

# 2021 ANNUAL FINANCIAL STATEMENT





# CONTENTS

<b>4</b>	<b>Shareholders, Corporate Bodies</b>
<b>6</b>	<b>Structure Report and Organization Chart</b>
<b>10</b>	<b>Reports from the Centers</b>
10	Energy
12	Health & Bioresources
14	Digital Safety & Security
16	Vision, Automation & Control
18	Low-Emission Transport
20	Technology Experience
22	Innovation Systems & Policy
23	Seibersdorf Labor GmbH
23	Nuclear Engineering Seibersdorf GmbH
<b>24</b>	<b>Business Performance 2021</b>
24	Earnings Position
25	Expense Structure and Result
26	Incoming Orders
27	Order Level
28	Work in Progress
29	Investments
29	Liquidity and Financial Position
30	Personnel
<b>31</b>	<b>Report on Measures in Sustainability Management</b>
<b>34</b>	<b>Report on the Significant Risks and Uncertainties</b>
34	Risk Management and Internal Control System
35	Risk Strategy
36	Risk Areas
39	Description of Key Features of the Internal Control and Risk Management System – Accounting Process
<b>40</b>	<b>Internal Audit Department</b>
<b>41</b>	<b>Forecast Report / Performance Indicators</b>
41	Strategic Development
42	Indicators for Scientific Success Measurement
<b>43</b>	<b>Events After the Balance Sheet Date</b>
<b>45</b>	<b>Balance Sheets</b>
46	Group Consolidated Balance Sheet
48	Group Consolidated Profit and Loss Statement

# SHAREHOLDERS

## **REPUBLIC OF AUSTRIA**

Federal Ministry for Climate Action, Environment, Energy, Mobility,  
Innovation and Technology (BMK) with 50.46%

## **ASSOCIATION FOR THE PROMOTION OF RESEARCH AND INNOVATION**

(Federation of Austrian Industries)  
with 49.54%

# CORPORATE BODIES

## MANAGEMENT

DI Anton PLIMON  
Prof. Dr. Wolfgang KNOLL

### Authorized Officers

DI Dr. Christian CHIMANI  
Prof.in Dr.in Elke GUENTHER  
DI Dr. Wolfgang HRIBERNIK  
Mag.a Beatrice KORNELIS, LL.M.  
DI Helmut LEOPOLD  
Mag. Alexander SVEJKOVSKY  
Univ.-Prof. Dr. Manfred TSCHELIGI  
DI Andreas VRABL  
DI Dr. Matthias WEBER, MA

## SUPERVISORY BOARD

### Chairman

Dkfm. Dr. Hannes ANDROSCH until 6 May 2021  
DI Dr. Peter SCHWAB, MBA as of 6 May 2021

### Deputy Chairpersons

Mag.a Isabella MERAN-WALDSTEIN  
DI<sup>in</sup> Katja SCHECHTNER, MSc as of 6 May 2021  
Mag. Christian WEISSENBURGER until 6 May 2021

### Supervisory Board

DI Dr. Franz Michael ANDROSCH until 6 May 2021  
Christian GÄRTNER, MSc  
Mag.a Hanna GLATZ  
Thomas HUGER until 6 May 2021  
Mag. Andrew LINDLEY  
DI Harald LOOS  
Mag. Dr. Rupert PICHLER as of 6 May 2021  
DI Mag. Wolfgang PELL  
Dr. Klaus PSEINER  
Dr.in Birgit RATZER  
Dr.in Ursula SAUER  
Mag. Anton SCHANTL  
Henriette SPYRA, MA, BA  
Mag.a Elisabeth MRAKOTSKY-KOLM as of 6 May 2021  
DI<sup>in</sup> Christina TAMAS  
DI (FH) Hubert UMSCHADEN

# STRUCTURE REPORT AND ORGANIZATION CHART

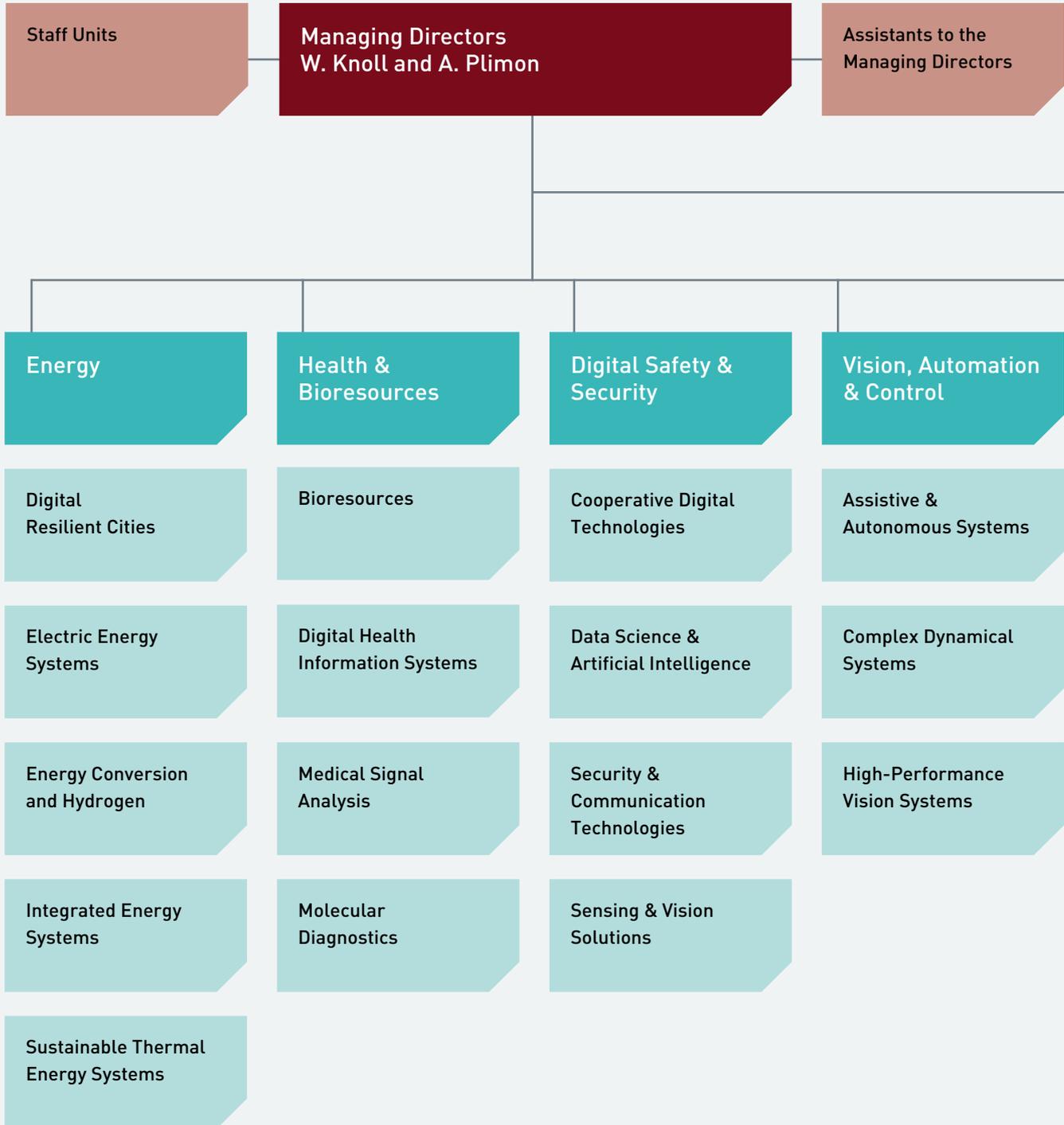
The reporting year 2021 marked the first year of the strategy period 2021–2023: "AIT Strategy 2021+ Research and Innovation for a Sustainable and Competitive Position in the Digital Age", which was developed to coincide with the first funding period of the Research Funding Act (FoFinaG).

According to this strategy, the organizational setup from 2021 onwards now shows seven Centers, instead of eight Centers as in previous years. The activities of the former Center for Mobility have been transferred. In concrete terms, this meant that the Transport Infrastructure Technologies Competence Unit was transferred to the Center for Low-Emission Transport, where it will complement the research portfolio. The research topics of the Dynamic Transportation Systems Unit were merged with those of the Digital Resilient Cities Competence Unit of the Center for Energy. This gave rise to a strong group of more than 60 researchers to work on the topic of "Transformation and Development of Urban Spaces of the Future".

Another organizational change implemented during the reporting year 2021 was the closure of the Competence Unit HBS – Biomedical Systems of the Center Health & Bioresources. Individual topics of the former Competence Unit were transferred to other Competence Units of the Center. In the case of the topic of pulse wave analysis, this formed the basis for the creation of the new Medical Signal Analysis Competence Unit. Conversely, individual elements of the former HBS research portfolio have been removed (e.g. biofunctionalization of materials). The current organizational chart therefore shows the AIT structure as divided into seven Centers, as well as the new structure of the Center for Health & Bioresources.

# AIT ORGANIZATION CHART

January 2022





**Finance & Controlling**

**Legal & HR Services**

**Low-Emission Transport**

**Technology Experience**

**Innovation Systems & Policy**

Battery Technologies

Experience Contexts and Tools

Biosensor Technologies

Electric Vehicle Technologies

Experience Business Transformation

Nuclear Engineering Seibersdorf GmbH

Transportation Infrastructure Technologies

Seibersdorf Labor GmbH

LKR Leichtmetall-kompetenzzentrum Ranshofen GmbH

- Center
- Competence Unit
- Legal Entity

- Administrative Area
- Administrative Unit

# REPORTS FROM THE CENTERS

## ENERGY

In 2021, the Center for Energy was able to implement important elements of the new Center strategy and substantially strengthen its strategic positioning. The integration of mobility competencies into the Center, which was launched in January 2021, has continued to make good progress. The focus here is clearly on a mission-oriented approach to decarbonisation and digitisation for the mobility and transport sector, both in the context of climate-resilient urban development as well as for sustainable logistics and freight transport. In the thematic field of Digital Resilient Cities, the Center achieved an extremely successful and visible participation at the Expo 2020 in Dubai with the City Intelligence Lab. Digital urban planning know-how was on display in the iLab of the Austria Pavilion and workshops for international stakeholders showed how cities can be planned with innovative technologies taking the aspects of climate change into account. A strong presence at various online and trade events (e.g. Heat Pump Summit, CIGRE SEERC Conference) has further increased the Center's visibility.

The new topic area of hydrogen is well anchored in the Center, both on the technological side and in the systemic context, and project development is in a growth phase together with the strategic partner HyCentA. Here, the Center is also heavily involved in programme work at the European level in the new EU partnership Clean Hydrogen. In general, the Center's relevant thematic networks could be well expanded and intensified. At the international level in particular, the Center is a key partner of the BMK and the Climate Fund when it comes to Austria's participation in the Mission Innovation missions (Net-Zero Industries, Green Powered Future). In the innovation network New Energy for Industry (NEFI), the project landscape with the objective of "decarbonising industry" could be significantly further developed under the scientific leadership of the Center. In 2021, five new projects with AIT participation were launched, and further funding decisions are expected in early 2022.

A key added value in the innovation network lies in the work of an industrial board, whereby a strategic innovation process is implemented operationally together with important industry stakeholders. As a result, the concrete needs of the industry (technologies, systems, framework conditions) on the transformation path to climate neutrality are addressed in a targeted manner.

With the spin-off VIRIDAD, the Center has succeeded in taking an important step in terms of exploitation in order to achieve a strategic positioning on the market in the field of sustainable finance. The core competence of the new company is the valuation of investments and economic activities in accordance with the EU taxonomy using a digital platform, supported by the Center's expert knowledge. As far as the further development of the research infrastructure is concerned, the implementation of the DC Lab as an extension of the existing infrastructure for electrical energy systems marked a significant milestone in 2021. With the expansion of the DC labs, the Center for Energy is creating an efficient and powerful development and validation platform for manufacturers of DC components and systems. The lab was commissioned in December 2021 and offers the possibility to test DC systems along with battery systems, e-charging infrastructure, heat pumps or electrolyzers. With a total investment of €3.125 million for the new laboratory, the Center for Energy is in a key position in Europe to substantially advance DC innovations for the industry.

