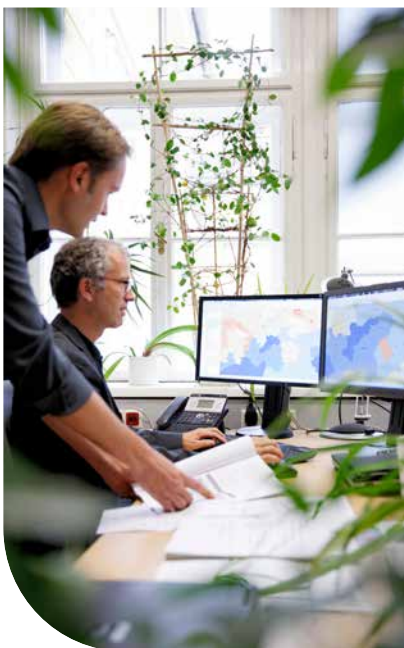


# JOANNEUM RESEARCH

Annual Report Shorted Financial Year 2016



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## Forewords



Foto: JRBergmann

**Prof. Dr. Wolfgang Pribyl, MBA**

Chef Executive Officer

The shortened financial year 2016 was quite challenging, especially in light of the increasingly difficult, current national and international framework conditions in the promotional landscape and due to intensified competition. Measures for the new five-year Company Strategy 2017-2021 have been initiated, and specific detailed planning has been finalised for the

financial year 2017. New, highly innovative research topics are being introduced for the location, and investments are being made in infrastructure expansion in order to maintain a top position in the national and international research landscape. The site of the ROBOTICS institute in Klagenfurt has been expanded, and the move of the LIFE centre to the Science Tower makes it possible to utilise additional synergies with local companies and institutions from the field of »green sciences«. These investments in the future also secure the excellence and USP of JOANNEUM RESEARCH. Our consistent approach is also reflected in the high quality of scientific projects from national and international clients and grant providers. JOANNEUM RESEARCH is successfully represented with numerous projects at Horizon 2020. Moreover, we are actively integrated in the content design and positioning of Austrian interests for the pending 9th Framework Programme.

JOANNEUM RESEARCH, as an application-oriented and independent research company, provides an indispensable contribution to securing the top research position at the sites. I regard it as my task to not only create necessary but also optimal framework conditions for the employees and the company. My gratitude also extends to the owners for their support and to all employees who are fundamentally responsible for the successful path of the company.



Foto: Rothwangl

**Christopher Drexler**

Minister of Health,  
Healthcare, Science and  
Human Resources, Styria

Questions about the future are essentially the same throughout the region as has been shown in the latest study of the Research Council in »MEGA-Trends«. In essential research-strategic, international topic clusters – such as environmental engineering, Industry 4.0 or Smart Cities – and, of course, in the field that I would summarise under the

heading »healthy ageing«, we can build on our excellent general expertise in individual research areas in the Styrian research landscape and especially within the provincial research company JOANNEUM RESEARCH, which must be further developed in a smart and consistent manner.

From a (research-)policy standpoint, Styria succeeds especially due to its culture of cooperation and networking (which must be consistently re-cultivated). This advanced art form must be perfected especially on the international stage of quickly changing political, economic and social developments. Shaping the future means: Knowing where we want to go! This cannot be achieved through regional protectionism, but only through the bundling of strengths and strategically close coordination among individual institutions. The research province of Styria – and thus the majority shareholder of JOANNEUM RESEARCH – has clearly expressed where it wants to go in recent turbulent months characterised by exciting challenges: Strengthening the motor that is propelling us into the future, namely JOANNEUM RESEARCH and thereby shaping the future.

I am especially grateful to all employees who have, once again, contributed to our success with their tremendous effort and dedication, which has again been impressively documented in the present balance sheet (of course, only in part as these figures are based on reference dates).

