





# Innovation

For OMV, innovation is the development of new technologies and products with the aim of reducing our impact on the environment, increasing efficiency, developing new business opportunities, and achieving our main goal of reducing the carbon intensity of our operations and product portfolio. OMV will invest EUR 500 mn in innovative energy solutions by 2025.

**Key Figures** 

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100 t

post-consumer plastic transformed into synthetic oil 18%

of R&D into low-carbon solutions

21 mn

EUR in sustainability innovations projects in Downstream



# Innovation management

The Group's research and development (R&D) expenses increased from EUR 40 mn in 2018 to EUR 49 mn in 2019. Out of total R&D expenses in 2019, EUR 8.945 mn (or 18%) was attributable to low-carbon solutions, such as hydrogen, advanced fuels, Co-Processing, and other Downstream innovations.

In fulfilling our purpose of providing "The energy for a better life," OMV actively explores new solutions and technologies for delivering affordable and carbon-efficient products in a responsible way. At the same time, introducing innovative solutions to our business means seizing the opportunity for more efficient production and expansion to new market areas. This strengthens our economic resilience in line with developments in the energy sector.

The purpose of innovation at OMV is to make operations more efficient, to minimize environmental impacts, and to provide cost-efficient solutions to our customers and society. OMV has clustered its innovation activities in the following areas: biogenic oil Co-Processing, circular economy, and hydrogen. Beyond this, we focus on digitalization and optimized drilling, production, and reserves. Each innovation area is described below.

OMV collaborates globally with universities<sup>28</sup>, research institutes as well as with industry partners and relevant initiatives.

# For example, OMV cooperates with various research institutions in the following areas:

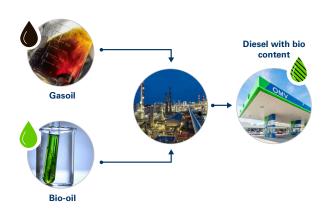
- Hydrothermal liquefaction of biomass waste to bio-oil (with University of Leoben)
- Fast pyrolysis of biomass waste to bio-oil (Europeanfunded research project)
- Conversion of CO<sub>2</sub> to alcohols with microorganisms (University of Technology Vienna)
- Photo reforming of water and CO<sub>2</sub> (University of Cambridge, Christian Doppler Institute)
- CO<sub>2</sub> reforming (K1-MET and University of Leoben)
- Storing and utilizing sustainable electric energy via synthetic e-fuels or chemical products (through a partnership within the German-funded Kopernikus project)



# Biogenic oil co-processing

OMV uses new technologies to increase the quality and stability of fuels with biogenic components through what is known as Co-Processing. Co-Processing involves introducing biogenic feedstock during the fuel refining process instead of the conventional method of blending biogenic components into fuel after production. This concept allows OMV's existing refineries to produce transportation fuels from various types of biogenic feedstock, such as domestic rapeseed oil, sunflower oil, used cooking oil, or algae oil. The high degree of integration within OMV refineries reduces greenhouse gas emissions from Co-Processing by up to 85% compared with the EU standard for similar finishing steps for biofuels.

# **Co-Processing**



In 2016, OMV successfully conducted the first field trial of Co-Processing using rapeseed oil and obtained certification in accordance with the REDcert standard, an EUrecognized system for the certification of sustainable biomass. OMV continues to implement Co-Processing technology, and by 2025, the Company aims to co-process approximately 200,000 t of sustainable feedstock per year, depending on future legislation.





Unlike conventional biofuels, advanced fuels do not compete with food production. OMV also researches various

advanced fuel technologies that are mostly in a research and development stage with the aim of future scale-up.



Sustainability Strategy 2025 target

Raise the share of sustainable feedstock co-processed in the refineries to ~200,000 t per year by 2025

Status 2019

- Process Design Package finalized for Schwechat refinery
- Process studies finalized for Petrobrazi refinery

### Action plan to achieve the target



For purposes of gaining further experience and rolling out Co-Processing at OMV Petrom, additional test runs are planned at the Petrobrazi refinery in Romania in 2020 (3,000 t of biogenic feedstock), to be accompanied by final product quality assurance tests in the laboratory.