### Portfolio development highlights 2021

In the area of co-financed research, the project "Industry for Redispatch (I4RD)" was launched in 2021 as a flagship project of the Integrated Energy Systems Competence Unit. An increasing need for redispatch is mainly due to the integration of fluctuating renewable generation and the progressive integration of the European electricity grids, the costs for redispatch in Austria having significantly increased in recent years. In this context, the provision of flexibility at distribution network level has high potential for redispatch. The goal of the project is to enable industrial and large customers to provide redispatch services to the transmission grid operator, taking into account the network constraints of the distribution grid operators. With the involvement of all relevant stakeholders in the innovation process, the potential of the industry as a redispatch service provider is thus being investigated and demonstrated for the first time here. In the thematic field of high-temperature heat pumps, an important European Horizon 2020 project was successfully completed in 2021. The "Dryficiency" project, led by the Center for Energy, aimed to make the production of energy-intensive companies in Europe more energy-efficient while also reducing their need for fossil fuels. Three high-temperature compression heat pumps were developed for the utilization of idle waste heat flows in production processes with a heat demand of up to 160°C. The technologies were successfully validated under real production conditions in drying processes of three leading European production companies from the food industry, brick industry, and waste management.

On the contract research side, the close cooperation with a Swedish transmission grid operator was successfully continued in 2021. Among other things, the Center was tasked with conducting an analysis of the Swedish FCR-N market design based on an agent-based model with a focus on the possible introduction of asymmetric "bidding." Along the same lines, projects for the scientifically based development of load

profiles and development scenarios for the expected market penetration of future technologies, such as e-mobility, battery storage, or heat pumps, were also successfully implemented last year with the Austrian transmission grid operator APG. In the field of power electronics, the commercial exploitation of the AIT Smart Grid Converter (ASGC) as a flexible converter platform was realized in 2021 based on an attractive licensing model for a technology provider for energy storage solutions. Important progress was also made in contract research on the topic of hydrogen. A case in point: the Center was commissioned to conduct a feasibility study on the decarbonisation of Austrian lake shipping using hydrogen technologies. The Digital Resilient Cities Competence Unit saw the launch of a major contract project from the European Commission in 2021 – the SCALE project (Support for the Smart Cities and Communities Lighthouse Project Group). The aim of the project is to bundle and analyze the results and findings of the Smart Cities Lighthouse projects, which have been funded in the expiring Horizon 2020 in recent years, and to prepare them for roll-out at the European level in workshops, expert group meetings and specialist events.

This project portfolio is further expanded by various high-quality study projects for the public sector (e.g. BMK, Climate Fund), including, among others, the contribution of Austrian industrial policy to climate neutrality 2040, where the strong systemic and technological competence of the Center in the field of industrial energy systems is drawn upon.

# REPORTS FROM THE CENTERS

## HEALTH & BIORESOURCES

The Center for Health & Bioresources is developing solutions for the health system focusing on prevention, diagnostics, and therapy support, as well as in the field of bioeconomics to improve crops and microbial-based production systems. The Center holds core competencies in omics and sensor technologies, digital health applications as well as AI, modelling and simulation, and has extensive knowledge of regulatory requirements in the medical technology sector. The Center's scientific output yielded twelve patents issued and nine patents filed, nearly 95 publications in peer-reviewed journals with a total impact factor of 502, and 21 peer-reviewed conference publications. Furthermore, eleven dissertations were completed and another 14 diploma theses were supervised. With its membership in European public-private partnerships, the Center positions itself in innovation networks for faster market access of new products and services. Furthermore, the successful certification of our KITMED and ENCEVIS medical products in accordance with the European Medical Device Regulation (MDR), which has been in force since May 2021, illustrates the successful implementation of results from applied cutting-edge research into commercial exploitation. In addition, the Center has contributed the expertise of its molecular diagnostic laboratories in Vienna and Tulln for the development of a COVID-19 test, and with a capacity of several thousand COVID-19 tests per week, supports the health verification of AIT employees as well as external companies in the corona pandemic.

### Portfolio development highlights 2021

#### **Biopesticides to protect olive groves against pests**

As a particularly aggressive bacterial pest, *Xylella fastidiosa* increasingly threatens olive plantations and other tree species (e.g. almond trees) in the Mediterranean region and thus also the livelihoods of numerous plantation operators. In some cases, centuries-old and very valuable groves have already been destroyed e.g. in Italy, and more than 30,000 jobs have been lost in Puglia alone. The pest is transmitted by insects, and other than chemical pesticides to control the insects, there are currently no products on the market to control the spread of the pest. As part of a public-private partnership (BBI) between the agricultural industry and the European Commission, AIT is working with partners in the EU project BIOVEXO to develop new crop protection methods to contain both the spread of the harmful bacterium as well as of the transmitting insects. Protective methods include microorganisms that colonise plants and build up systemic resistance; other methods include microorganisms or plant extracts that show activity against the insects. In the process, AIT is developing the targeted application of selected microorganisms and is working out the mechanisms of pest control. The most efficient methods will be applied and tested together with research institutions and farmers in Puglia (Italy) and Mallorca (Spain), two of the most affected regions in the EU. New, sustainable processes such as those being developed in BIOVEXO until they reach market maturity in 2025 provide sustainable protection against a devastating plant disease, thus preserving jobs as well as a historic landscape heritage without having a negative impact on natural biodiversity.

**Paradigm shift in the diagnosis of autoimmune diseases**

Autoimmune diseases represent an increasing burden on health systems worldwide and mainly in industrialised countries. These diseases are triggered by a malfunction of the immune system, which attacks the body's own cells, and are characterised by an enormous heterogeneity in terms of disease progression and response to targeted therapies. Biomarkers that can indicate response to therapy and control of disease progression represent important prerequisites for future precision medicine for autoimmune diseases. As part of a public-private partnership (IMI) between the pharmaceutical industry and the European Commission, and with the aim of overcoming the weaknesses and bottlenecks in the development of new drugs and therapies, AIT is developing a new, cross-disease approach with more than 20 partner organizations and a budget of EUR 32 million in the EU project IMMUNIVERSE. In specific terms, we are investigating the interplay between affected tissue and immune cells with regard to disease progression and therapy response using the example of two autoimmune diseases (ulcerative colitis, atopic dermatitis). AIT's goal within the project is to raise the clinical management of autoimmune diseases to a new standard. This is accomplished by improving diagnosis, providing relevant information on disease severity and progression early in the clinical course, and monitoring treatment through the use of non-invasive approaches. For this project, AIT will receive more than EUR 2 million in funds until 2024. The realization of the project goals may lead to an improvement in patient management in the field of autoimmune diseases in the future, increase patient well-being, and significantly reduce the socio-economic burden of these diseases.

# REPORTS FROM THE CENTERS

## DIGITAL SAFETY & SECURITY

In 2021, the Center for Digital Safety & Security was once again able to position itself as a strong innovation partner for reaching new global markets. In order to adapt its own research priorities to new market and technology trends, these have been adapted accordingly. Due to the rapidly advancing global digitisation which is marked by the comprehensive networking of people and machines as well as the development of new digital technologies such as Artificial Intelligence, the information and communication technologies and platforms required and used for this are playing a new central role. Secure and permanently available digital systems, data protection, and controllable digital technologies have evolved into an essential foundation for the use of digital systems as effective tools for solving many of our societal and economic problem areas.

This development strengthens the demand for the Center's central research topics in this area, such as cybersecurity, data encryption, testing and verification of software systems and new technology development methods (e.g. privacy and security by design). Here too, AIT is making an important contribution to an effective social discourse on the use of new digital technologies.

Moreover, global digitisation brings about new problem areas: New technological approaches are needed in both optical and wireless communication in order to be able to process the enormously high data volumes and implement highly reliable real-time communication for IoT and sensor networking. In addition, new technologies for computer systems are needed to achieve a significant reduction in the increasing energy consumption of digital systems. This turns focus topics of the Center in the area of Enabling Digital Technologies such as photonics, quantum technologies and wireless technologies of the next generation into important key areas for the industry and business location.

### Portfolio development highlights 2021

Building on the Center's successful international scientific track record in the field of next-generation wireless technologies, the new research focus "6G" was anchored

in the organisation and a new Principal Scientist was introduced during this process. The Center has thus taken on an important pioneering role in Austria with the goal of positioning itself internationally in this field and providing important technological expertise for industry in Austria.

In the field of quantum technologies, the Center was able to successfully demonstrate its global know-how and technology leadership with the focal area of "Quantum Communication and Quantum Encryption". As part of the EU strategy to achieve the highest possible data autonomy for EU society and industry, the EuroQCI programme is pursuing the development of an EU-wide infrastructure (fibre optic networks and satellites), realised by cutting-edge EU technology. The Center has successfully established itself in this EU infrastructure and industry development programme as a key technology supplier and know-how service provider for EU industry, ESA, and the EU Commission as well as national stakeholders from authorities and industry.

In the area of cybersecurity and dependable systems engineering, the Center has successfully researched and developed new methods and development tools in order to pursue security-by-design approaches in the area of safety-critical systems and to be able to reliably test and verify system developments. This forms an important foundation for ensuring highly secure, reliable digitisation in modern means of transport and critical infrastructures (energy generation and supply), as well as for effectively meeting new legal and regulatory requirements for secure system developments. The Center has already received several innovation awards for this (e.g., eAward, Digital Leader Award, Constantinus Award). In the course of collaborations with Austrian industrial companies and SMEs, this AIT technology was also presented as a "made in Austria" success story at the Dubai Expo 2020.

Furthermore, the Center was able to consolidate its function as an important infrastructure for the development of the national industrial and company location in the area of

cybersecurity. The KSÖ Cyber-Planspiel [cyber simulation game] 2021 with international involvement of the cybersecurity authorities from Germany and Switzerland was designed by AIT experts and implemented on a powerful, modern IT platform (AIT Cyber Range). All relevant national authorities (BKA, BMI, BMLV, and CERT) and Austrian critical infrastructure operators (energy, telecom, railways, etc.) also took part in this simulation, which was rated by all participants as a best-practice example of beneficial close cooperation between research, industry, and the authorities.

In the area of Artificial Intelligence (AI), the Center has developed a unique AI-based technology as part of the research focus "Fake News and the Fight Against Disinformation" in order to offer online commerce consumers protection against abuse which has increased considerably in the wake of the pandemic, and thus support the path to digital autonomy for online users. The AIT Fake Shop Detector technology supports the early detection of questionable and dubious online suppliers and thus significantly contributes to the prevention of fraud and abuse in the digital space. This special protection service is already being successfully offered to all Austrian online customers as a beta test version in collaboration with the Austrian Institute for Applied Telecommunications and the KMU X-Net.

In the area of technologies for digital identities, the Center has been able to assume a global pioneering role through the development of sensor technologies on the one hand and through its special expertise in the areas of secure and distributed IT systems (blockchain technologies), data encryption (smart encryption) and cybersecurity on the other, also evidenced by its close cooperation with the United Nations (UN). The service website [www.responsible-biometrics.org](http://www.responsible-biometrics.org) is run by the UN together with AIT to provide assistance and support to the global nations around the responsible use and handling of these new technologies in the digital space.