## Executive Bodies

### Supervisory Board

Prof. Dr Wolf **RAUCH**  
*Chairman*

Brigitte **HASEWEND**  
*Deputy Chairman*

Dr Ertfried **TAURER**  
*Deputy Chairman*

Prof. Dr Werner **HAUSER**

Sonja **JÖBSTL-FINDEIS**

Dr Thomas **KRAUTZER**

Martin **PÖLZL**

Ingolf **SCHÄDLER**

Dr Martin **WIEDENBAUER**

### Appointed to the Supervisory Board by the Works Council:

Ferdinand **GOLJA**  
*Chairman of the Works Council*

Clemens **HABSBURG-LOTHRINGEN**, MAS

Helen **HASENAUER**, MSC

Gertrude **MATZER**, BA MSc

Gerhard **PROBST**

### Scientific Advisory Committee

Prof. Dr Dr Gerald **SCHÖPFER**  
*Chairman*

Prof. Dr Gerhard **FRIEDRICH**  
*Deputy Chairman*

Prof. Dr Hansjörg **ALBRECHER**

Prof. Dr Horst **BISCHOF**

Dr Michaela **FRITZ**

Prof. Dr Günter **GETZINGER**

Prof. Dr Manfred **HUSTY**

Prof. Dr Joachim **KRENN**

Dr Mario **MÜLLER**

Michael **PATAK**

Reinhard **PETSCHACHER**

Herbert **RITTER**, MBA

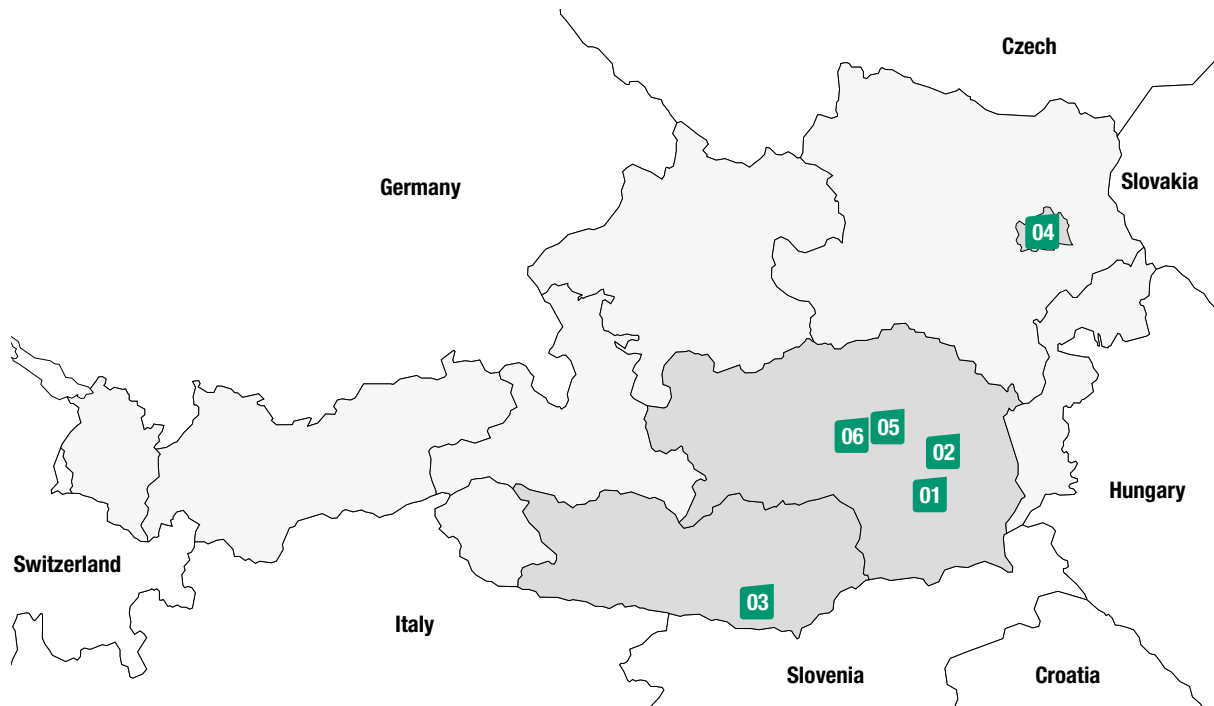
Prof. Dr Karin **SCHAUPP**

Dr Stefan **TASCH**

### Board of Management

Prof. Dr Wolfgang **PRIBYL**, MBA

## Company Sites



### 01 GRAZ

Leonhardstrasse 59  
8010 Graz

- ➔ Management
- ➔ Corporate services
- ➔ Corporate departments
- ➔ POLICIES
- ➔ LIFE

(prospectively Science Tower)

Neue Stiftingtalstrasse 2  
8010 Graz

- ➔ HEALTH

Steyrergasse 17  
8010 Graz

- ➔ DIGITAL
- ➔ Rechenzentrum

Elisabethstrasse 18/II  
8010 Graz

- ➔ LIFE

(prospectively Science Tower)

Hilnswarte  
Roseggerweg 31  
8010 Graz

- ➔ DIGITAL

### 02 WEIZ

Franz-Pichler-Strasse 30  
8160 Weiz

- ➔ MATERIALS

### 03 KLAGENFURT

Lakeside B08a, EG  
9020 Klagenfurt am Wörthersee

- ➔ POLICIES
- ➔ ROBOTICS

### 04 WIEN

Haus der Forschung  
Sensengasse 1  
1090 Vienna

- ➔ HEALTH
- ➔ LIFE
- ➔ POLICIES

### 05 NIKLASDORF

Leobner Strasse 94  
8712 Niklasdorf

- ➔ MATERIALS

### 06 LEOBEN

Roseggerstrasse 12  
8700 Leoben

- ➔ MATERIALS





### **MATERIALS**

The Institute for Surface Technologies and Photonics performs research in the fields of micro and nanostructuring, light and optical technologies, laser processing, sensor systems and functional surfaces.

### **HEALTH**

The Institute for Biomedicine and Health Sciences combines basic research and industrial application in close cooperation with the Medical University of Graz.

### **DIGITAL**

The Institute for Information and Communication Technologies analyses new technologies for the World Wide Web, specialising in signal processing in audiovisual media, remote sensing as well as in communication and navigation technologies.

### **POLICIES**

The Institute for Economic and Innovation Research offers consulting, planning and evaluation in matters related to technology and regional policies as well as economics and statistics.

### **ROBOTICS**

The Institute for Robotics and Mechatronics primarily works on research topics pertaining to human-robot collaboration and interaction in innovative production processes and robot safety. Moreover, the institute also focuses on mobile robotics in the fields of industrial manufacturing, logistics as well as in general service robotics.

### **LIFE**

The Centre for Climate, Energy and Society deals with crucial questions relating to climate change: How can society and companies better deal with the risks of global warming? How do we set our economic system on a low-carbon development path?



to the JOANNEUM RESEARCH  
Media Centre

# MATERIALS – Institute for Surface Technologies and Photonics

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## DIRECTOR

Dr Paul Hartmann

## RESEARCH GROUPS

- HEP – Hybrid Electronics and Patterning
- LOT – Light and Optical Technologies
- LPP – Laser and Plasma Processing
- SFP – Sensors and Functional Printing

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### Industry proximity with the new step-and-repeat facility

The new step-and-repeat facility complements the existing research portfolio with state-of-the-art structuring techniques as JOANNEUM RESEARCH becomes a general provider of large-surface imprinting technologies in the micro and nano range. The facility closes the gap between manufacturing small master stamps and quick, large-surface imprinting of micro and nanostructures for industrial application.



### ATLASS – an EU-H2020 project

Objects are to be given the ability to interact with each other and with people – this is the next step in research on the »Internet of Things«. Within an international project consortium, MATERIALS, as a specialist for large-surface imprinting technologies in the micro and nano range, is researching next-generation solutions for multi-functional and easily integratable sensor circuits such as »electronic skin«.

# HEALTH – Institute for Biomedicine and Health Sciences



## FDA study: Active substance verification for generics




HEALTH has successfully established a method for determining the bioequivalency of medications in the skin by means of the OFM method (open microperfusion) within the context of a project promoted by the American »Food and Drug Administration«. A reliable method had not existed thus far. The method breaks down barriers for the prospective development of generic medications that are applied to the skin.

