where media is 'shared' and 'owned' by the project - such as articles, blogs, twitter, LinkedIn and website - data and analytics are much easier to track and analyse. However, knowing when a journalist, video news channel or even scientific publisher has cited RECLAIM ('earned' media) is more difficult to achieve.



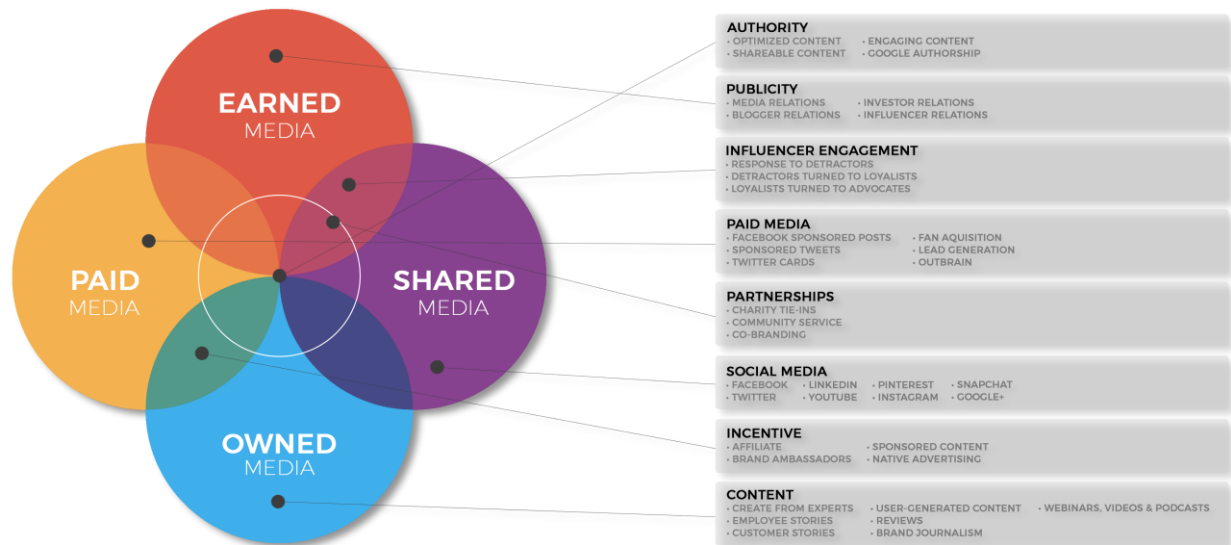


Figure 16 - RECLAIM owned, shared, earned media examples

The project will use a variety of sources to try and achieve the best possible assessment and understanding about how and when audiences receive and interact with our messages and content. Web and social media monitoring are how we aim to achieve this.

Web monitoring

Web monitoring refers to the process of testing and verifying interaction of end-users with websites, web applications and social media accounts. It is a critical process since it provides information regarding uptime and downtime and overall performance and response. For the NextGen website, it will be monitored not only regarding common metrics but also in order to register the total number of sessions during different project periods. It is also interesting to investigate the top locations to gain perspective of the project's global impact. Overall, the most interesting quantities to be monitored are:

- Total number of visits
- Average session and visit duration
- Number of frequent & one-time visitors
- Visiting prime time
- Visitors' location

Internally, ESCI will monitor these on a monthly basis and share in detail with the consortium at project meetings. Additional monitoring frequency can be done around specific events, campaign actions or local demonstration site initiatives.