In order to increase the relevance of the Center's expertise for the market of the Lake Constance region (Vorarlberg,

southern Germany, Switzerland and Liechtenstein), which was previously not easily accessible for the Center, the "Digital Factory Vorarlberg (DFV)" was founded as a new Research Center in 2021 with a focus on "Cyber Security, Industry 4.0, and Artificial Intelligence" together with the province of Vorarlberg and the University of Applied Sciences Vorarlberg. In close cooperation with the Vorarlberg business community, the aim is to position the Lake Constance region correspondingly in the global competition.

In addition to these research and technology activities, the successful scientific track record and the expansion of networks with universities and scientific institutions also demonstrate the Center's high level of sustained scientific expertise. Despite the more difficult conditions caused by the pandemic, scientific dissemination could be maintained at the same level as in the previous year.

# REPORTS FROM THE CENTERS

## VISION, AUTOMATION & CONTROL

The Center for Vision, Automation & Control (VAC) deals with the automation and digitisation of industrial processes, systems, and components. With its three research groups, it covers the entire automation chain, from the acquisition of information by intelligent sensor systems all the way through to AI-based decision making. The intelligent automation solutions developed and tailored to the specific requirements of the respective application by the Center are essential building blocks for the implementation of the digitisation strategy and the European Green Deal of the EU Commission. In 2021, the Center was able to consolidate and expand its key partnerships with internationally active industrial and research partners and further strengthen its position despite the sometimes more difficult economic conditions. One essential aim of the research work is to support industry in improving the flexibility, adaptivity and resilience of products and production processes while increasing energy and resource efficiency and minimising production costs.

In collaboration with the Automation and Control Institute (ACIN) of the Vienna University of Technology, the growth strategy of recent years could be continued successfully. The steady increase in contract and funded research has allowed the number of employees to double to about 110 since the Center was founded five years ago. Fortunately, it has also been possible to increase the proportion of women scientists, even if the general percentage is still quite low. In terms of strategy, the course was set to invest more in fundamental research questions in the future and to further expand the Center's existing areas of strength. So in the next years, selected topics of AI-based process automation for sustainable production, synergetic cooperation between humans and robot systems in assembly and disassembly, and the development of assistance as well as autonomy functions of automated working machines and large manipulators will be researched as part of a scientific lighthouse project in collaboration with the Center for Technology Experience at AIT, PROFACTOR, and the Vienna University of Technology. As a first step towards this, a test site for an automated crane was set up in Seibersdorf in 2021.

Furthermore, we have succeeded in 2021 in bringing Philipp Schneider, Professor of Biomedical Imaging at the University

of Southampton, UK, to the Center as Principal Scientist. Prof. Schneider has excellent knowledge in the fields of high-resolution 3D imaging, image processing and quantification methods, which are particularly important for expanding research activities in the areas of inline quality inspection systems and real-time image processing for robotic applications.

### Portfolio development highlights 2021

In the high-performance image processing and inspection systems research field, the Center has been playing a globally leading role for many years when it comes to the development of innovative technologies for the optical quality inspection of security documents (especially banknotes). Embedded in an international cooperation, the Center is collaborating on the definition of standards for the integration of test sensors in banknote sorting systems as well as for the communication interfaces for data transmission. In 2021, this CD12 standard was awarded the "Central Banking Award".

Innovative combined 2D and 3D imaging methods, which have their origins in the inspection of security documents, are being used for industrial inline quality control in production (e.g., metal or plastic products, printed circuit boards). These concepts are particularly suitable for the automated optical inspection of challenging products, for example with transparent, glossy, or black surfaces. These inspection systems are characterised by a combination of a particularly fast and robust image acquisition with specially tuned deep-learning methods. This makes it possible to automatically detect defects that previously could not be resolved by optical methods. New solutions such as xposure:photometry for the high-speed inspection of 2D and 3D surface structures were implemented as prototypes in 2021 and successfully presented at VISION (leading trade fair for image processing), where this development was distinguished as one of the four best innovations. In addition, the inline inspection systems were expanded in the direction of inline 3D microscopy in order to detect and visualise material and production defects in the  $\mu\text{m}$  range, for example for the inspection of ball grid arrays.

In order to expand quality inspection to closed-loop quality control, sensor-based, intelligent control concepts will be

developed and integrated in the future in cooperation with the research area "Process Automation" in the new funded project FITAM. The product quality, here in wire-based 3D metal printing, is not only to be controlled visually, but also regulated correspondingly, so that faulty productions are avoided right from the start. The Center was able to further expand its excellent market position in the process automation of heat treatment operations in the metal industry. In order to precisely control the product temperature and increase energy efficiency, tailor-made solutions based on mathematical plant models and optimal control algorithms were successfully implemented in several plants for continuous and batch ovens. The Center also conducts research into intelligent algorithms for resource-saving production and the efficient operation of mechatronic automation components. In the process, solutions were developed that entail a simple configuration of different variants, a significantly reduced commissioning effort, a reduction of possible performance losses due to production tolerances and an extension of the service life of the components. This is achieved through the development of accurate and easy-to-use modelling and verification methods as well as adaptive and online learning control algorithms.

In the thematic area of assistive and autonomous systems, the Center continues to advance research in sensor technology for the detection of the environment for the automation of vehicles, machines and aircraft. A special focus is placed on automated operation in harsh environmental conditions (weather-related obstruction of visibility, dust, dirt) in changing environments (e.g. construction sites, off-road). The latest imaging radar systems with corresponding data analysis methods as well as algorithms for the fusion of multimodal

sensors play an essential role, as does machine learning. In addition to classic applications for object classification and semantic segmentation of the environment, methods for determining the position of objects in space have thus been developed. This is an important prerequisite for path planning and the precise manipulation of objects by working machines. In the funded AUTILITY project, a carrier vehicle that can autonomously perform versatile tasks and operate safely in a dynamically changing environment with the help of combined sensor data and Artificial Intelligence methods was developed at the Center. At the end of the project in autumn 2021, the vehicle demonstrated its skills in the cargo area of an airport, where it will autonomously transport goods between loading ramps and cargo aircraft in the future.

# REPORTS FROM THE CENTERS

## LOW-EMISSION TRANSPORT

The Center for Low-Emission Transport (LET) conducts basic new research into technologies for sustainable and efficient vehicles, components and transport systems, as well as their manufacture and maintenance. The focus of the new strategy 2021–2023 is on lightweight construction technologies (Competence Unit Light Metals Technologies Ranshofen), electric drives and batteries (Competence Unit Electric Vehicle Technologies) and efficient use of the transport infrastructure (Competence Unit Transportation Infrastructure Technologies).

Based on the thematic successes and further developments of the previous years, it was decided in the course of the preparation of the new Strategy 2021–2023 to establish separate research fields from particularly up-and-coming topics. For example, the new research field "Wire-Based Additive Manufacturing" is researching wire-based additive manufacturing from light metals for components with theoretically almost unlimited component size and high build rates. In addition to many successful national project submissions, a separate FFG COMET project on this topic was successfully launched in 2021. The new "Power Electronics" research field focuses on increasing the power density and efficiency of power electronics in the electric powertrain, focusing on new semiconductor technologies (silicon carbide and gallium nitride). In addition to use cases for a wide variety of vehicles (from electric motorbikes to municipal vehicles) in funded projects, research is being conducted together with a strategic partner to demonstrate the technological limits in an electric rallye car. In order to be able to play a role as a research institution not only in electric vehicles but also in future low-emission technologies in aviation, the new research field "Hybrid Electric Aircraft Technologies" was successfully established. In addition to innovative, energy-efficient ice protection systems, it is also working on solid-state batteries for aviation in particular – several successful EU projects are already underway, some of which are also led by this research field.

Based on the AIT evaluation carried out in 2020, it was decided to integrate the Transportation Infrastructure Technologies Competence Unit into the LET Center. In the course of the joint preparation of the new 2021–2023 strategy, the added value of the Competence Unit for the holistic view of emission-

free transport was elaborated in the LET Center and the topics were well integrated. In addition to synergies in methodological approaches and material science, the knowledge of life cycle extension of infrastructure facilities as well as the avoidance of CO<sub>2</sub> emissions in new infrastructure construction constitute an important competence extension of the LET Center.

### Portfolio development highlights 2021

#### Novel, innovative method for spatially resolved lithium measurement

Lithium – known from battery technology – plays an important role in super-lightweight structural materials for aerospace and must therefore be able to be reliably measured with spatial resolution in the material development process. Usually, an electron microscope equipped with a special energy dispersive X-ray spectroscopy detector is used to determine distribution profiles and maps of elements. Due to the low characteristic X-radiation of lithium (3rd element in the periodic table), it cannot be detected in this way. Previous scientific alternative methods for quantifying lithium require complex, expensive specialized equipment. A method has therefore been developed at the LKR Light Metals Competence Center Ranshofen that significantly simplifies the detection of lithium and only requires a standard scanning electron microscope to map lithium at the microscopic level. This combines the information of energy dispersive X-ray spectroscopy with that of quantitative backscattered electron microscopy. Through sophisticated calibration of the measured data, the lithium content can consequently be calculated for each measurement position and a spatially resolved analysis of the lithium content can thus be performed. The new method was internationally applied for a patent and published in the renowned journal "Scripta Materialia". This resulted in a strategic cooperation with a world leading electron microscopy manufacturer who intends to market the method after joint further development.

### **Optimised vehicle energy management for heating, ventilation and air conditioning**

The range of electric vehicles is of critical importance when it comes to their use in practice and their acceptance. In addition to battery capacity and powertrain efficiency, external conditions such as heat and cold are also crucial for energy consumption and range. In extreme cases, heat and cold reduce the range by 50% or more. In conventional cars with combustion engines, the waste heat from the engine is used for heating and cooling; this does not work in highly efficient electric cars – the energy must be taken from the battery. Research was conducted with a European consortium of twelve partners under the coordination of the LET Center with the aim of significantly increasing the energy efficiency of electric vehicles in heating and cooling and thus increasing their range. Different technical solutions were combined in a prototype vehicle and extensively tested on the test bench and in practice. The significant 26% increase in range achieved is due on the one hand to an air-conditioning system that works as a heat pump and can thus cool and heat. For this purpose, a changeover to a new type of refrigerant was made. On the other hand, a highly efficient spiral compressor was developed, which generates less friction and is more efficient due to its simpler design. Furthermore, the battery system and the electric drive train were also included as part of a holistic approach: For instance, waste heat generated during battery charging is temporarily stored using "phase-change" materials and later used for heating. Infrared panels in the vehicle generate pleasant radiant heat in seconds which makes it possible to heat only certain areas of the vehicle and, along with the other measures, provides the same level of comfort with less energy consumption.

### **Predictive maintenance based on in-situ monitoring and forecasting models for railway infrastructures**

The holistic view of zero-emission transport also encompasses emissions reduction/avoidance in the construction, operation and maintenance of transport infrastructure. The LET Center is therefore researching methods for sensor-based inspection, assessment and prediction of structural conditions, e.g. of bridges or the wear and tear of streetcar tracks. The aim is to thus identify and prioritize necessary measures in good time, which in the best case will extend the useful life of the structures, thus saving costs and CO<sub>2</sub>. In 2021, in terms of structural conditions, the LET Center, in collaboration with European partners, developed a probabilistic method for fatigue assessment of steel bridges considering actual tensile loads. Various data sources from traffic management, timetables, and historical data (e.g. macroeconomic indicators) were brought together and used to draw conclusions about the remaining service life of railroad steel bridges. Moreover, significant improvements could be achieved using measured axle loads compared to current conservative standard models. These methods were successfully demonstrated with national rail infrastructure managers in 2021. As far as condition detection of streetcar rails is concerned, success was achieved with the approach of sensors mounted directly on the rail vehicle. A specially developed hardware configuration of vibroacoustic MEMS sensors was attached to control vehicles and used to drive the streetcar network. Measurement data obtained in this way was evaluated by means of Artificial Intelligence, thus enabling the detection and assessment of different damage patterns on rails and switches. Besides the national application, this method was also successfully adapted and rolled out for another, European tramway network in 2021.