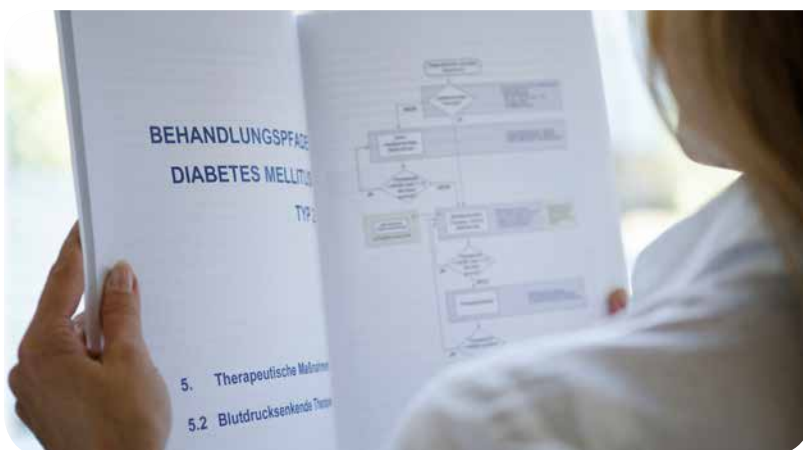


## DIRECTORS

**Prof. Dr Thomas Pieber  
and Dr Frank Sinner**

## RESEARCH GROUPS

-  BTM – Biomedical Technology and Monitoring
-  BAM – Bioanalytics and Metabolomics
-  GWS – Health Sciences



## Successful spin-offs: EPIG and decide

A part of the research group Health Sciences was outsourced to the newly founded EPIG GmbH in order to satisfy the demand for well-founded, content-related planning and development services in Styrian healthcare. decide Clinical Software GmbH, a spin-off of JOANNEUM RESEARCH, was founded in order to market and further develop GlucoTab®.

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## DIGITAL – Institute for Information and Communication Technologies



### DIRECTOR

Dr Heinz Mayer

### RESEARCH GROUPS

- FER – Remote Sensing and Geoinformation
- MVA – Machine Vision Applications
- WKT – Space and Communication Technology
- AVM – Audiovisual Media
- IIS – Intelligent Information Systems
- IAL – Intelligent Acoustic Solutions

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Foto: Fotolia.com

### Projects for self-determined ambient assisted living (AAL) in old age

Growing old at home often requires assistance from state-of-the-art technologies. Three research projects, coordinated by DIGITAL, are to show how specifically adapted technologies can alleviate everyday life of the elderly while, at the same time, increasing the quality of life. The total project volume amounts to more than two million euros; ten partners from business and industry are involved. In January 2016, JOANNEUM RESEARCH held a DIGITAL Forum on the topic of AAL.



### "We map the world"

Methods are being developed in the research group Remote Sensing and Geoinformation to evaluate remote sensor data of aircraft and satellites (remote sensing). The sensor flight platforms »ADAM« and »ARGUS« utilise optical and thermal cameras as well as laser scanners coupled with sensors for so-called georeferencing in various combinations.

## POLICIES – Institute for Economic and Innovation Research



### ETER – Higher education database

ETER (European Tertiary Education Register) is the only Europe-wide higher-education database that provides microdata at the level of individual institutes. The database contains an abundance of information for analysing the heterogeneity in European higher education systems. Resulting conclusions visualise cooperation opportunities within Europe and make these possibilities a reality. The project was jointly performed by POLICIES and international partners.



### DIRECTOR

Wolfgang Polt

### RESEARCH GROUPS

- TIP – Technology, Innovation and Policy Consulting
- STA – Statistical Applications
- REG – Regional Economics and Structural Policy



### eRamp – an EU-ENIAC project

The focus of eRamp research is the quicker introduction of new fabrication techniques and the further exploration of casing technologies for power semiconductor devices. POLICIES is developing new prognosis techniques within the project framework in order to increase reliability and process yield for new chip technologies. 26 research partners from six countries are participating in the project.

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# ROBOTICS – Institute for Robotics and Mechatronics



## DIRECTOR

Dr Michael Hofbaur

## RESEARCH GROUPS

- COR – Collaborative Robotics
- MES – Mechatronic Systems
- ROS – Robotic Systems

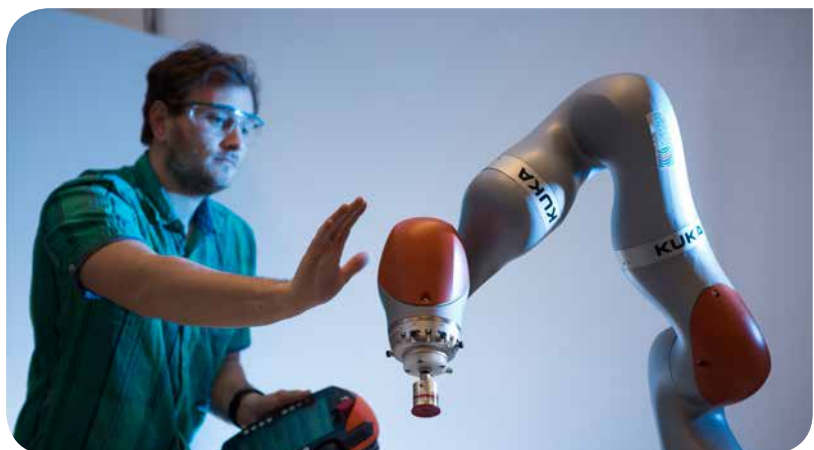
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## ESA order for ROBOTICS

The scope of ROBOTICS was extended far beyond the borders of Carinthia, even all the way to Mars as the institute participates in an international ESA project: ROBOTICS is technically preparing the robot-based handling of Mars rocks. This so-called teleoperation is to prospectively make the examination of extraterrestrial rock samples possible in high-security laboratories or clean-rooms.



## New ROBOTICS research area established

The synergetic utilisation between ROBOTICS and the Alpen-Adria-University Klagenfurt made it possible to explore »robotics security« as a new research area, a topic that has already attracted attention within the international community. The topic of security is fundamentally important within the framework of the Industry 4.0 initiative due to increasing networking among industrial systems and its close integration with the topic of safety.

# LIFE – Centre for Climate, Energy and Sustainability



## Sustainability of biodiesel

The European Commission commissioned the project »Improving the Sustainability of Fatty Acid Methyl Esters (FAME=Biodiesel)«, which is to fundamentally improve sustainability measures within the lifecycle of biodiesel production. Together with BDI – BioEnergy International AG, ALTERRA, Wageningen University and Fraunhofer UMSICHT, LIFE successfully examined a total of ten measures based on lifecycle analyses.



## DIRECTOR

Dr Franz Prettenthaler, M.Litt

## RESEARCH GROUPS

- CRM – Weather and Climate Risk Management
- SYS – Future Energy Systems and Lifestyle
- CPE – International Climate Policy and Economics



## IMPACT2C – an EU-FP7-project

The effects of global warming by 2°C on water, energy, infrastructure, coasts, tourism, forests, agriculture, ecological system performance, health and air quality-climate interactions were analysed in the EU-FP7 project IMPATC2C. LIFE introduced a work package and was significantly involved in the quantification of climate damage and risks in the areas of tourism, energy and flooding.