# **Circular economy**

There is a growing consensus on the need for a circular economy to preserve the environment, along with legal incentives, such as the Circular Economy Package of the European Commission, which aims to increase plastics recycling rates and minimize plastic leakage into the environment. OMV recognizes the environmental footprint of petrochemicals and assumes its responsibility for petrochemicals value chain impacts throughout their lifespan. Despite the current drawbacks of the plastics economy, plastics are part of the solution to a number of challenges facing our society. For example, light and innovative materials in cars and planes reduce fuel consumption and cut CO<sub>2</sub> emissions. Biocompatible plastic materials enable medical innovation and save human lives. It is OMV's ambition to strengthen its European downstream position through a shift to higher-value-added products, such as petrochemical products. This move, in combination with recycling of post-consumer plastics, is an important way to make better use of valuable natural resources.

OMV provides petrochemical feedstock to chemical companies and uses plastic waste as feedstock for the  $\text{ReOil}^{\textcircled{B}}$  plant.

OMV also directly interacts with Borealis and other companies through the platform EverMinds<sup>®</sup> for circular-economy-related activities.<sup>29</sup> In October 2017, Borealis launched a joint initiative called STOP to eliminate leakage of plastics into the ocean, increase plastics recycling, and support the wider systemic changes required for a circular plastics economy. The first project started in Indonesia and is intended to improve the ways plastics are handled in one of the country's most polluted areas.

OMV also implements initiatives directed toward the engagement of local stakeholders in the topic of the circular economy. The Company is also involved in two community investment projects focused on the circular plastics economy, which started in Romania in 2019: "Recycling Laboratory" and #noplasticwaste (for further details, see Community Relations and Development).

# ReOil<sup>®</sup> – circular economy project

OMV has been exploring the potential for utilizing postconsumer plastics – polyethylene, polypropylene, and polystyrene – since 2011. The Austrian Research Promotion Agency has also contributed with subsidies covering part of the project investment. The first test facility was launched in 2013. In 2018, the next-level test facility – the ReOil<sup>®</sup> pilot plant – began fully refinery-integrated operation with a processing capacity of up to 100 kg per hour and production capacity of up to 100 liters of synthetic crude per hour.

The crude is then further processed at the Schwechat refinery into fuel products or base materials for the plastics industry. This process creates a closed loop ("the circular economy"), where post-consumer plastics are used to





create value-added products, thereby reducing dependence on natural resources and lowering carbon intensity as compared to standard oil processing. This innovative chemical recycling technology closes the loop of post-consumer plastics recycling. Substituting crude oil with postconsumer plastics is estimated to lead to 45% lower CO<sub>2</sub> emissions in the use of this product and 20% lower energy demand per t of the product.<sup>30</sup>

# **Chemical recycling**



OMV holds the patent for this chemical recycling process in Europe, the US, Russia, Australia, Japan, India, China, and other countries.

In 2019, OMV worked on developing the necessary technical parameters for a further scale-up and initiated the engineering process to develop a ReOil<sup>®</sup> demo plant with a post-consumer plastic feedstock capacity of 16,000 to 20,000 t per year.

OMV aims to develop ReOil<sup>®</sup> into a commercially viable, industrial-scale recycling technology with a processing capacity of approximately 200,000 t of used plastics per year by 2025.

OMV has also signed a memorandum of understanding (MoU) with ADNOC for the establishment of a joint working group to assess the feasibility of a scalable ReOil<sup>®</sup> plant in the United Arab Emirates.