# REPORTS FROM THE CENTERS

## TECHNOLOGY EXPERIENCE

Based on a stable structure in terms of Competence Units and research fields, key portfolio elements were further developed in accordance with the strategy. Thus various areas of automation were examined from an experience perspective, the topic of diversity was further developed in its impact on digital contexts of the future, and the portfolio was expanded to include future interfaces and extended reality in use for special application conditions. Key aspects such as interaction with AI-based systems, the use of AI for intelligent and personalized interface concepts, or the topic of sustainability (e.g., behavioral motivation for sustainable energy use, digital concepts for promoting sustainable nutrition, or sustainability as a value in interface design) were addressed across all research fields.

Scientific publications were positioned at relevant conferences. The publication "What Players Want: Information Needs of Players on Post-Game Visualizations" received an Honorable Mention Award at the CHI 2021 conference. Furthermore, the International Conference on Human-Computer Interaction (INTERACT) saw the publication "Stress Out: Translating Real-World Stressors into Audio-Visual Stress Cues in VR for Police Training". The concept of "stress cues" was introduced there, through which stressors for VR training can be operationalised to improve VR training for trainers and trainees. At the 18<sup>th</sup> International Web for All Conference (W4A '21), the paper "Enhancing video communication experience for low vision users" empirically demonstrated that digital video enhancement approaches make video communication more accessible and easier to use for low vision users.

In order to initiate the scientific discourse on the topic of diversity sensitivity within the Quality of Experience community, the article "The WEIRDness of QoE research: The diversity of QoMEX authorship considering locality and gender" was published. Two publications (ACM Automotive UI and MDPI Multimodal Technologies and Interaction Journal) for the first time presented results from field studies on the effects of external human-machine interfaces of automated vehicles in real-world traffic. As part of an International Energy Agency (IEA) consortium, a concept for "social license to automate" in the area of demand side management was presented in the Energy Research & Social Science Journal.

### Portfolio development highlights 2021

In the research field "Experience Business Transformation", advances were realized in the development of the multi-level measurement toolkit. The aim here is to capture human behaviour and cognitive processes by integrating different biosignal sensors. A model for the calculation of real-time stress was created on the basis of the data obtained. The development of the Extended Reality (XR) theme focused on the strategic area of "XR for Challenging Environments". The requirements from an end-user perspective in different subareas (including police, rescue, or CBRN experts) were collected and initial solution approaches were developed to simulate complex situations in a virtual world using Augmented Reality (AR) or Virtual Reality (VR). One focus here was – in synergy with the MED1stMR project – the development of a concept for a VR-based co-creation tool. By using this tool, multiple people can collaborate directly in VR and create or modify shared virtual worlds.

New interaction concepts and design solutions for "Industrial Human Machine Interfaces" could be developed in synergy with several industrial projects as part of the focus on future interface topics. Thus, an innovative solution in the field of Automated Guided Vehicles (AVG – automatic and driverless transport systems for the logistics sector) was implemented in an industrial project. The focus of the project was the user interface design of a complex software package that enables all processes for the introduction, control, and monitoring of AVGs. This software package enables (within a tool world) the automatic measurement of the warehouse for the future use of AVGs, the creation of component lists (including the number of charging stations), the preparation of offers as well as the complete commissioning of the new system (via the software or directly at the AVG using innovative interaction solutions). In addition, a monitoring software was developed to monitor the system. All system components were evaluated with representatives of the target group and adapted to the actual needs in agile project steps.

In the research field "Experience Measurement", new user-centred experience assessment and optimisation methods as well as new diversity-sensitive design approaches were developed. New methods for design & evaluation of assistive systems have been developed and applied in different

deployment contexts, for example in the areas of motivation enhancement in sports through social robots (project RobPerMot) and robot-assisted care and manufacturing (project ROBxTASK). Furthermore, methods for recording and predicting technology acceptance were further developed in the direction of remote assessment and consideration of cultural diversity (METICOS project). Diversity-sensitive interface and interaction concepts with a focus on prosocial behaviour, social cohesion, and cohesion in various application fields such as the promotion of civic courage (CATRINA project), soccer fandom (GENSATION project), intergenerational storytelling (HiStory project) were developed iteratively.

As part of the series of projects directly commissioned by BMK and FFG in 2021, 3vAALuation developed a comprehensive tool for demonstrating the impact of support systems for older people in the areas of health, care, and work, including both English-language questionnaires validated with approximately 480 people and socio-economic surveys of key figures. The surveys include innovative dimensions such as stigma-free design, traditional age(ing)related self-perceptions, or improved health control and competency. They shed light on international differences in funding and reimbursement, privacy, and ethical issues in light of national specifics of health and care systems. The results can also be used to support implementation decisions by the public sector, private individuals, or companies such as insurance companies.

The "Capturing Experience" research field saw the exploration of AI-based interface approaches for the collaboration of a wide range of user groups with automation, which is intended to support users in focusing on things that are relevant to them. For example, the Green Energy Lab Open Data Platform project developed and tested a method to support behaviour change based on clustering algorithms of time series data and other contextual information such as demographics and weather. Furthermore, solutions were developed that enable industrial users to better integrate their comprehensive domain knowledge into the control and automation of complex systems and to operate them more easily and with greater efficiency. This included configuration interfaces for automated control processes (NEFI EDCSproof) and iterative review as well as improvement of quality review results in retail and industrial production (COGNITUS).

Under the leadership of the Capturing Experience Team and together with the 29 partners of the European research project AWARD, a comprehensive and detailed requirements analysis for the operation of autonomous special vehicles in logistics was prepared. Using specially tailored methods from online workshops, virtual site visits, and a survey, it was possible to analyse the needs of a wide range of users for relevant application contexts despite travel restrictions during the COVID-19 pandemic. Workflow analyses were used to determine how and when employees should be involved in automated transport logistics processes for the use cases port, airport, plant transport and hub-to-hub transfer. In this way, automation made it possible to determine the changing role of humans from on-site control to remote monitoring. The defined requirements were used as a basis for developing experimental user interface solutions for teleoperation in an extended reality simulator in order to be able to optimise these until real deployment in 2024.

# REPORTS FROM THE CENTERS

## INNOVATION SYSTEMS & POLICY

With its strategic focus on transformative innovation policy, the activities of the Center for Innovation Systems & Policy have been successful both in scientific and economic terms, and have been characterized by portfolio and market expansion. At both the European and national levels, the Center's visibility could be expanded, especially in the areas of foresight, monitoring and support of transformative and mission-oriented RTI programs, further development of micro-data and indicators for knowledge production and utilization, and sustainable industrial transformation. New customer segments were also gained in the neighbouring countries of Germany and Switzerland. The successes in acquiring funded projects, contract projects, and framework agreements are manifested in what remains a very high degree of capacity utilisation at the end of 2021 and an accompanying expansion of the research teams in terms of personnel.

### Highlights of the 2021 portfolio development

Transformative innovation policy encompasses the development and implementation of new solutions with a clear focus on concrete social and economic challenges. With the new Horizon Europe research framework programme (2021–2027), new transformative policy initiatives and tools such as partnerships and missions have been established at the European level. In EU funded projects in support of the Cities mission and cooperation between member states in EU missions, the Center is participating in leading roles. These are complemented at the national level by the preparation of transformative initiatives and programmes that address the governance of transitions in cities, energy, and mobility systems. For example, the new European partnerships Driving Urban Transitions and Clean Energy Transition were developed in close cooperation with the BMK and the FFG. The fact that this type of expertise from the Center is also in demand in other member states is shown by the example of the 7th Energy Research Programme "Innovations for the Energy Turnaround" in Germany. The Center has been commissioned by the German BMWi as coordinator for the accompanying evaluation of this program (2021–2025).

The Foresight on Demand framework contract led by the Center directly supports the EU Commission in the implementation and strategic development of the Horizon Europe research framework programme. Besides the impact of the COVID-19 pandemic on the European Research and Innovation Policy, the focus is on the preparation of the second phase of the Framework Program (2024–2027). The methodological research work of the Center on Rapid Foresight comes into direct play here.

In the field of emerging or potentially disruptive technologies and their implications for societal transformation processes, the Center, as coordinator of the EU-funded project TechEthos, was able to significantly expand its research portfolio with respect to ethical dimensions ("ethics by design"). By linking it to participatory foresight approaches, new ground is being broken in terms of content and methodology, which will contribute to the Center's further scientific profile and a new USP. This also includes the Center-wide Machine Learning Lab, which addresses challenges around the development and use of Artificial Intelligence technologies and tests approaches for minimizing potentially problematic social and ethical consequences.

In order to drive economic recovery in Europe alongside the digital and green transition, new priorities for reform and investment must be set in the context of an innovation-oriented industrial policy. The Center supports the European Commission in the development of technology roadmaps for energy-intensive industries in this context. Through the joint development and implementation with the member states and industrial stakeholders, the transfer of research results to the economy is to be accelerated, thus strengthening Europe's competitiveness and technological sovereignty.

Substantial progress has been made in the field of agent-based modelling for the description of regional knowledge production in order to explain regional innovation dynamics. Our scientific achievements in understanding the relationship between complex knowledge production and economic growth, based on the Knowledge Complexity Indicator developed at the Center, were honoured this year with the WU Award for Outstanding Research Achievements.

The digitisation push triggered by the COVID-19 pandemic also goes hand in hand with lasting changes in working conditions and practices in the research sector. The Center developed a pioneering New Work concept in 2021, which, with its innovative work models and advanced infrastructures, is designed to enable more effective work during and after the COVID 19 pandemic and will be implemented as a pilot project in 2022.

# SEIBERSDORF LABOR GMBH

Seibersdorf Labor GmbH (SL) is the first point of contact for high-precision laboratory analysis and complex measurement technology in Austria and (with selected services) also internationally. The company ensures that its clients can market their products and services in accordance with current health and environmental guidelines. To this end, the Seibersdorf Labor GmbH (SL) offers highly sensitive lab and analytical services as well as special developments for complex measurement technology in the segments of chemical analysis, radioactivity and radiation protection, EMC and high frequency technology as well as optical radiation. The product portfolio is supplemented by radiopharmaceutical production as well as education and training offerings of the Seibersdorf Academy.

Even in the year 2021 with its special circumstances, some of the profits generated were again reinvested in our own research and development as well as in the continuous quality improvement with regard to certifications and accreditations. The focus of applied research and experimental development was on the following areas:

#### Radioactivity and Radiation Protection

- Development of Measurement Methods and Radiancy Qualities
- Measurement Methods and Simulations for Radiation Hardness
- Method Development for Ultra-Low-Level Measurement Technology

- Development of Radiation Protection Measuring Instruments and Probes Chemical Analytics
- Detection of Doping Substances and Disease Markers
- Method Development and Validation for Stability Studies

#### EMC & Optics

- Method and prototype development for the measurement of electromagnetic fields
- Safety of laser and optical radiation

With its expertise, Seibersdorf Labor GmbH works for the Austrian and European economy (from small and medium-sized enterprises through to large-scale industry) and the public sector (from national task forces and authorities through to international organizations). The company stands for top quality and excellent know-how in the field of these laboratory services. Accreditations and certifications are therefore to be understood as the basis for any business activity.

The order level of Seibersdorf Labor GmbH has grown continuously in recent years, particularly in the fields of electromagnetic field measurement technology and radiopharmaceuticals. Despite the continuing difficult economic situation in 2021, strong growth could be recorded again. An infrastructure expansion in the field of high-frequency technology (calibration centre) and radiopharmacy is planned for 2022.

## NUCLEAR ENGINEERING SEIBERSDORF GMBH

The Nuclear Engineering Seibersdorf GmbH (NES), a 100% subsidiary of AIT GmbH, has two main tasks: the management of radioactive waste produced in Austria (collection, sorting, processing, conditioning and interim storage) and the decontamination and decommissioning (dismantling) of nuclear facilities, in particular from 45 years of research and development at the Seibersdorf site.