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## Events and Conferences



**23 to 26 August 2016**

### European Forum Alpbach

What does it mean to have the best healthcare system in the world? And for whom is it the best if such an ideal system exists? – On 23 August, these questions were posed in a discussion forum within the context of health talks held by HEALTH and EPIG GmbH. On 26 August, ROBOTICS organised the work group »Robotic Realities and Future Perspectives« within the context of technology talks.

**12 to 14 September 2016**

### UN/A Symposium

Discussions and lectures were held from 12 to 14 September 2016 at the Austrian Academy of Sciences at the request of the UN on the topic »Integrated Space Technology Applications for Climate Change«. Approximately 60 participants from 27 nations attended the numerous technical presentations. JOANNEUM RESEARCH organised the event.



**28 September 2016**

### Visit by Chancellor Christian Kern

On 28 September 2016, Chancellor Christian Kern visited the Innovation Centre Weiz within the context of Styria Day. The purpose of the visit was to start a dialogue with industry executives from Weiz, which also included Managing Director of JOANNEUM RESEARCH Prof. Dr Wolfgang Pribyl, MBA.

**11 October 2016**

### Forum JOANNEUM RESEARCH

Approximately 60 people heeded the invitation from Managing Director Prof. Dr Wolfgang Pribyl, MBA and attended FORUM JOANNEUM RESEARCH, an event held by the POLICIES and DIGITAL institutes. The topic of the forum: »How to integrate ethics in a machine?« Moral dimensions of the current technology development were discussed.





Seite 16 STEIERMARK Freitag, 5. August 2016

Ost- und weststeirisches Hügelland liegen in kritischer Zone ▶ Neue Info-Karte

# Hangrutschung: Wo Gefahr droht

Das ganze Land wurde mittels Laserscan aus der Luft vermessen. Dank der Karte können jetzt Sicherungsmaßnahmen getroffen werden.

Horvath Probst, Joanneum Research

Die Steiermark ist das Land der Hangrutschungen! In keinem anderen österreichischen Bundesland spitzt sich nach Unwettern die Situation so dramatisch zu wie bei uns, Muren reißen Stra-

ßen, Brücken, sogar Häuser mit. Beim Land ist man – angesichts jüngster katastrophaler Ereignisse – entsprechend alarmiert und versucht, mit einer neuen Online-Gefahrenkarte gegenzusteuern.

Dieser Unwettersommer hinterlässt Spuren. Schwere Schäden gibt es nicht nur in der Stanz und in Breitenau, sondern beinahe in allen steirischen

Freitag, 26. August 2016, Seite 30

# Wenn ein Ring das Geldbörsi ablöst

Rechnungen kontaktlos mit dem Ring bezahlen? Ein US-Unternehmen sorgt mit dem Produkt global für Aufsehen – möglich ist das nur dank eines Grazer Mikrochips.

MARKUS ZOTTLER

Aufbruchsstimmung inmitten der Tiroler Bergwelt. Gemeindefürsorge mit Branchengrößen von AT&S bis Infineon präsentierte Infrastrukturminister Jörg Leichtfried in Alpbach das Förderprogramm „Silicon Austria“. Mit 80 Millionen Euro wird die Forschung für Elektronik und

Joanneum Research, Carinthian Tech Research und des Materials Center Leoben. „Elektronik made in Austria“, so Leichtfried, solle eine „Weltmarke“ werden. Ähnlich wie es den Schweizern mit ihren Uhren gelang.

Die Voraussetzungen scheinen gut. Schon jetzt beschäftigen österreichweit 180 Elektronikunternehmen 65.000 Mitarbeiter. Die Umsätze belaufen sich auf 80 Milliarden Euro. Zahlreiche Innovationen namhafter Konzerne haben ihren technologischen Ursprung in der Alpentrepublik. Wo mit wir schon wie?

NXP-Innovation: bezahlen bald auch mit Kennzeichen



der bei dem eingangs deutschen Halbleiter Infineon wären.

Mit dem „weltweit Bezahling“ sorgt nur das US-amerikanische Unternehmen NFC Ring für

Möglich ist das aber: neues kontaktloses Chips von Infineon, die in Graz entwickelt wurden. Der wasserfeste Ring

Der wasserfeste Ring

„Es sind die, die den digital aktiv mitgestalten um beim Forum Alpbach mit großer Kompetenz“.

## Technologie-Leistungsschau in Alpbach

unterstützte Zukunft“ weisen, betonte Landesrat Christopher Drexler bei einer Art „steirischen Leistungsschau“ bei den Alpbacher Technologiegesprächen. Unternehmen wie u. a. Winterfa-

# Morgen gehen Sie und 4099 andere ins Bad

Was die Holding Graz im Detail über das Wetter und damit über das Verhalten der Grazer Badegäste weiß.

MICHAEL SARIA

Wir bitten um Verzeihung, falls wir hiermit die Überraschung vorwegnehmen – aber falls Sie am heutigen Samstag ins Grazer Augustbad gehen, werden Sie dort knapp 449 andere Badegäste treffen. Und die Auster in Eggenberg teilen Sie sich mit 849 Mitbädern – bei 26,5 Grad. Um Punkt 14 Uhr. Noch Fragen?

Ja, bei der Holding Graz weiß man ziemlich genau Bescheid über die kommenden Tage. Und damit über das Verhalten der Ba-



Kraimer: „Damit können wir genau planen“

degiste: Seit Jahren arbeitet man mit Franz Prettenhaler und dessen Joanneum-Research-Team zusammen und erntet dabei einen WEDDA-Forecast („Weather Driven Demand Analysis“). Vorhersagen der Zang-Meteorologen in puncto Temperaturen und Niederschlag werden mit unserem statistischen Material aus den vergangenen zehn Jahren verknüpft“, verrät Michael Kraimer, Geschäftsführer des Freizeitbereiches bei der Holding Graz.

Und so prognostizieren diese Daten, die zweimal pro Woche ge-

liefern werden, eben für die kommenden Tage den größten Ansturm am Sonntag: mit insgesamt rund 4100 Gästen in allen Grazer Bädern – und mit 1400 Besuchern in der Straßganger Anlage.

Kraimer: „Dank dieser Daten können wir seit Jahren genau unser Bilderpersonal und den Wareneinsatz in der Gastronomie planen.“

Wir freuen uns mit Marie auf diese Tage



natürlich ab

torisch zu bestätigen. Und mittels eines akustischen Hilfsystems wird Senioren die Erledigung von Amts- oder anderen Geschäftswegen wesentlich erleichtert. Barrieren und Hürden sollen damit endlich der Vergangenheit angehören.