 Sustainability Strategy 2025 target
 Develop ReOil<sup>®</sup> into a commercially viable, industrial-scale process (unit size of ~200,000 t per year)

 Status 2019
 • 100 t of post-consumer plastics transformed into synthetic crude

 • 40 days of continued production at the ReOil<sup>®</sup> plant

 Action plan to achieve the target

 Image: Plant Plant Plant to achieve the target

 Image: Plant Plant

 2022: demo plant with a post-consumer plastic feedstock capacity of 16,000 to 20,000 t per year



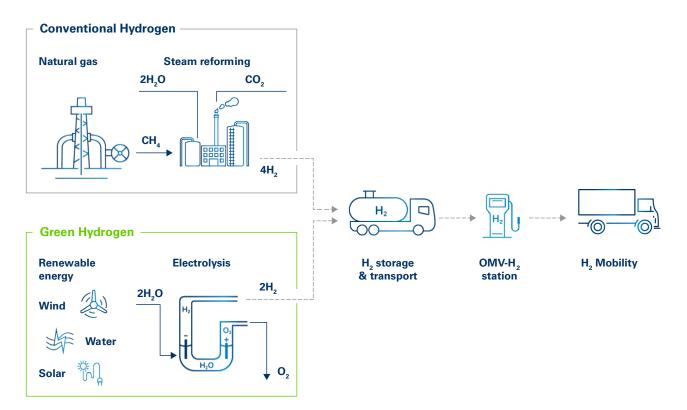


# Hydrogen

We are working to advance and optimize the entire energy value chain with sustainable hydrogen. In conventional hydrocarbon-based hydrogen production, we are looking into ways to prevent CO<sub>2</sub> produced in the steam-reforming process from being expelled as emissions. Instead, we aim to separate it and subject it to further chemical processing, for example, for use in producing alcohols that are then turned into fuel. Another highly promising alternative is

splitting natural gas into hydrogen and coke with the pyrolysis method, which uses lower amounts of energy compared to electrolysis with water. We also plan to produce green hydrogen, which involves electrolysis using sustainable energy sources, such as wind power. In addition to green hydrogen, carbon-neutral or lower-carbon hydrogen from the two methods outlined could be an important building block in meeting our targets with respect to reducing CO<sub>2</sub> emissions.

# Hydrogen production



OMV is collaborating with several partners on the UpHy project involving the production of hydrogen for use in the mobility sector and in the refining process. Options for using green hydrogen to hydrogenate CO<sub>2</sub>, for reducing carbon emissions from industrial facilities and for producing synthetic fuels and chemicals (power-to-X) are also being evaluated. For more details on hydrogen mobility, see Focus on future mobility.

# Innovation in drilling, production and reserves

Optimizing drilling and production processes prolongs the lifetime of hydrocarbon reserves, thus increasing production efficiency and reducing the impact on the environ-

ment. OMV continuously works on optimizing the amount of hydrocarbons that can be extracted from an oil reservoir (recovery rate) and on extending the reliability of facilities and materials.

While the international average recovery rate for crude oil is about 40%, OMV succeeded in pushing recovery rates above 55% in the super-mature Matzen field in Austria by using water injection. OMV is among the global front runners in terms of achieving high recovery rates in mature fields. By 2025, OMV aims to increase the amount of oil that can be extracted from selected fields in Central and Eastern Europe by 5 to 15 percentage points, making our Company a leader in efficient production in the region.





In 2012, OMV started injecting viscous saltwater to achieve higher recovery rates in a pilot project in the Matzen area. This launched our Enhanced Oil Recovery (EOR) activities and paved the way to attaining the strategic goal of further increasing the recovery rate. In total, 300,000 bbl of incremental oil were produced by the end of 2019. Oil rates could be significantly increased compared to conventional produced saltwater re-injection. In 2019, OMV made further progress in rolling out EOR projects in various fields in Austria and Romania.

OMV has made significant progress in developing new technologies and improving the operational performance of produced water treatment processes. In a series of field pilots targeting optimum produced saltwater quality for reinjection, OMV was able to identify innovative flotation and filtration technologies which can also effectively treat challenging emulsions.

Furthermore, OMV is investigating the possibilities for capturing CO<sub>2</sub> from its own assets and introducing it into former gas reservoirs to reduce OMV's carbon footprint (Carbon Capture and Storage (CCS) technology).