Both tasks are carried out on behalf of the Republic of Austria (currently represented by the BMK) and there are long-term contracts with terms until 2033 (decommissioning) and 2045 (waste management), which also regulate the financing of the activities.

The main project of NES in the area of waste management in 2021 was the continuation of the reconditioning of old waste packages. No problems were encountered during project implementation, and the work could be completed according to plan. Among other things, reconditioning can realize a significant reduction in the volume of waste that must be sent for subsequent final disposal. In the area of decommissioning, the major project in 2021 was the continued operation of the soil monitoring facility and the associated initiation of routine measurement, sorting, and release of lightly contaminated materials from previous decommissioning projects. In addition, major progress was also made in the Decommissioning Hot Cell Laboratory project, the last major former nuclear research facility at the Seibersdorf location.

# BUSINESS PERFORMANCE 2021

## EARNINGS POSITION

The business year 2021 was closed with a positive result for the AIT Group. Despite the ongoing pandemic, the Group's business showed significant growth. Thanks to now well-established practices in dealing with social distancing, virtual working as well as a number of implemented protective measures in the companies of the AIT Group, it was possible for the customer and partner organizations to remain efficient.

As a result, contract research revenues increased significantly above the previous year's level (+5.7 million EUR; +10.6%). Revenues from co-financed research also showed significant growth (+2.6; +7.6%).

Shareholder contributions reached a level of 50.8 million EUR (PY: 48.9 million EUR), thus showing an increase in the revenue structure compare to the previous year of around 1.9 million EUR (+3.8%). The shareholder Republic of Austria, represented by the BMK, thus secures the third pillar of funding for the company's research activities and underscores the importance of the company when it comes to the topics surrounding climate change, decarbonisation, and digitisation.

The other operating income / other sales revenue of 13.8 million EUR includes income from recharged rents and operating costs of 1.1 million EUR as well as income from other onward charges to third parties of EUR 1.3 million, dissolution of investment grants of 9 million EUR, income from the dissolution of provisions of 1.5 million EUR, and other operating income / other sales revenue of 0.9 million EUR.

In contrast to the presentation of the P&L structure in the annual financial statement according to the RÄG 2014, the presentation for the management report was maintained unchanged in order to present the proceeds from research contracts without confusion with the proceeds from expenses now to be presented according to the RÄG 2014 charged in the amount of 5.7 million EUR (PY: 4.9 million EUR) and the other revenues in the amount of 1.5 million EUR (PY: 1.3 million EUR).

Designation in kEUR	ACTUAL 2021	ACTUAL 2020
Revenues R&D	60,800	54,633
Inventory changes	-872	-438
<b>Revenues R&amp;D including inventory changes</b>	<b>59,928</b>	<b>54,196</b>
Funding R&D	34,917	32,531
Inventory changes	2,141	1,900
<b>Funding R&amp;D including inventory changes</b>	<b>37,059</b>	<b>34,431</b>
<b>Total Revenues from Research Contracts</b>	<b>96,987</b>	<b>88,626</b>
Services BMK – previously bmvit	50,801	48,923
<b>Total Payments of the Shareholders (Research)</b>	<b>50,801</b>	<b>48,923</b>
Nuclear BMK – previously bmvit	4,934	4,837
Nuclear BMK – previously bmvit	5,212	4,483
<b>Total Financing Nuclear</b>	<b>10,145</b>	<b>9,321</b>
<b>Other operating income / Other revenue</b>	<b>13,858</b>	<b>14,381</b>
<b>TOTAL OPERATING INCOME</b>	<b>171,790</b>	<b>161,251</b>

# EXPENSE STRUCTURE AND RESULT

As a result of higher revenues and the resulting project cost structure for purchased services, the company's expense structure for the reporting year 2021 shows an increase of about 1.4 million EUR (reporting year: 10.7 million EUR, previous year: 9.3 million EUR).

Due to the increase in the number of employees and the salary indexation based on the collective bargaining agreement, personnel expenses showed an increase of approx. 3.3 million EUR (reporting year: 103.7 million EUR, previous year: 100.4 million EUR).

Compared with the previous year, other operating expenses also showed an increased volume of about 3.0 million EUR (reporting year: 32.5 million EUR, previous year: 29.5 million EUR). The increase is largely due to necessary allocations to provisions for infrastructure measures at the Group's various locations (2.1 million EUR) as well as costs in connection with corona prevention (0.5 million EUR).

The financial profit in the reporting year shows a positive result of 0.2 million EUR. The annual result 2021 is 5.2 million EUR and thus underlines the successful course of the completed business year of the AIT Group.

Designation in kEUR	ACTUAL 2021	ACTUAL 2020
<b>TOTAL OPERATING INCOME</b>	<b>171,790</b>	<b>161,251</b>
Material costs	- 8,283	- 8,300
Services rendered by third parties	- 10,692	- 9,254
<b>Material costs and purchased services</b>	<b>- 18,974</b>	<b>- 17,555</b>
<b>Personnel expenses</b>	<b>- 103,680</b>	<b>- 100,354</b>
<b>Amortizations</b>	<b>- 11,023</b>	<b>- 11,435</b>
<b>Other operating expenses</b>	<b>- 32,509</b>	<b>- 29,457</b>
<b>TOTAL OPERATING EXPENSES</b>	<b>- 166,186</b>	<b>- 158,801</b>
<b>OPERATING PROFIT</b>	<b>5,604</b>	<b>2,449</b>
Financial profit	230	283
<b>RESULT BEFORE TAXES</b>	<b>5,834</b>	<b>2,732</b>
Taxes on income and earnings	- 649	- 444
<b>ANNUAL RESULT / PERIOD SUCCESS</b>	<b>5,185</b>	<b>2,288</b>
Result carried forward	33,200	30,912
<b>NET PROFIT</b>	<b>38,385</b>	<b>33,200</b>

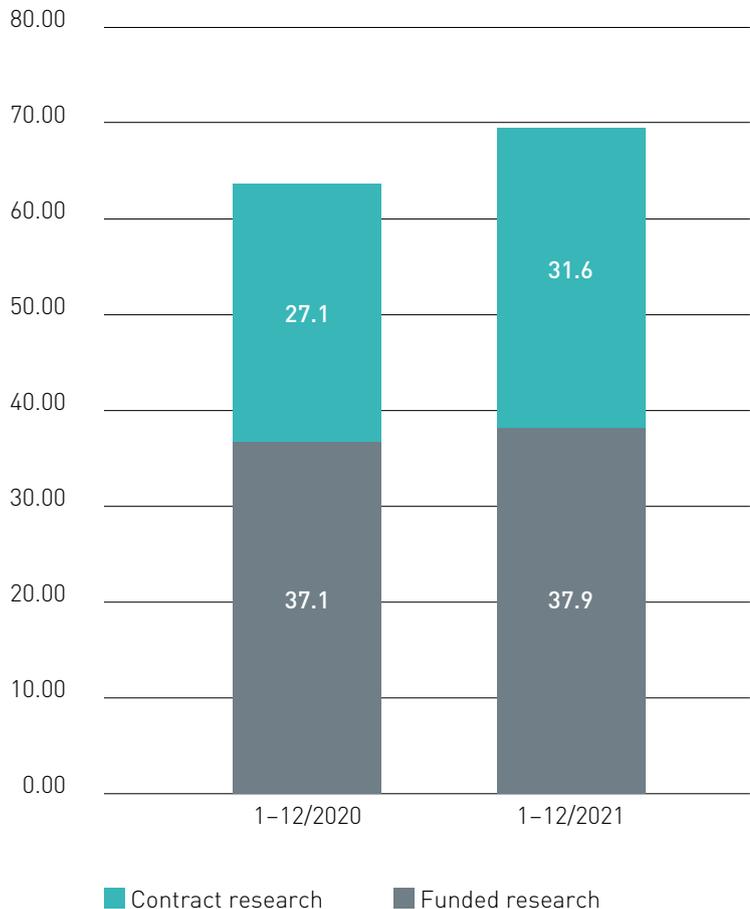
# INCOMING ORDERS

In the year under review, orders worth 69.4 million EUR (previous year: 64.2 million EUR) were acquired. Incoming orders for the AIT Group could thus be increased by approx. 8% above the previous year's level. The growth rate in the acquisition of co-funded projects was about 2% (reporting year: 37.9 million EUR, previous year: 37.1 million EUR), in addition, the acquisition of contract research projects achieved a significant growth rate of almost 17% and amounted to 31.6 million EUR in the year under review (previous year: 27.1 million EUR). Overall, this represents a solid acquisition performance and a good basis for the further development of order levels (see next page) and thus for employee capacity utilization, in subsequent years as well.

The representation of incoming orders and order backlogs does not take into account small projects – primarily those of Seibersdorf Labor GmbH – with a short duration and completion within the acquisition year (incoming orders small projects reporting year: 30.6 million EUR, previous year: EUR 27.2 million; thereof Seibersdorf Labor GmbH: Reporting year: 24.9 million EUR, previous year: 21.1 million EUR).

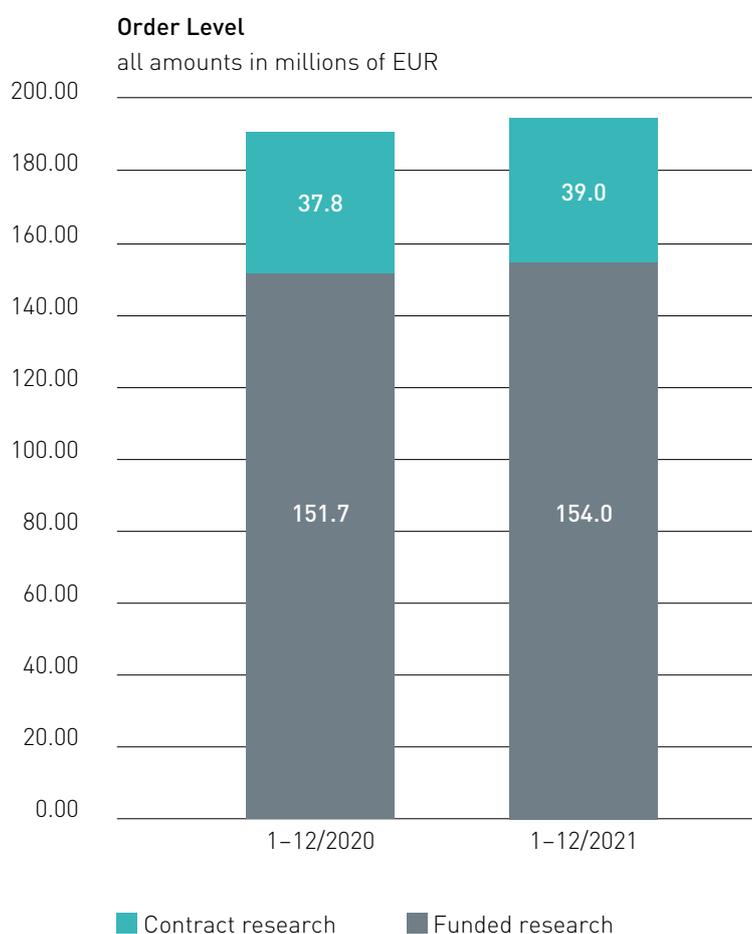
## Incoming orders

all amounts in millions of EUR



# ORDER LEVEL

The good incoming order situation in the year under review allowed order levels to increase in 2021 even despite the high revenue volume. In comparison to the previous year, these increased by about 2% (reporting year: 193.0 million EUR, previous year: 189.4) and both contract research (reporting year: 39.0 million EUR, previous year: 37.8 million EUR +3%), and co-financed research (reporting year: 154.0 million EUR, previous year: 151.7 Mio. EUR, +2%) saw an increase.