Der Mensch mit seinen Bedürfnissen steht besonders im Mittelpunkt unserer Aktivitäten.

Wolfgang Probst, Joanneum Research

## SPEZIAL

VON JAN FISCHER



## Metall aus dem Drucker

Joanneum Research arbeitet mit 3D-Druck an neuen Material-techniken, die den Weg zu medizinischen Implantaten aus dem Drucker ebnen.

Vom digitalen Modell zum Computer in kurz- und langfristiger Zeit zum Prototypen – das sind die ersten Schritte. 3D-Drucker erst möglich. Längst gibt es 3D-Drucker, die nicht mehr nur für kleine Objekte aus Kunststoff, sondern auch für großformatige Werkstücke aus Metall. In der

UNENDELICH VIELE NEUE MOGLICHKEITEN. Am Joanneum Research hat man sich von der 600.000 Euro teuren Anlage vor allem eine direkte Beschleunigung der Entwicklungszeit erhofft.

Jahult unserer Forschung ist es unter anderem, neue Geometrien zu generieren, die mit anderen Prozessen, wie zum Beispiel Zerspanung oder Gießen, zu teuer oder gar nicht herstellbar wären“, erläutert Wolfgang Waldhauer, Forschungssprecher bei Joanneum Research. Beispiele

GEOMETRIE IMPLANTAT: Wolfgang Waldhauer, Forschungssprecher bei Joanneum Research, hält ein 3D-Druck-mechanisches Implantat fest.

Die so hergestellten „Geometrien“, die mit dem 3D-Drucker erst Form annehmen können, sind wiederum verschleißfester, leichter oder verformbarer.

„Mitte des neuen 3D-Laserdruckers wurden vier Eigenschaften der Bauteile sowie die Unterschiede zu herkömmlichen Fertigungsprozessen erörtert und verbessert“, so Waldhauer. Ein erstes Anwendungsgebiet hat Waldhauer ebenfalls schon im Blick: eines der ersten Ziele ist die Herstellung von Implantaten für die Medizintechnik.

„Material“-Institut soll allerdings auch die 3D-Druck-technik selbst verbessert werden. Das Fokus befindet sich die Fertigung, insbesondere der Legierungen, die das verformbarste Potenzial der jungen Technologie noch nicht genutzt wird.“

Ein erstes Anwendungsgebiet hat Waldhauer ebenfalls schon im Blick: eines der ersten Ziele ist die Herstellung von Implantaten für die Medizintechnik.

neuer Technologien vor. Die Technik passt sich dabei an die Bedürfnisse des Nutzers an und nicht umgekehrt.

Dazu zählen etwa die automatische Abschaltung des Herdes bei Abwesenheit, Schutzmaßnahmen gegen Einbrüche und die Möglichkeit, via Handy Lichter, Heizung oder diverse Haushaltsgeräte ein- und wieder auszuschalten. Speziell für Demenzerkrankte wurde eine Spiele-Trainings-Software mit der die Betroffenen motiviert werden, sich geistig und motorisch zu betätigen. Und mittels eines akustischen Hilfsystems wird Senioren die Erledigung von Amts- oder anderen Geschäftswegen wesentlich erleichtert. Barrieren und Hürden sollen damit endlich der Vergangenheit angehören.

Der Mensch mit seinen Bedürfnissen steht besonders im Mittelpunkt unserer Aktivitäten.

Wolfgang Probst, Joanneum Research

## Glucotab ausgegründet

Erfolgsprodukt aus der Diabetesforschung macht sich selbstständig.

MARKUS ZOTTLER

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## „Wie verheißt Sie Innovationen zum Durchbruch, Herr Pribyl?“

Der JOANNEUM-RESEARCH-Geschäftsführer Wolfgang Pribyl über das wachsende Netzwerk Forschung, neue Innovationsbedürfnisse der Wirtschaft und die Chancen konsequenter Internationalisierung.

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# Audit Certificate

## Report on the financial statements

### AUDIT OPINION

We have audited the financial statements of

**JOANNEUM RESEARCH**  
**Forschungsgesellschaft mbH, Graz**

consisting of the balance sheet as of 31 December 2016, the income statement for the shortened financial year ending on this reporting date and the notes.

Based on our assessment, the enclosed financial statements comply with legal stipulations and portray the company's asset and financial position as of 31 December 2016 and the company's profit situation for the shortened financial year ending on this reporting date as accurately as possible while complying with legal Austrian entrepreneurial stipulations.

### Basis for the audit opinion

We performed the audit according to the Austrian principles of proper annual auditing. These principles require us to apply international audit standards (International Standards on Auditing). Our responsibilities in accordance with these stipulations and standards are described in further detail in our audit certificate in the section »Responsibilities of the auditor for auditing the financial statements«. Our auditing services are performed independently of the company and in agreement with the legal Austrian entrepreneurial and professional stipulations, and we also fulfilled our other professional obligations in accordance with these requirements. We have determined that the audit verifications obtained by us are sufficient and suitable as a basis for an audit opinion.

## Responsibilities of the legal representative, the Supervisory Board and the Audit Committee for the financial statements

The legal representative is responsible for the itemisation of the financial statements and for ensuring that these financial statements are in agreement with the legal Austrian entrepreneurial stipulations in order to portray the company's asset, financial and profit situation as accurately as possible. Furthermore, the legal representative is responsible for internal controls deemed necessary by him in order to facilitate an itemisation of financial statements that is free of essential misrepresentations – whether intentional or unintentional.

With respect to the itemisation of financial statements, the legal representative is responsible for assessing the company's ability to continue its business activity, stating issues related to the continuation of business activity – if pertinent – and applying the accounting principle for the continuation of business activity, unless the legal representative intends to either liquidate the company or cease its business activity or if he has no other realistic alternative.

The Supervisory Board and Audit Committee are responsible for monitoring the company's accounting process.

## Responsibilities of the auditor for auditing the financial statements

Our goals are to attain sufficient certainty in order to determine whether the financial statements as a whole are free of essential misrepresentations – whether intentional or unintentional – and issue an audit certificate containing our audit opinion. Sufficient certainty is a high degree of certainty, but not a guarantee that a proper annual audit performed in agreement with Austrian principles of proper annual auditing requiring the application of ISA will always uncover any existing essential misrepresentation. Misrepresentations can result from wilful actions or errors and are regarded as essential if it can be reasonably assumed

## Audit Certificate

that these misrepresentations, individually or as a whole, were to influence the economic decisions of users based on these financial statements.

As part of the audit according to the Austrian principles of proper auditing requiring the application of ISA, we perform a dutiful assessment throughout the entire annual audit and maintain a critical basic attitude.