Extending the lifetime and reliability of facilities and materials ensures safe and efficient hydrocarbon production. Over the past 20 years, OMV has implemented extensive materials selection and corrosion management programs to ensure asset integrity, reduce safety risks, and minimize environmental impact. Equipping nearly 6,500 wells with artificial lift systems resulted in measurable reductions in power consumption and downtime of sucker rod pumps. Consequently, the number of well interventions decreased by 25% in Austria, reducing associated HSSE risks accordingly. OMV has investigated new nano-related technologies in the field of advanced coatings to extend material resistance, in the field of chemicals to inhibit paraffin deposits to optimize the production process, and in the field of adsorption systems to prevent soil and water contamination. OMV continues its cooperation with third-party research institutes on these technologies and is in the process of setting up programs together with other operators.

OMV works on extending the lifetime of operational facilities by mitigating abrasion and corrosion. To this end, cross-linked polyethylene pipes are inserted in tubing with a special polymer lining that was developed by OMV and patented in 16 countries. In addition, OMV has performed pilot tests on polymer flowlines under various operating conditions, which will allow us to cut costs and increase the efficiency of flowline replacement.

Sustainability Strategy 2025 target	Increase the recovery factor in the CEE region in selected fields by 5–15 percentage points by 2025 through innovative Enhanced Oil Recovery methods
Status 2019	<ul> <li>100 kboe additional production in pilot project in Austria in 2019</li> <li>We started a pilot EOR project in Romania, with the initial increase in the recovery rate and in production expected in 2020.</li> </ul>
Action plan to achieve the target 8 december action 8 december action	Finalize the pilot EOR project in Romania; further mature the full field implementation project in two Matzen field reser- voirs





# OMV's digital journey

Innovation and technology are a powerful engine that drives and enables sustainability. Digitalization presents us with opportunities to harvest value from connecting data sources across the Company and even beyond the Company. This, in turn, helps us deal with the higher business complexity and increased expectation levels of customers and other stakeholders. Data centralization and advanced analytics help make sense of production and logistical data to steer our production to higher yields, higher quality, and reduced losses. Customer data help us offer the best possible service to our customers. We believe both digital and technical innovation are vital for reducing both the environmental impact of our business and our carbon intensity, as innovation often means better asset utilization and process efficiencies as well as improved maintenance and early anomaly detection. It leads to optimized workloads and better business results and improves environmental and social performance. OMV's Digital Journey is our program to achieve these goals and pave the way toward digital leadership. It is composed of synergetic and orchestrated initiatives across the entire Group: Upstream, Downstream, and Corporate. OMV's digital ambition is to become a digital leader in core areas by adopting the latest digital technologies, such as the Industrial Internet of Things (IIoT), intelligent automation, machine learning, and video analytics.

Digital transformation at OMV is much more than applying and scaling technology – it is also about people and culture. Creating a digital mindset, building digital skills, and reshaping the talent landscape are essential parts of our Digital Journey. All of this is implemented using design thinking and agile ways of working and in close collaboration with technology partners, universities, and start-ups.

OUR PATH TO DIGITAL LEADERSHIP

# Three signposts guide OMV's Digital Journey:



# DIGITALIZE!

Creating business agility through smart investment choices that focus on highest impact on business and HSSE priorities.

# ACT!

Committed to develop an empowered, collaborative learning culture that enables each employee to help shape the energy future. Innovating at speed and scale by creating environments receptive to innovation and fostering an organization, skills, and mindset that are adaptive to digitalization while boosting internal innovation development efforts through open innovation methods and agile ways of working.

## ENABLE!

Common digital platforms forming the backbone of our digital core that enables us to break down data silos and use data across the Group. Applying technologies like SAP S/4HANA, cybersecurity, the cloud, hybrid integration, analytics, and data platforms builds a basis for increasing efficiency and enabling new business models.

While all three pillars are interconnected, the DIGITALIZE stream focuses more on the technology aspects, the ENABLE stream focuses on breaking data silos, and the ACT part specifically addresses our people skills and ways of working.



# **Digitalization in Corporate**

With the launch of Finance 4.0 in 2018, we started the Finance Division's journey toward a future-oriented, digitalized process and system landscape enabling integrated growth.

A strong midterm strategic focus for Finance is the implementation of the new SAP S/4HANA enterprise resource planning software. The goal is to increase business value by providing real-time digital and analytics functionalities based on harmonized data and processes. The implementation of SAP Ariba – the cloud-based solution covering all processes related to source-to-contract and purchase-topay – enables digital transformation in Procurement.