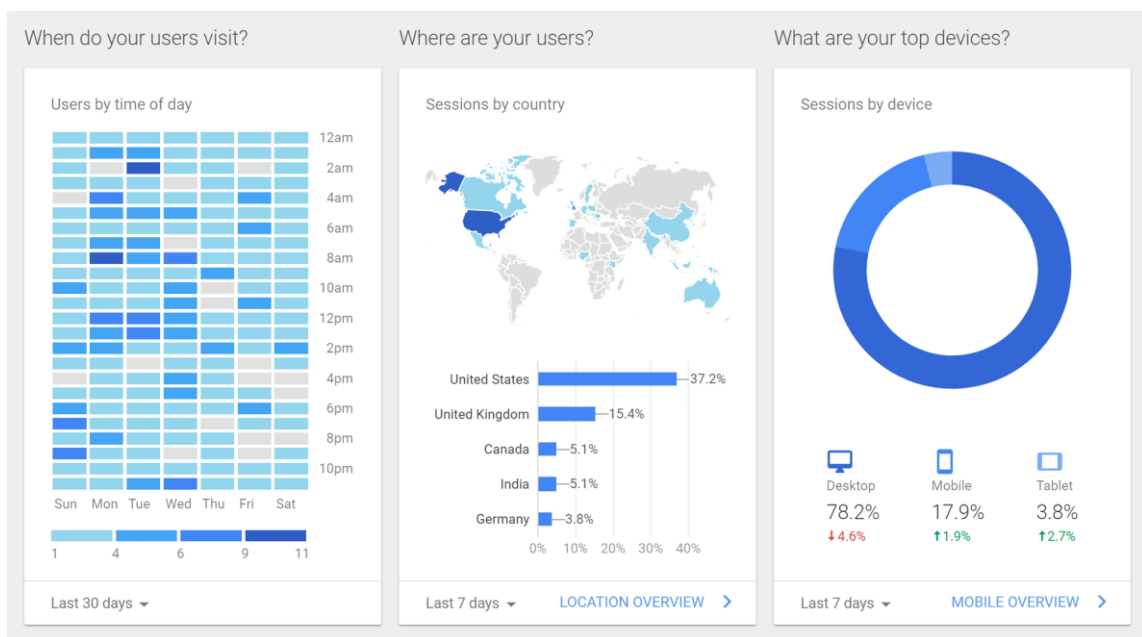


Figure 17 - Google analytics Word Press plugin sample

Social media monitoring

In a similar way, the social media will be monitored as a way to determine the volume and sentiment of online interaction. Many kinds of data are accumulated during the acquisition process, from simple information as statistics on likes, followers, re-tweets etc. to more complex such as comments, downloads etc. LinkedIn, Facebook, YouTube and Twitter accounts will be monitored for that purpose in order to identify their overall impact on different target groups.

Social media monitoring is often referred to as SMMS (Social Media Management Software), which is an application that facilitates successful engagement in social media across different communication channels. It monitors inbound and outbound conversations and evaluates the usefulness of a social media presence.

For RECLAIM, ESCI will use a combination of analytic tools embedded in each platform and a central client called Digimind. These analytics will enable ESCI to assess, fine tune and adjust on going actions and provide analysis for deliverables 9.1 and 9.4.

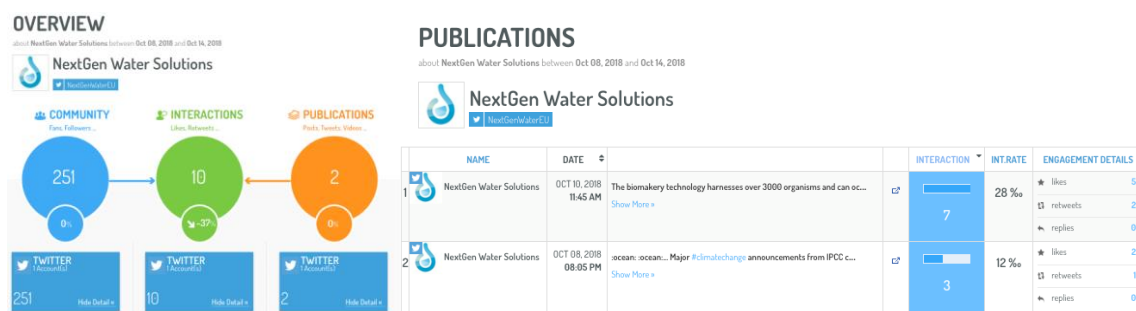


Figure 18 - Digimind





Update engagement ⓘ Viewing 1 - 10 of 10 Show: 10 ▼

Update name	Date	Impressions	Clicks	Video views	CTR	Social Actions	Engagement
Koningshoeven NextGen All followers	10/11/2018	93	-	0	-	5	5.38%
Registration for NEWFERT & PHORWÄRTS JOINT EVENT ... All followers	10/9/2018	90	2	0	2.22%	1	3.33%
Water experts from Catalonia, Berlin & beyond... All followers	10/3/2018	267	21	0	7.87%	11	11.99%
Background media All followers	9/18/2018	94	6	0	6.38%	3	9.57%
Our mission: to challenge embedded thinking &... All followers	9/13/2018	740	711	0	96.08%	12	97.7%