# WORK IN PROGRESS

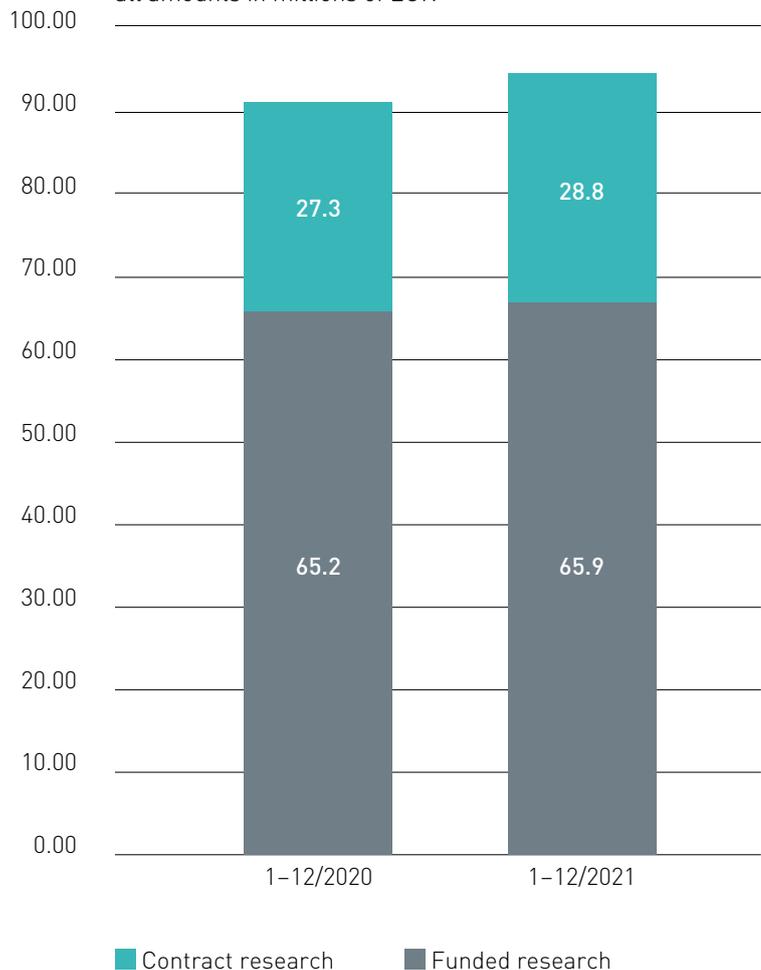
(unfinished projects)

Work in Progress does not only take account of the invoiced revenues (as in the case of the order level), but also the deferred project revenues due to the project work progress. In the year under review, work in progress increased by approx. 2% to 94.7 million EUR (previous year: 92.5 million EUR).

In terms of project categories, the co-financed research shows a slight increase of approx. 1% (reporting year: 65.9 million EUR, previous year: 65.2 million EUR). The growth in work in progress for contract research was more pronounced at around 5% and reached a value of 28.8 million EUR in the reporting year (previous year: 27.3 million EUR). In the co-funded research market, the last EU Framework Programme H2020 ended and is now being replaced by the new Framework Programme HEU (Horizon Europe). The first incoming orders for AIT from this programme are expected in spring 2022.

## Work in Progress

all amounts in millions of EUR



# INVESTMENTS

Total investments in intangible assets and property, plants and equipment in 2021 amounted to 10.3 million EUR and are 1.6 million EUR below the corresponding previous year's figure of 11.9 million EUR.

The investment in intangible assets (primarily rights) amounted to 0.5 million EUR (previous year: 0.7 million EUR). The acquisition of assets for land and buildings amounted to 0.9 million EUR (previous year: 1.1 million EUR). The investment in technical facilities amounted to 6.7 million EUR (previous year: 5.0 million EUR). 1.1 million EUR were spent for facility and office equipment (previous year: 2.1 million EUR) and 1.1 million EUR were received for advance payments and plants under construction (previous year: 3.0 million EUR). In addition, assets under construction and advance payments of 3.1 million EUR (previous year: 1.3 million EUR) were put into operation in the financial year. In the business year, EUR 0.04 million in advance payments were transferred to expenses.

# LIQUIDITY AND FINANCIAL POSITION

As of 31 December 2021, cash and cash equivalents amounted to 90.0 million EUR (previous year: 92.1 million EUR). The liquidity level as of 31 December 2021 also includes funds for investment projects already ordered but not yet delivered.

Cash and cash equivalents are offset by liabilities from fiduciary project coordination funds in the amount of 27.6 million EUR (previous year: 25.8 million EUR).

As of 31 December 2021, there were securities deposits with a book value of 20.3 million EUR (previous year: 11.3 million EUR).

There were no liabilities to banks as of 31 December 2021, nor in the previous year.

As of 31 December 2021, equity amounted to 54.0 million EUR (previous year: 48.8 million EUR). After considering the investment grants in the amount of 72.7 million EUR (previous year: 73.7 million EUR), the sum of expanded capital resources for the reporting year 2021 amounts to 126.7 million EUR (previous year: 122.5 million EUR).

# PERSONNEL

As of 31 December 2021, the company employed a total of 1,177.9 FTEs or an average of 1,159.5 FTEs during the financial year. These figures also include apprentices, apprentices in the retention period and HF/EU scholarship holders. Compared to the previous year's reporting date (1,149.1 full-time equivalents and 1,147.6 average full-time equivalents), this corresponds to a total increase of the workforce of 28.8 FTEs and 11.9 average FTEs. The highest increases stem from the Seibersdorf Labor GmbH as well as the AIT Austrian Institute of Technology GmbH.

# REPORT ON MEASURES IN SUSTAINABILITY MANAGEMENT

As an R&D institute, the AIT follows the current strategy "Research and Innovation for a Sustainable and Competitive Position in the Digital Age". The management of the company in the form of a GmbH is conducted according to the usual principles of corporate governance. As a result, sustainability management at AIT can benefit from a closely coordinated system of structures, processes, and regulations which is effective in the different phases of service provision and across the entire organisation and takes into account the ideas of sustainability and corporate social responsibility.

AIT uses the existing management system (certified in accordance with ISO 9001), which forms an essential basis for regulation in connection with the provision of services and the daily work of the AIT employees. The company can react flexibly to the need for change within the framework of the existing management system and can incorporate new measures into the corporate process landscape. The existing communication channels and mechanisms of the management system ensure a rapid implementation in the organisation.

The starting point of AIT's strategy development is the adoption of the "owner's vision", which provides cornerstones and orientation parameters for the company's direction. The owner's vision takes into account trends and discussions of the international and national RTI landscape as well as supranational organisations (such as SDG – Sustainable Development Goals of the UN and the EU Taxonomy Regulation).

The AIT strategy and the research roadmaps defined therein form the basis of service provision. The AIT planning and control process is based on the company's strategy and quality policy and defines the company's key control mechanisms.

Against this backdrop, the pillars of the AIT service delivery and value creation come into play. Human Resources Management: Clear career paths, further training and development opportunities, regular interaction (e.g. work environment surveys, development discussions, team meetings) also contribute to AIT being perceived as a place for development and creative work.

Gender & Diversity Management plays an important role at AIT and is handled in a structured manner by the AIT "Gender Task Force". The company sees this work as a valuable contribution to non-discriminatory collaboration – working with respect, appreciation, and tolerance, regardless of gender, gender identity, age, ethnic, national or social origin, religion or belief, sexual orientation, language, disability, political opinion and social or economic circumstances.

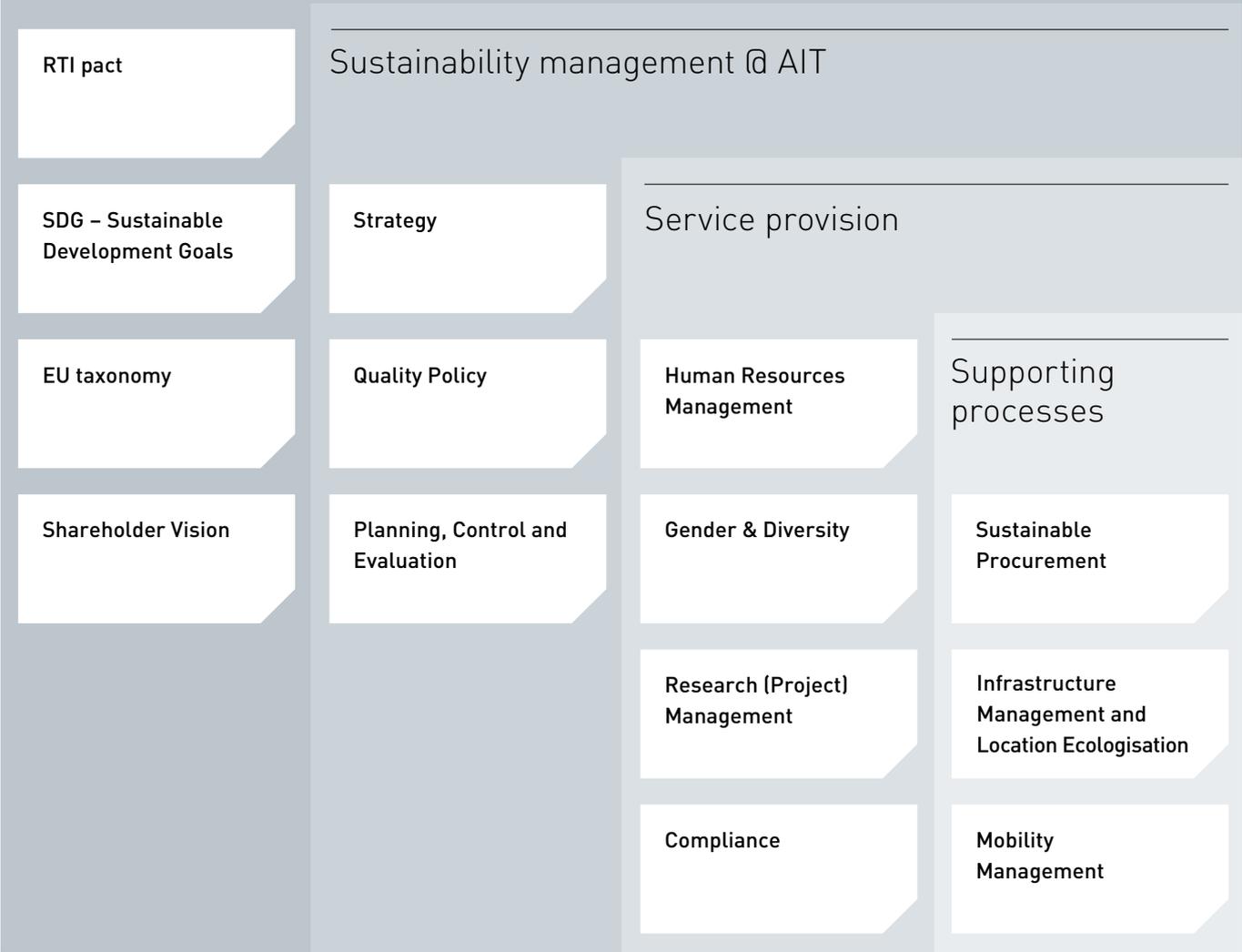
Research management ensures the basis for regular work in all types of research projects – from contract research to independent research. Structures, rules, and processes create transparency, integrity and traceability of the work, both in terms of content and under business considerations.

The compliance pillar ensures transparency and thus compliance with important standards and rules of the company (e.g., Code of Conduct, Code of Leadership, Incident Reporting System in compliance with the EU Whistleblower Directive).