Moreover, the following applies:

- We identify and assess risks for essential misrepresentation – whether intentional or unintentional – in the financial statements, plan and execute audit actions as a reaction to these risks, and obtain audit verifications that are sufficient and suitable as the basis for our audit opinion. The risk that essential misrepresentations resulting from wilful actions are not uncovered is higher than misrepresentations resulting from errors since wilful actions may incorporate fraudulent cooperation, falsifications, intentional incompletions, misleading portrayals or suspension of internal controls.
- We gain an understanding of the internal control systems that are relevant for the annual audit in order to plan audit actions that may be appropriate under certain circumstances, but not in order to give an audit opinion on the effectiveness of the company's internal control system.
- We evaluate the appropriateness of the accounting methods applied by the legal representative as well as the justifiability of values estimated by the legal representative in accounting and the associated statements.
- We draw conclusions about the appropriateness of applying the accounting principle for the continuation of business activities by the legal representative as well as whether, based on obtained audit verifications in connection with events or eventualities, an essential uncertainty exists that raises significant doubts about the company's ability to continue its business activity.

We are obligated to reference the associated statements in the financial statements within the context of our audit certificate if we draw the conclusion that an essential uncertainty exists or modify our audit opinion if these statements are not appropriate. We draw our conclusions based on the audit verifications obtained by the date of our audit certificate. Prospective events or eventualities may, however, result in the renunciation of the company's continued business activity.

- We evaluate the overall portrayal, outline and content of the financial statements including disclosures and also determine whether the financial statements reflect the fundamental business transactions and events as accurately as possible.
- We communicate with the Supervisory Board and Audit Committee about the planned extent and time allotment of the annual audit as well as about important audit findings, including potentially significant deficiencies in the internal control system, which the annual audit may reveal.
- We provide a declaration to the Supervisory Board and Audit Committee that we have adhered to the relevant professional behavioural requirements for independence. We also communicate about our relationship and other circumstances for which it can be reasonably assumed that these might affect our independent status and – if pertinent – associated protective measures.

# Audit Certificate

## Report on the management report

The management report is to be examined based on legal Austrian entrepreneurial stipulations in order to determine whether it is in agreement with the financial statements and whether it has been itemised according to valid legal requirements.

The legal representative is responsible for the itemisation of the management report in accordance with legal Austrian entrepreneurial stipulations.

We performed our audit according to the professional principles of management report auditing.

## Opinion

According to our assessment, the management report has been itemised according to the valid legal requirements and is in agreement with the financial statements.

## Declaration

Based on insights gained from the audit of financial statements and an understanding of the company and its environment, essential false statements have not been detected in the management report.

Graz, 03.03.2017

K & E Wirtschaftstreuhand GmbH

MMag. Renate Kubat      Mag. Dr. Hannes Greimer  
Wirtschaftsprüfer

## Balance Sheet

| Assets  | 31.12.2016<br>EUR    | 30.06.2016<br>EUR    |
|---|----------------------|----------------------|
| <b>A. Fixed assets</b>  |                      |                      |
| <b>I. Intangible assets</b>                                       |                      |                      |
| 1. Rights and licenses  | 243,143.00           | 202,926.00           |
| <b>II. Tangible assets</b>  |                      |                      |
| 1. Land and buildings   | 9,015,560.66         | 9,137,546.66         |
| <i>of which land value</i>  | <i>2,656,523.66</i>  | <i>2,656,523.66</i>  |
| <i>of which investments in third-party buildings</i>              | <i>2,158,879.00</i>  | <i>2,196,42.00</i>   |
| 2. Technical equipment and machines                               | 3,777,528.00         | 3,653,905.00         |
| 3. Other equipment, operating and office equipment                | 663,272.00           | 725,144.00           |
| 4. Advance payments and assets under construction                 | 1,028,888.37         | 385,220.80           |
|   | 14,485,249.03        | 13,901,816.46        |
| <b>III. Financial assets</b>                                      |                      |                      |
| 1. Shares in affiliated companies                                 | 150,000.00           | 200,000.00           |
| 2. Equity interests   | 255,038.25           | 221,039.25           |
| 3. Securities and book-entry securities held as fixed assets      | 1,350,675.00         | 1,345,275.00         |
|   | 1,755,713.25         | 1,766,314.25         |
|   | 16,484,105.28        | 15,871,056.71        |
| <b>B. Current assets</b>  |                      |                      |
| <b>I. Inventories</b>   |                      |                      |
| 1. Raw materials, consumables and supplies                        | 5,178.20             | 7,119.20             |
| 2. Work in progress   | 8,746,242.57         | 9,306,476.38         |
| 3. Advance payments   | 18,854.30            | 29,625.90            |
|   | 8,770,275.07         | 9,343,221.48         |
| <b>II. Receivables and other assets</b>                           |                      |                      |
| 1. Accounts receivable  | 1,892,095.64         | 1,568,700.66         |
| 2. Receivables from affiliated companies                          | 132,436.03           | 9,927.06             |
| 3. Receivables from companies in which an equity interest is held | 211,585.42           | 188,982.11           |
| 4. Receivables from owners  | 156,492.78           | 14,758.75            |
| 5. Receivables from subsidies and project grants                  | 3,622,356.47         | 3,379,475.86         |
| 6. Other receivables and assets                                   | 13,044,784.98        | 11,614,733.47        |
|   | 19,059,751.32        | 16,776,577.91        |
| <b>III. Securities and shares</b>                                 |                      |                      |
| 1. Other securities and shares                                    | 2,000,000.00         | 1,994,000.00         |
| <b>IV. Cash in hand and at bank</b>                               | 4,703,696.44         | 5,922,198.49         |
|   | 34,533,722.83        | 34,035,997.88        |
| <b>C. Accruals and deferrals</b>                                  | 608,544.97           | 433,842.95           |
| <b>D. Trust assets</b>  | 1,941,558.95         | 946,317.44           |
| <b>Total assets</b>   | <b>53,567,932.03</b> | <b>51,287,214.98</b> |