# **Paperless initiative at OMV Petrom**

OMV Petrom started the rollout of the Paperless initiative to minimize the use of paper for daily work activities. Goals of the initiative are twofold: to establish the culture of digital working as well as giving employees the necessary tools and skills to go paperless. Workshops and masterclasses informed employees about the value of digitaliz-

# **Digitalization in Upstream**

OMV aims to advance into the league of digital frontrunners in the Upstream industry. Digitalization helps optimize operations and processes for higher efficiency, improve HSSE performance, and increase profitability. At the same time, digital technologies and the resulting deployment of new capabilities will not just make OMV more attractive to new employees but will also open the door to new partnerships with operators and suppliers.

# Integrated Digital Twins from subsurface to facilities

This program focuses on subsurface-related matters ranging from exploration to development within OMV's supply chain. Multiple evergreen reservoir models will enable end-to-end value creation through informed decision-making under rigorous management of uncertainty. The aim is a unified ecosystem which will integrate workflows, technology, and data with personal knowledge, assisted by artificial intelligence. No search will be required for information and tools; instead, they are available anytime. The data is accessible through a personalized cockpit with all the decision-relevant information, so all employees can contribute to fast and effective decision-making.

For example, the Digital Rock project creates Digital Twins of real rocks with all their components in the micrometer range. The Digital Twins will be part of the high-performance computing (HPC) environment and deliver deep insight into our reservoir properties. Compared to traditional rock scanning, this yields fast results, uses less hazardous chemicals for laboratory measurements, and helps improve the quality of our exploration and development activities.

ation and its environmental benefits. Numerous other tools in the initiatives help reduce the use of paper, including the rollout of digital signatures and digital documentation storage. In addition to environmental benefits, implementation of the Paperless initiative enhances work efficiency as it builds the basis for automation and digitalization of administrative processes and reduces the risk of document loss.



Our digital roadmap consists of the following five lighthouses ranging from the business agility programs Digital Twins, Digital Oilfield, and Digital Rig to Digital Ways of Working and Digital Office of the Future. The roadmap contains more than 70 projects and use cases.

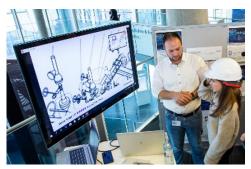




# **Real-time digital oilfield**

This program aims to expand the options for safer, greener, and more efficient operations through strategic integrated digital technology deployment. A recent example is a robotic drone that conducted routine condition inspections of the largest crude oil storage tanks in a fraction of the time and at lower costs, while completely eliminating the risk to human life when working at height and entering confined spaces. In addition, robotic crawlers with magnetic pads are currently being tested to perform paint blasting and reconditioning of external corrosion protection, thus eliminating the extreme risks linked to having humans perform this work.

Advanced Process Control systems are in the testing phase to implement an algorithm-based predictive model that helps the operators control and optimize the facilities at all times in order to operate at the most efficient operating point possible. This reduces internal consumption of energy, decreases the carbon footprint, and increases the efficiency of processing chemicals, thus optimizing production costs.



The Digital Worker (also called "remote operator") stream includes the technology for streaming high-quality images and information from the drilling and operational sites all over the wo

information from the drilling and operational sites all over the world to OMV experts. This enables them to provide the right support and decisions remotely without the need to travel long distances to safety-risk areas.

## **Digital rig of the future**

The RigUP program enables the custom design and construction of an automated robotic rig, featuring custom software and an innovatively powered drillpipe. RigUP aims to implement an unmanned rig floor as well as reliable high-speed data feeds and innovative rig sensors for effective and efficient remote well-construction monitoring. This will remove a persistent source of harm to personnel on the rig site, thus fulfilling OMV's Vision of "ZERO harm – NO losses."

New drilling technology that will come into force in 2020 will allow us to use less fuel per well due to faster drilling. At the same time, a smarter supply chain system between suppliers, warehouses, and the rigs will reduce traffic to the well site, leading to reduced  $CO_2$  and  $NO_x$  emissions. Increasing performance and optimizing the wells will require fewer workover operations to maintain production and thus will create a safer work environment.