The idea of sustainability also extends to supporting processes and measures. Sustainable procurement is conducted taking into account the BMK's guideline on sustainable procurement, structured according to different procurement groups and product class specifications (e.g. energy indicators, proof of chemical substances, recyclability, etc.) and, if possible, using appropriately preselected procurement catalogues in the AIT's electronic workflow system. In the area of building and lab infrastructure, a cross-organisational planning process that comprehensively addresses ideas of sustainable building development, energy issues as well as renovation issues was developed. Optimised land use, the best possible avoidance of land sealing and the ecologisation of green spaces are of great importance in this context, especially at the Seibersdorf site. The company's mobility management complex is taken into account through travel guidelines, fleet management (electric vehicles with charging facilities at the sites) and advice to employees regarding their choice of mobility options.

The following presentation provides an overview of the current sustainability management structures, processes and measures at ALT.

# AIT SHAREHOLDERS, STAKEHOLDERS AND RELEVANT ENVIRONMENT



# REPORT ON THE SIGNIFICANT RISKS AND UNCERTAINTIES

AIT is committed to the fact that every entrepreneurial activity involves taking risks. At the same time, a successful company knows how to use its opportunities. AIT is committed to providing resources and design options for managing opportunities and risks in order to exploit opportunities and take risks in a conscious manner.

For example, many risks have a recurring characteristic and occur whether they are recognized or not, while opportunities can often be seized only once and only within certain time frames that must be recognized as such. AIT has the freedom to seize an opportunity when it makes strategic sense. On the other hand, AIT is not free to avoid risks completely or to resolve them in every case in a contradiction-free manner.

The implemented risk management system, which was further developed and optimized in the past financial year, is used for recording and controlling.

## **Risk Management and Internal Control System**

risk management (RM) identifies and categorises significant risks inherent in the AIT activities. It defines how these risks are to be dealt with. For example, by defining which risks are consciously accepted and managed and which risks should be avoided or outsourced. The AIT Risk Management System consists of three components:

1. The risk strategy
2. Risk-related responsibilities, processes, and guidelines
3. Monitoring the risk management

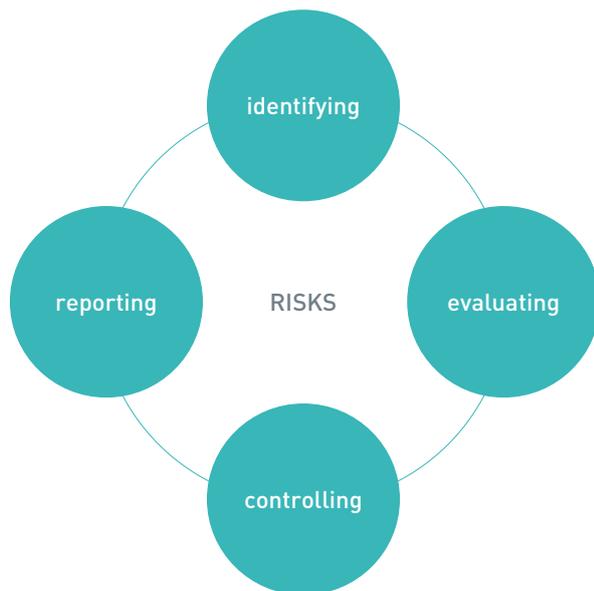
AIT understands the Internal Control System (ICS) to encompass the totality of all the policies, process descriptions, work instructions, methods, and control measures ordered by management which serve to ensure the proper running of business operations at process level.

Internal control measures are a means to an end for AIT to achieve its objectives, and not an end in themselves. Controls are effected by employees at all levels of the organisation.

AIT regards the Internal Control System as a subsystem of risk management with strong mutual interactions. As a rule, optimizations in the ICS will have a positive effect on risk management since every improvement of the control system at process level tends to contribute to the reduction of the effort required for the dealing with risks.

# RISK STRATEGY

The basis for the AIT's risk management system is the risk strategy. It is established by the management and defines the risk categories and risk topics to be considered along the most important business areas or the most important value-adding resources. It evaluates these and defines how to deal with these risks (avoid risks, outsource risks, accept and manage risks).



Once the basic risk strategy has been determined on the basis of the strategic risk catalogue, the risk management system subsequently ensures that (further) risks are identified, assessed, managed and reported. The aim of risk management is to optimise the company's success and value in line with the defined AIT corporate strategy. Risk management thus takes place as a continuous process in all parts of the company.

- Development of the corporate strategy is taken into consideration (market considerations, business case developments etc.)
- Considerations of the design of the organizational structure (e.g. by defining roles, responsibilities or even by defining organizational units themselves)
- Process development (e.g. as part of the offer, procurement or recruiting process) Specifications for shaping the corporate culture (such as Incentive Models, MBO etc.)

# RISK AREAS

The following is a description of the key corporate risk areas that may have a negative effect on the assets, financial and profit position of AIT.

## **Financial risk, information on financial instruments according to § 243 para. 3 lit. 5 UGB [Austrian Commercial Code]**

The company currently does not use any derivative financial instruments. Due to the nature of its business operations, the use of derivative financial instruments is not planned in the future either.

Funds are invested in accordance with the AIT investment guideline, which provides for a conservative investment of funds with the involvement of the investment management of the main bank. Where possible, the investment is also made in the short and medium range. On the one hand, this ensures the availability of liquidity; on the other hand, it also allows us to respond quickly to changing framework conditions, such as the fundamentals of the EU taxonomy.

The value of the receivables is continuously assessed and monitored by the receivables management. A review of compliance with payment deadlines, limiting of credit limits and obtaining creditworthiness assessments from our clients limit the impact of potential payment defaults on the company's assets, financial and profit position.

## **Risk of the strategic portfolio and market risk**

AIT works on the (further) development of technologies or processes whose future usability (e.g. via exploitation in contract research) must first be proven.

The resulting development risk is covered by the use of federal funds. The AIT research portfolio is thus made up of elements with varying degrees of maturity. At the same time, it represents a risk mix that makes it possible, on the one hand, to take up and finance new issues while simultaneously generating a stable income situation on the other. In exploiting the results, AIT addresses European and international markets. Both the acquisition of customers and projects in the field of contract research as well as the acquisition of third-party funding in the national and international subsidy markets happen in a competitive environment.

Against this background, a risk in terms of attainability of projected figures, the development of client groups and partner networks as well as the implementation of business models is an intrinsic part of business. The service portfolio of the AIT Group is diversified and addresses various sectors in different markets. The continuous monitoring of the order situation as well as an early recognition of trends in the relevant markets with measures that are quickly derived from these remain important tasks for AIT.

#### **Project funding risk**

A public project funding scheme deviating from the full reimbursement principle as well as changing interpretations of funding guidelines may lead to a deterioration of the funding rate. Changes in the terms of funding project accounting require a system adjustment of the cost accounting and project accounting system. In order to maintain a sound project assessment base, it is necessary to monitor the relevant environment and assess it with regard to possible commercial effects.

#### **Information technology risks**

The company has a central IT system environment, enabling the joint use of high-quality system components at the various locations. This includes, among other things, a modern security environment with a firewall, virus detection and remote access points with multiple protection for the detection of and defence against attacks. The data is centrally stored, automatically backed up at regular intervals, and copies are kept off-premises. All our projects are based on the generally accepted standards of the Baseline Protection Manual of the Federal Office for Information Security (BSI) and ISO standard 27001 and are supplemented by empirical values reflecting the current state of technology. AIT intensively deals with the protection of the IT infrastructure from unauthorized access or from attacks, both from within and from outside. In addition to technical and organizational measures in IT security, the company also implements targeted measures in the area of awareness training for all

employees on topics pertaining to IT and information security (e.g. also when handling personal or other sensitive data). As the company transitions from pure IT to comprehensive information security, it is increasingly looking at organisational measures as well as physical security measures to prevent the loss or misuse of company-critical data. The function of a CISO (Chief Information Security Officer) was implemented in the reporting year. This function ensures that measures to increase information security are improved in a structured and sustainable manner and are broadly anchored in the company.

#### **Legal risks**

AIT counters legal risks through constant communication between the central legal department and the local attorneys, as well as through the implemented reporting system which encompasses ongoing procedures and potential risks. Possible risks were taken into account by means of balance sheet risk provisions in the annual financial statement.

#### **Economic risks**

The current developments regarding COVID-19 (coronavirus) are continuously monitored and corresponding measures are taken depending on them. In particular, business events (with a larger number of participants) are currently being refrained from, business trips are being reduced, travel warnings are being taken into consideration accordingly, and many company areas are being converted to teleworking. AIT offers its employees the possibility of regular corona monitoring (tests).

We follow the recommendations of the Austrian Federal Government both in the interests of the health of our own employees and of society as a whole. All the activities we embark on are geared to ensuring that our business operations are conducted in the best possible way in the interests of our clients and partners.

**Geopolitical risks**

In light of the current international sanctions against the Russian Federation, possible effects on the business and the risk situation of the company must be monitored on an ongoing basis.

**Personnel risks**

The performance of our employees is essential for the development of our knowledge-based company. The company is competing with other companies for highly qualified specialists and executives. The further development of the AIT management culture, measures for training and further education in connection with the implementation of specific technical and scientific as well as management and support role models will position AIT more strongly as a top employer internationally. Within the framework of international and domestic cooperation projects with universities and scientific institutions, AIT increases its access to well-qualified employees in the course of concrete project work. The "Recruiting & HR Development" department supports the entire AIT recruiting process, from requirement definition all the way to professional search. New IT tools increase transparency and effectiveness throughout the process and complement the contribution of recruiting to strengthen the AIT employer brand. Considerable attention is given to the topic of gender and diversity management: A separate "gender task force" is continuously developing the topic with the involvement of employees.

**Product and environmental risks**

Product and environmental risks may arise in the course of laboratory operation with hazardous materials during storage, handling, and disposal. Possible effects may result from associated incidents with immediate effect on individuals and the environment. AIT is therefore taking into account high (safety and security relevant) technical standards for the use of hazardous materials, and these are subject to consistent monitoring of quality requirements and standards.

**Infrastructure and location rehabilitation risks**

In recent years, intensive measures have been taken to implement the location and space concept of AIT and its subsidiaries. This applies both to the main location in Vienna and to the Seibersdorf location, where a significant improvement in the surface structures – both technically and in terms of the usability of the surfaces – was achieved through new construction. Nevertheless, additional measures are necessary especially at the Seibersdorf location to improve the structural condition of the buildings and the general infrastructure. In addition, extensive demolition measures will now follow to clean up the old building structure after the construction of new buildings at the Seibersdorf site. Overall, these measures effectively counteract risks of plant shutdowns and risks in the safety of the site.

**Overall risk**

When analyzing the risks, no situations that would jeopardize the continued existence of the company at present and in the foreseeable future could be identified.

# DESCRIPTION OF KEY FEATURES OF THE INTERNAL CONTROL AND RISK MANAGEMENT SYSTEM – ACCOUNTING PROCESS

A clear management and corporate structure obtains in the Centers, the divisions, the company, and the Group. Cross-departmental key functions are managed centrally by the company, with the individual companies of the Group having a high degree of autonomy at the same time, in particular with regard to operation-related processes.

The accounting regulations related internal control system of AIT ensures that accounting records are checked for mathematical and factual correctness. The material check for the release of bills and receipts takes place in the respective organizational units or subsidiaries and the financial and accounting procedures for all organizational units are then centrally managed at AIT – intensively supported by digitized processes and systems. This IT system-supported, centralized management of financial and asset accounting at AIT, with creditor and debtor management and the complete management of all incoming payments and outgoing payments, ensures a comprehensive functional separation of operational and financial processes across the Group.

The functions of the departments which are significantly involved in the accounting process, i.e. accounting and treasury, controlling and business administration, IT, HR, as well as legal and procurement, are clearly separated. The areas of responsibility are clearly assigned.

The financial systems used are protected against unauthorized access by corresponding IT systems. Standard software is used in the area of financial and management systems.