## Balance Sheet

| Liabilities   | 31.12.2016<br>EUR    | 30.06.2016<br>EUR    |
|---|----------------------|----------------------|
| <b>A. Equity</b>  |                      |                      |
| I. Called share capital                                     | 3,420,000.00         | 3,420,000.00         |
| II. Capital reserves  |                      |                      |
| 1. Appropriated   | 3,741,292.71         | 3,836,035.02         |
| 2. Unappropriated   | 362,637.44           | 362,637.44           |
|   | 4,103,930.15         | 4,198,672.46         |
| III. Revenue reserves                                       |                      |                      |
| 1. Statutory reserves                                       | 159,571.25           | 159,571.25           |
| 2. Other reserves (free reserves)                           | 763,630.22           | 769,990.22           |
|   | 923,201.47           | 929,561.47           |
| IV. Net profit  | 508,771.61           | 101,112.53           |
| <i>of which brought forward</i>                             | 448,938.15           | 94,628.00            |
|   | 8,955,903.23         | 8,649,346.46         |
| <b>B. Investment grants</b>                                 | 1,819,187.00         | 1,759,790.00         |
| <b>C. Provisions</b>  |                      |                      |
| 1. Provisions for severance payments                        | 3,992,400.00         | 3,515,800.00         |
| 2. Provisions for pensions                                  | 4,556,360.00         | 4,369,770.00         |
| 3. Other provisions   | 13,117,270.00        | 12,972,510.00        |
|   | 21,666,030.00        | 20,858,080.00        |
| <b>D. Liabilities</b>                                       |                      |                      |
| 1. Due to banks   | 2,712,193.77         | 712,193.77           |
| <i>of which with a term to maturity of up to 1 year</i>     | 2,712,193.77         | 712,193.77           |
| 2. Payments received on account                             | 10,246,854.20        | 10,059,865.01        |
| <i>of which with a term to maturity of up to 1 year</i>     | 9,018,782.69         | 8,495,890.38         |
| <i>of which with a term to maturity of more than 1 year</i> | 1,228,071.51         | 1,563,974.63         |
| 3. Accounts payable   | 2,185,001.42         | 2,078,686.57         |
| <i>of which with a term to maturity of up to 1 year</i>     | 1,584,659.06         | 1,404,498.79         |
| <i>of which with a term to maturity of more than 1 year</i> | 600,342.36           | 674,187.78           |
| 4. Due to affiliated companies                              | 850,402.75           | 793,018.72           |
| <i>of which with a term to maturity of more than 1 year</i> | 653,015.75           | 643,849.26           |
| 5. Due to companies in which an equity interest is held     | 15,480.00            | 13,746.00            |
| <i>of which with a term to maturity of up to 1 year</i>     | 15,480.00            | 13,746.00            |
| 6. Other liabilities  | 2,731,098.12         | 3,529,332.86         |
| <i>of which tax-related</i>                                 | 355,824.20           | 346,672.42           |
| <i>of which with a term to maturity of more than 1 year</i> | 1,387,477.00         | 1,387,477.00         |
| <i>of which tax-related</i>                                 | 355,824.20           | 346,672.42           |
| <i>of which related to social security</i>                  | 680,680.44           | 1,321,350.57         |
|   | 18,741,030.26        | 17,186,842.93        |
| <b>E. Accruals and deferrals</b>                            | 444,222.59           | 1,886,838.15         |
| <b>F. Trust liabilities</b>                                 | 1,941,558.95         | 946,317.44           |
| <b>Total liabilities</b>                                    | <b>53,567,932.03</b> | <b>51,287,214.98</b> |
| Contingent liabilities                                      | 292,509.11           | 234,017.29           |



## Income Statement

| Income Statement   | 31.12.2016<br>EUR | 30.06.2016<br>EUR |
|--|-------------------|-------------------|
| 1. Income Statement  | 7,670,452.59      | 16,105,360.41     |
| 2. Changes in inventories of goods and work in progress  | -560,233.81       | -807,328.33       |
| 3. Other project-related income  | 7,410,314.15      | 14,718,114.11     |
| 4. Shareholder contribution  | 4,412,000.00      | 8,824,000.00      |
| 5. Other own work capitalised  | 27,264.28         | 128,366.36        |
| 6. Other operating income  |                   |                   |
| a. Income from the disposal of fixed assets excluding financial assets                         | 57,408.66         | 21,743.63         |
| b. Income from the release of provisions   | 308,005.44        | 406,547.23        |
| c. Income from the release of investment grants  | 228,837.22        | 253,861.39        |
| d. Other   | 1,395,043.15      | 8,086,905.08      |
|  | 1,989,294.47      | 8,769,057.33      |
| 7. Cost of materials and other purchased services  |                   |                   |
| a. Cost of materials   | 785,820.47        | 1,279,546.71      |
| b. Cost of purchased services  | 898,731.01        | 1,945,235.14      |
|  | 1,684,551.48      | 3,224,781.85      |
| 8. Personnel expenses  |                   |                   |
| a. Salaries  | 9,844,295.02      | 20,604,651.37     |
| b. Social expenses   |                   |                   |
| aa. Pension costs  | 187,204.12        | 428,201.84        |
| bb. Costs for severance payments and services employee pension fund                            | 641,300.87        | 950,019.10        |
| cc. Cost of statutory social security contributions, payroll-taxes and mandatory contributions | 2,801,932.57      | 5,855,538.31      |
| dd. Other social costs   | 57,704.83         | 134,749.15        |
|  | 13,532,437.41     | 27,973,159.77     |
| 9. Depreciation and amortisation for intangible objects of fixed assets and tangible assets    | 1,233,280.53      | 2,467,542.32      |

# Income Statement

| Income Statement   | 31.12.2016<br>EUR | 30.06.2016<br>EUR |
|--|-------------------|-------------------|
| 10. Other operating expenses   |                   |                   |
| a. Taxes unless categorised under line 19  | 3,934.32          | 7,868.46          |
| b. Other   | 4,183,305.64      | 13,916,786.74     |
|  | 4,187,239.96      | 13,924,655.20     |
| 11. Subtotal of lines 1 to 10 (operating result)   | 311,582.30        | 147,430.74        |
| 12. Income from other securities   | 22,893.76         | 38,528.02         |
| 13. Other interest and similar income  | 84,057.60         | 105,891.95        |
| 14. Income from the disposal and addition to<br>financial assets and securities classified as current assets | 45,399.00         | 19,000.00         |
| 15. Expenses incurred on financial assets and<br>securities classified as current assets                     |                   |                   |
| <i>Depreciations</i>   | 0.00              | 6,000.00          |
| <i>Expenses resulting from affiliated companies</i>  | 410,000.00        | 300,000.00        |
| <i>Other</i>   | 58,899.32         | 113,092.25        |
|  | 468,899.32        | 419,092.25        |
| 16. Interest and similar expenses  | 35,426.19         | 20,170.52         |
| 17. Subtotal of lines 12 to 16 (financial result)  | -351,975.15       | -275,842.80       |
| 18. Earnings before tax (subtotal from line 11 and 17)   | -40,392.85        | -128,412.06       |
| 19. Taxes on income  | 876.00            | 1,750.00          |
| 20. Net loss for the year  | -41,268.85        | -130,162.06       |
| 21. Release of capital reserves  |                   |                   |
| a. Appropriated  | 94,742.31         | 121,226.59        |
| 22. Release of revenue reserves  |                   |                   |
| a. Other reserves (free reserves)  | 6,360.00          | 15,420.00         |
| 23. Retained income brought forward from the previous year   | 448,938.15        | 94,628.00         |
| 25. Net profit   | 508,771.61        | 101,112.53        |