## **Digital Ways of Working**

This lighthouse aims at building OMV Upstream in such a way that we are resilient to the market and always competitive at our core – maximizing our digitalization return will increase speed to maneuver.

Upstream's organization, team, and people will seize opportunities wherever they arise and be empowered to contribute to value creation in a sustainable manner. One focus area will be to enable our most valuable asset – our employees – to take Upstream's digital journey by developing digital competencies and skills. Collaboration with the Corporate Culture initiative (for more details, see Beyond technology – working differently) is embedded in this lighthouse to ensure that Upstream's front-runner vision includes the Group-wide Digital Journey.





#### **Digital Office of the Future**

Digitalization is based on data. This program therefore focuses on OMV's data backbone to create a digitalized OMV Upstream frontrunner organization. We are building a flexible and globally high-performance, secure infrastructure for our staff by using latest cloud and integration technologies, providing access to state-of-the-art integrated applications and quality-assured data and knowledge.

One example is the GeoCloud platform, which allows users to run geoscience applications that require large amounts of electricity and computing power to collaborate globally on projects and workflows. This has already been rolled out at eight out of ten OMV locations and allows 400 users to access 1.6 PB of geological data and 170 applications from any device around the world. In addition, GeoCloud provides the flexibility and scalability to quickly deploy a virtual office by improving the security of data and people exposed to high-risk regions. The GeoCloud application will be the basis for further projects, such as high-performance computing (HPC), which is crucial for obtaining data for machine learning and artificial intelligence methods to enable data-driven decision-making. The HPC environment on Microsoft Azure is currently set up to reduce simulation times and increase resolution by a factor of 10 each using a globally unlimited license model.

# Digitalization in Downstream

Digitalization initiatives in Downstream will generate new value in the selected focus areas of operational excellence, value chain integration, and customer experience. The Downstream Digitalization Roadmap for 2025 consists of 60+ initiatives to achieve process optimization, simplify work, extend our digital capabilities, lower costs, embrace new business opportunities, and further contribute to an innovative corporate culture.

#### **Digital terminal**

We are implementing a digital and automated end-to-end business process covering the entire operational cycle of tank farms. This entails harmonizing the IT landscape across all depots to increase the efficiency of the entire operational process, from loading activities to digital data processing in the terminal management system. Furthermore, mobile technologies have eliminated all paper-based processes, simplifying and making fuel loading safer. Embracing the Internet of Things approach, we have introduced a fully automated emergency monitoring and execution system with automated fire-extin-



guishing components, thus improving safety, security, and regulatory compliance.

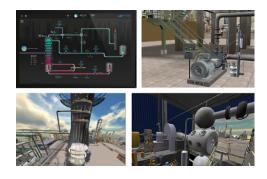




## Algorithms supporting gas traders

OMV GAS, which is authorized to trade in twelve EU gas markets, implemented an algorithmic trading tool to simultaneously monitor constantly changing order book activities related to the trading of gas contracts. Every event in the order books is read and stored in real time in a high-performance database, comprising around 400,000 data records. Data analytics tools combine other market information to search for patterns and optimize trading decisions. The system also helps close trades in milliseconds, while balancing fluctuations in gas supply and demand and optimizing gas transportation as well as gas storage capacities. Such automation reduces the workload, while optimizing the OMV GAS portfolio all day, every day.

#### Virtual training center



In addition to virtual 2D and 3D simulator classroom training aimed at ensuring optimal preparedness for unplanned or critical events, OMV distributes simulator training software with standard computers, thus enabling employees to train autonomously and according to requirements. This helps provide cost-effective trainings with high coverage across all refinery sites.

# Beyond technology - working differently

Digital transformation is a broad concept. Its success can be measured based on its predefined goals, which are understood differently by different organizations. Some organizations want to automate internal processes and workflows to improve efficiency and reduce costs. Others want to establish digital channels to reach their customers, while still others aim to give their workforce expertise and skills for working safely and efficiently. If we consider digital transformation as a measure for making our organization fit for the future, the indicators include:

- Developing leadership with a digital mindset: During a transformation, change occurs on every level. One of the indicators of a successful digital transformation is having the leaders with the right digital mindset and a clear vision and strategy, who are committed to the transformation.
- Adjusting the roles and responsibilities of the workforce in line with digital capabilities: One of the indicators of a successful digital transformation is an empowered workforce that embraces change and innovation and can adapt to new ways of working.