An adequate policy and process management (e.g. for management, business, controlling, resources and support processes) has been established and is constantly being updated and developed further. The electronic incoming invoice recording with electronic approval workflow is comprehensively used throughout the AIT Group. The electronic processing of invoices as well as the complete approval of invoices for payment in the system ensure a high transparency and reliability as well as the maintenance of the process discipline (e.g. four eyes principle).

The ICS, in particular accounting-relevant processes, is regularly checked by the process-independent internal audit team.

The Internal Control and Risk Management System as regards the accounting process, whose essential features have been described above, guarantees with sufficient certainty that business events are accurately recorded in the books, processed and thus properly incorporated into the external accounting.

# INTERNAL AUDIT DEPARTMENT

The Internal Audit Department, which is directly responsible to the management of the company, supervises the operational and business processes as well as the internal control and risk management system. In particular, the functionality and effectiveness of the Internal Control System and the Risk Management System, the compliance with applicable legal and operational policies, the regularity of all operational processes as well as measures for the protection of company assets are to be examined and assessed in this context.

The audits are carried out according to the annual audit plan approved by AIT management and brought to the attention of the supervisory board, and supplemented by short and special audits. The audit reports make recommendations and propose measures which are subject to an ongoing follow-up following the implementation instruction by management.

# FORECAST REPORT / PERFORMANCE INDICATORS STRATEGIC DEVELOPMENT

In 2020, the Research Funding Act (FoFinaG) was passed. AIT is listed in the FoFinaG ("Federal Research Foundation Act") as a central research institution, which means that the responsible ministry (BMK) must conclude performance agreements with the AIT in a three-year cycle. The first performance agreement in this regard was signed in January 2022 and thus replaces the previous financing agreements. The performance agreement regulates the basis of the Institute's funding by the BMK – in the currently concluded version for the years 2022–2023. Pursuant to FoFinaG, the next performance agreement to be concluded will cover the period 2024–2026. For the reporting year 2021, financing was implemented on the basis of the agreement for the years 2019–2021. The financing agreement contains both financial and non-financial target indicators for the company which are regularly reported on and tracked as part of the work of the Monitoring Committee of the Supervisory Board.

A selection of non-financial indicators is presented below.

# INDICATORS FOR THE SCIENTIFIC SUCCESS MEASUREMENT

The following table shows a selection of indicators for the scientific success measurement of the AIT Group. In addition to those of the AIT Austrian Institute of Technology GmbH, the key figures also include those of the fully consolidated Group subsidiaries and the at-equity-consolidated Profactor GmbH.

<b>Scientific &amp; Performance Indicators</b>	<b>AIT 2021</b>	<b>AIT 2020</b>
Patents granted (patent families)	35 [28]	38 [33]
Publications in scientific peer review Journals with impact factor	288	243
Impact factor	1,347.9	1051.8
Publications in scientific peer review Journals without impact factor	66	48
Publications as part of conferences (with review process)	296	277
Publications as part of conferences (without review process)	134	106
Invited Lectures	295	253
Lectures	167	163
Number of PhD students	184	185
Number of PhD students from the international arena	88	82
Proportion of PhD students from the international arena (%)	48%	44%
Completed dissertations	38	29
Completed diploma theses	67	52
Number of habilitated employees	33	33

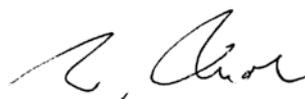
# EVENTS AFTER THE BALANCE SHEET DATE

No events of special significance have occurred after the balance sheet date that would have led to a different presentation of the asset, financial, and earnings position.

Management:



DI Anton PLIMON e. h.



Prof. Dr. Wolfgang KNOLL e. h.

Vienna, 25 March 2022



# BALANCE SHEETS

- 46**      **Group consolidated balance sheet**
- 48**      **Group consolidated profit and loss statement**

# GROUP CONSOLIDATED BALANCE SHEET

1 January 2021 through 31 December 2021

	EUR	EUR	Status as of 31 Dec. 2021 EUR	Status as of 31 Dec. 2020 kEUR
<b>A. FIXED ASSETS</b>				
I. Intangible assets II. Property, plant and equipment				
1. Concessions, rights		1,547,756.35		1,547
II. Property, plant and equipment				
1. Land, rights to land and buildings, including buildings on land owned by third parties	31,761,027.86			31,335
2. Technical equipment and machinery	27,133,268.57			25,590
3. Other equipment, plant and office equipment	9,899,175.41			10,836
4. Advance payments made and plants under construction	7,050,355.99			9,152
		75,843,827.83		76,913
III. Financial Assets				
1. Holdings	1,036,261.82			752
2. Securities (book-entry securities) of fixed assets	20,550,340.43			11,552
		21,586,602.25		12,304
			98,978,186.43	90,763
<b>B. CURRENT ASSETS</b>				
I. Inventories				
1. Raw materials, auxiliary materials and supplies		2,005,601.08		2,455
2. Not yet billable services				
Non-funded customer projects	7,893,625.02			8,713
less advance payments received	-5,449,481.33			-5,663
Funded research projects	87,447,539.42			85,348
less advance payments received	-73,757,217.53			-72,180
		16,134,465.58		16,219
		18,140,066.66		18,674
II. Receivables and other assets				
1. Receivables from deliveries and services	12,469,890.90			9,204
2. Receivables from associated companies	156,290.07			274
3. Other receivables and assets	1,070,925.68			1,157
		13,697,106.65		10,635
III. Cash on hand, credit balances with credit institutions		90,048,057.12		92,120
			121,885,230.43	121,429
<b>C. DEFERRED ITEMS</b>				
1. Other			2,022,188.02	2,084
<b>D. DEFERRED TAX ASSETS</b>				
			634,261.48	569
			<b>223,519,866.36</b>	<b>214,846</b>

	EUR	Status as of 31 Dec. 2021 EUR	Status as of 31 Dec. 2021 EUR
<b>A. EQUITY</b>			
I. Called and paid-in share capital	470,920.12		471
II. Capital reserves (unappropriated)	13,656,321.07		13,656
III. Retained earnings			
1. Legal reserve	47,092.01		47
2. Other reserves (free reserves)	1,466,518.51		1,467
IV. Net profit	38,385,105.97		33,201
thereof profit carried forward kEUR 53,201 (2020 kEUR 30,912)		54,025,957.68	48,842
<b>B. INVESTMENT GRANTS SHAREHOLDERS</b>		33,429,152.09	323,990
<b>C. OTHER INVESTMENT GRANTS</b>			
I. Investment grants by the public sector	39,146,512.70		40,552
II. Other investment grants	97,400.41		161
		39,243,913.11	40,713
<b>D. PROVISIONS</b>			
1. Provisions for severance payments	5,479,519.00		5,702
2. Provisions for pensions	288,182.44		256
3. Provisions for taxes	309,207.80		47
4. Other provisions	25,516,948.98		22,141
		31,593,858.22	28,147
<b>E. LIABILITIES</b>			
1. Advance payments received on orders	14,473,561.02		15,466
2. Liabilities from deliveries and services	5,603,679.19		7,382
3. Liabilities to affiliated companies in which a participating interest is held	211,177.73		305
4. Other liabilities	31,140,374.67		28,788
of which from taxes	1,733,208.65		1,382
of which for social security	2,177,961.66		2,074
		51,428,792.61	51,941
<b>F. DEFERRED ITEMS</b>			
1. Other		13,798,192.64	12,214
		<b>223,519,866.36</b>	<b>214,846</b>

# GROUP CONSOLIDATED PROFIT AND LOSS STATEMENT

1 January 2021 through 31 December 2021

	2021		2020	
	EUR		kEUR	
1. Revenues	67,942,807.85		60,809	
2. Funding, research grants				
a) Funding	34,908,830.27		32,525	
b) Research grants from the shareholder	50,800,805.23		48,923	
c) Service revenues	4,942,263.26	90,651,898.76	4,843	86,291
3. Change in the stock of finished products and not yet billable services	1,279,750.15		1,481	
4. Other operating income				
a) Income from the disposal of fixed assets with the exception of financial investments	54,632.51		17	
b) Income from the reversal of provisions	1,493,665.41		1,744	
c) Other	10,367,603.27	11,915,901.19	10,912	12,672
5. Expenses for material and other purchased manufacturing services				
a) Material expenses	-8,281,855.62		-8,300	
b) Expenses for purchased services	-10,691,583.22	-18,973,468.84	-9,254	-17,555
6. Personnel expenses				
a) Wages and salaries				
aa) Wages	-43,833.98		-48	
ab) Salaries	-79,306,309.53		-76,735	
b) Social expenses				
ba) Expenses for pensions	-1,444,000.07		-1,427	
bb) Expenses for severance payments and company pension funds	-1,411,269.21		-1,402	
bc) statutory social security contributions	-20,576,969.21		-20,068	
bd) Other social expenditures	-897,620.38	-103,680,002.38	-675	-100,354
7. Amortization of intangible assets of fixed assets and property, plant and equipment	-11,022,899.79		-11,435	
of which extraordinary depreciation EUR 0 (2020: kEUR -64,594.00)				
8. Other operating expenses				
a) Taxes, other than under item 18	-178,301.12		-32	
c) Other	-32,331,730.62	-32,510,031.74	-29,426	-29,458
<b>9. Subtotal of items 1 to 8 (operating result)</b>	<b>5,603,955.20</b>		<b>2,449</b>	
10. Income from investments	262,215.54		45	

	2022 EUR	2020 kEUR
11. Income from other securities in financial assets	276,649.16	200
12. Other interest and similar income	21,139.74	32
13. Income from the disposal and amortisation of financial investments and securities in financial assets	10,534.00	33
14. Expenses from financial investments	-160,525.09	-27
of which amortizations EUR -159,707.59 (2020 kEUR -16)		
15. Interest and similar expenses	-180,542.31	1
<b>16. Subtotal of items 10 to 15 (financial result)</b>	<b>229,471.04</b>	<b>283</b>
<b>17. Result before taxes</b>	<b>5,833,426.24</b>	<b>2,733</b>
18. Taxes on income and earnings of which deferred taxes EUR 40,080.26 (2020 EUR kEUR -24)	-649,120.84	-444
<b>19. Result after taxes; annual net profit</b>	<b>5,184,305.40</b>	<b>2,289</b>
20. Profit carried forward from previous year	33,200,800.57	30,912
<b>21. Net Profit</b>	<b>38,385,105.97</b>	<b>33,201</b>

## **Imprint**

### Publisher and content

AIT Austrian Institute of Technology GmbH, Corporate and Marketing Communications, Giefinggasse 4, 1210 Vienna, Austria,  
cmc@ait.ac.at, www.ait.ac.at

### Production

AIT Austrian Institute of Technology GmbH, Corporate and Marketing Communications, Daniel Pepl, MAS, MBA  
Giefinggasse 4, 1210 Vienna, Austria, cmc@ait.ac.at, www.ait.ac.at

### Graphic concept, design and typesetting

WHY.Studio, www.why.studio

### Proofreading

Mag. Maria Stummvoll, Viriotgasse 9/19, 1090 Vienna, Austria  
sigmatau@sigmatau.at, www.sigmatau.at

### Questions and further information

AIT Austrian Institute of Technology GmbH, Corporate and Marketing Communications  
Mag. Michael H. Hlava, Head of Corporate and Marketing Communications,  
Giefinggasse 4, 1210 Vienna, Austria, cmc@ait.ac.at, www.ait.ac.at

Subscribe to our newsletter at <https://www.ait.ac.at/presse/AIT-newsletter>



The paper of the Annual Financial Statement 2021 of AIT Austrian Institute of Technology GmbH is certified according to the criteria of the Forest Stewardship Council (FSC). The FSC prescribes stringent standards for forest management, thus helping to avoid uncontrolled deforestation, violation of human rights, and environmental impact.

This product has been printed without negative impact on the climate.