Figure 19 - LinkedIn

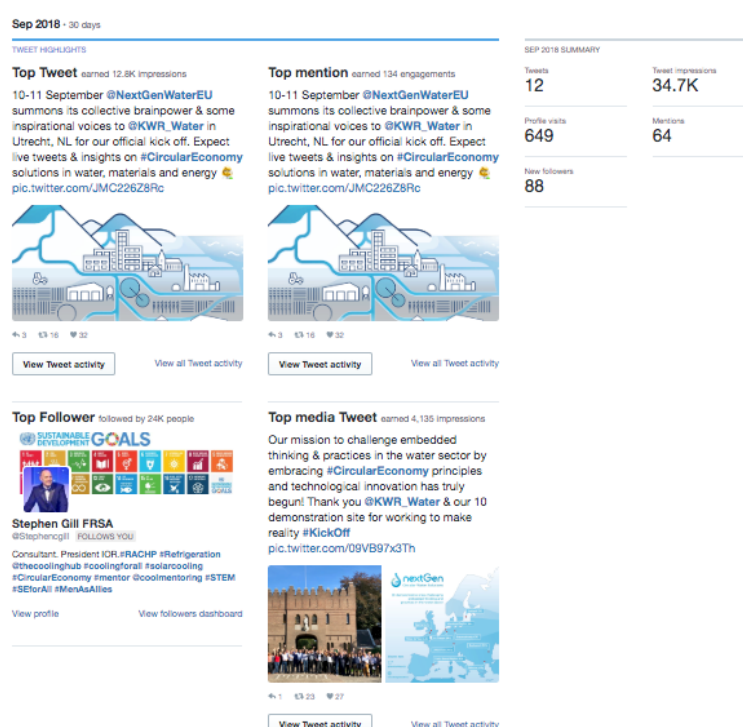


Figure 20 - Digimind, LinkedIn and twitter analytics insights

Publications and events reporting

A regular reporting of past events and actions, plus upcoming highlights for the project and within each demo site will be conducted twice a year. Regular meetings of key WP9 contacts will serve to update this and discuss actions to amplify and support a publication or event.

ESCI and key WP9 partners FEUP & SEZ will request a formal input from partners about their communication and dissemination activities every six months and make available to all in the collective file sharing. More important events will also be a source of interviews, articles, news releases, social media activity and more. A bi-annual conference call dedicated to following WP9 actions and responsibilities will be held and ad hoc sessions at project meetings.

This will add to D9.4 Report on Communication and Dissemination Activities (M18, M42).





Conclusion

RECLAIM is off to a good start, with social media, video, website and first journalistic articles already in production before end of M3. ESCI - together with key partners FEUP, SEZ and other WP9 stakeholders - will try to keep this momentum going.

The tools, resources and ideas are in place to maintain a healthy output during the first 18 months of the project. This is traditionally a difficult phase, with few tangible outcomes, technical publications and major visible advances. Here, we will focus on the context, process and our journey towards digital retrofitting; looking to gain as much awareness as possible before we can activate these audiences with a compelling set of physical, decision-making and user solutions.

Our only concern is the relatively niche online interest and forums available for RECLAIM to assert itself. Social media and online content are essential, but expectations about numbers and media impact must be realistic. RECLAIM messaging has made particular effort to hook digital retrofitting into bigger conversations and relate the work to issues in the spotlight.

Leveraging all our collective contacts in Innovation Communities and European business networks will also be essential to overcoming this and our mid-long-term impact.

December 2019