- Empowering the workforce to handle day-to-day change and innovation: One of the major outcomes of a digital transformation should be developing skills and talents across the organization. The workforce must not only acquire digital skills and adapt to new ways of working, but employee roles and responsibilities must also be transformed as a result of digital transformation.
- Establishing digital as the new norm in the organization: Digital should be established as the new norm in the organization including digital tools, processes, and communication channels as well as technology in operations and data-driven decision-making. Digital tools are needed for new working methods and are an important way to spread information and data across the organization and make it accessible for everyone.

# Empowering the workforce: creating a culture and environment receptive to innovation and change

In a digital world, now more than ever, our employees are at the heart of our business. Many things will be easier, but also new and different. This is why we want to nurture an innovation-friendly corporate culture, build skills in digital technologies and new ways of working, and foster collaboration. With this in mind, we set up #ACT, a portfolio of initiatives based on people, culture, and the organization:





- Adapting our culture and our ways of working
- Building digital capabilities
- Fostering open innovation

#### Adapting our culture and our ways of working

Building on our Foundation, we looked at what behaviors and ways of working we need to absorb in our culture to enable us to deal better and faster with the many changes in the digital world as well as in the environment, in mobility, and in society. We realized that we needed to leave behind some fears, silo thinking, and strong hierarchies to be able to respond to the changes in our environment. We are committed to developing an empowered, collaborative learning culture that enables each employee to help shape our energy future.

## **Building digital capabilities with the Digital Academy**

We set up a portfolio of initiatives to nurture an innovation-friendly corporate culture, build skills in digital technologies and new ways of working, and foster collaborations.

#### **Digital Academy**

The Digital Academy enables OMV staff to develop skills through learning and helps them embrace new ways of working and new technologies. It offers training courses to help OMV employees take part in lifelong learning and build strengths in capabilities needed to deliver <u>OMV's Digital Journey</u>.

The Digital Academy is accessed through our Learning Management System. It contains over 250 validated courses, the majority of which are online and available globally to every employee at every level. The Academy helps find relevant trainings by identifying various topic areas depending on the employee's core role and know-ledge needs at OMV. The content was developed by a cross-functional team from Upstream, Downstream, and Corporate. In the first two weeks of operation, OMV colleagues around the globe watched 7,400 learning videos.

# The agile approach and collaboration with start-ups

In 2019, we organized our first International Digital Intrapreneur challenge. Over 100 employees submitted ideas that would contribute to innovation and business agility. The winning pitch, the RD4 Predictive Heat Exchanger Schedule, wowed the jury for both its financial and environmental benefit – it is expected to generate significant cost savings and save up to 15,000 t of CO<sub>2</sub> emissions per year.

Ensuring a fresh supply of ideas, perspectives, and cuttingedge technologies is a central element of innovation and digitalization. We can often greatly benefit from new ideas by young companies. To learn from them, OMV engages in

Open innovation facts & figures

**External hackathons & startup contests** 

>120 international start-ups evaluated and supported logy companies or start-ups. One such example is Innovation2Company, an initiative organized by the Vienna Economic Chamber that focused on the search for innovative solutions in the area of predictive maintenance. The winning start-up, ZeitDice, was awarded an innovation cash prize and a pilot with OMV. ZeitDice is a Canadian start-up that provides a cloud-based computer vision platform and smart time lapse cameras that extract measurable data from images. In Romania we have been collaborating for four years with Innovation Labs, a nationwide start-up development competition, which has ultimately resulted in several start-up collaborations.

dialogue and cooperation with young and aspiring techno-

Organizational transformation

>200 people trained in agile methodologies





**OMV Intrapreneur Challenge** 

>80 ideas pitched 12 ideas implemented In-house digital summits - masterclasses

>15 at OMV Petrom and OMV

masterclass executive

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