# Notes

## Preliminary note

### ■ Changing the reporting date

The financial year 2016/2017 has been defined as a shortened financial year ending on 31 December 2016 with the shareholders' resolution from 21 July 2016. Subsequent financial years correspond to calendar years. The reporting date change from 30.06. to 31.12. was accepted with the decree from 3 August 2016 based on the application to Finanzamt Graz-Stadt from 1 August 2016. In further consequence, it must be noted that a comparison of the values from the shortened financial year with values from previous years is only conditionally possible.

### ■ Merger

According to the merger contract from 30 November 2016, NanoTecCenter Weiz Forschungsgesellschaft mbH as the transferring company has merged with JOANNEUM RESEARCH Forschungsgesellschaft mbH as the takeover company, and the assets of NanoTecCenter Weiz Forschungsgesellschaft mbH have been transferred as of 30 June 2016 to JOANNEUM RESEARCH Forschungsgesellschaft mbH. As of 1 July 2016, all benefits and burdens of the transferred assets are carried by the takeover company, and thus the values of the takeover company are only conditionally comparable for the reference financial year.

## Accounting and valuation methods

### ■ General principles

The Changes in Accounting Act (RÄG 2014), which is to be applied to business years after 31.12.2015 results in modifications regarding the accounting and valuation methods of individual items and the outline or identification in the balance sheet and income statement. These changes were also applied to the previous year for the preparation of the current financial statements. Any deviations in the identification of items are explained in detail in the respective individual items.

The financial statements for JOANNEUM RESEARCH Forschungsgesellschaft mbH were prepared according to

the regulations of the Austrian Commercial Code (ACC) in the valid version while taking the principles of proper bookkeeping and the general norm into account so as to portray the company's asset, financial and profit situation as accurately as possible.

The principle of completeness was observed while preparing the financial statements.

The principle of individual assessment was taken into account for the evaluation of individual assets and liabilities, and a continuation of the company was assumed. The principle of caution was observed by only indicating the profits that were realised by the reporting date. All detected risks and pending losses were taken into account. Comparative values are stated in parentheses unless clearly identified.

### ■ Fixed assets

#### ➤ Intangible assets

Intangible assets are evaluated according to acquisition costs plus additional acquisition costs minus the applied discount and the scheduled depreciations calculated according to the straight-line depreciation method. A time frame of 3 to 5 years (20% – 33%) is assumed for the useful life.

#### ➤ Tangible assets

Tangible assets are evaluated according to acquisition costs plus additional acquisition costs minus the applied discount and the scheduled depreciations.

Public subsidies for the fixed assets are identified as investment grants from public funds on the liabilities side. The consumption of investment grants is performed analogous to the scheduled depreciation and amortisation.

## Notes

Scheduled depreciations and amortisations are calculated linearly based on the following useful life and depreciation rates:

| Tangible assets   | Useful life in years | Depreciation |
|---|----------------------|--------------|
| Buildings and buildings on third-party land                             | 10 – 40              | 2.5 % – 10 % |
| Machines, scientific equipment and electronic data processing equipment | 3 – 10               | 10 % – 33 %  |
| Other equipment, operating and office equipment                         | 4 – 10               | 10 % – 25 %  |

Full-year depreciation is applied for additions in the first half of the financial year; half-year depreciation is applied for additions in the second half.

Low-value economic goods within the meaning of § 13 of the Income Tax Act 1988 – individual acquisition value up to EUR 400.00 – are fully written off in the addition year and are identified in the development of fixed assets as addition and disposal.

### ► Financial assets

**Shares in affiliated companies and equity interests** are evaluated according to acquisition costs, possibly reduced in order to take depreciations for value decline into account.

**Securities held as fixed assets** are applied as acquisition costs or the possibly lower attributed value on the reporting date.

No unscheduled depreciation was performed in the reporting year for financial assets.

### ■ Current assets

#### ► Inventories

The evaluation of **consumables** is performed with acquisition costs while taking the lowest-value principle into account.

**Work in progress** from commissioned research is determined based on the prepared operational settlement. The recording of project costs is performed according to cost centre and individual cost verifications.

The evaluation is performed individually for manufacturing or acquisition costs within the meaning of § 203 of the Austrian Commercial Code (ACC). Besides the costs assignable according to costs-by-cause, manufacturing costs include proportionate, capitalisable overhead costs for manufacturing as well as parts of social costs within the meaning of § 203 (3) next to last sentence of the ACC. Interest expenses and research risk are not accounted.

Overhead management costs must be activated for projects whose term extends beyond twelve months due to the company's project structure. Voting rights were utilised (cf. § 206 (3) of the ACC) so as to portray the company's asset, financial and profit situation as accurately as possible.

Discounts from work in progress or provisions are formed for expected loss-incurring orders or for costs that are still expected from already invoiced services. Balance precautions in the form of provisions are performed for potential warranty obligations in connection with commissioned research. Proportionate overhead management costs are capitalised for orders whose execution extends beyond twelve months.

## Notes

### ➔ Receivables and other assets

Receivables and other assets are evaluated at nominal value provided that the lower attributable value is not applied in case of detected individual risks. Fixed-rate corrections in the amount of 2% of the net receivables sum are formed as a precaution for general credit risks.

### ➔ Provisions

The **severance payment provision** has been changed due to the Changes in Accounting Act 2014 (RÄG 2014). The severance payment provision is calculated according to the financial-mathematical principles on the basis of the 10-year average interest rate with a term of 15 years. The calculation of the severance payment provision is based on an interest rate as of 31.12.2016 at 4.01%, a wage trend of 2% and a legal pensionable age of 65 according to the partial value procedure. A fluctuation discount has no longer been applied (previous year 7%). The allocation due to the changed evaluation of the Changes in Accounting Act 2014 is distributed over 5 years.

The **pension provision** is calculated in the amount of the insurance-mathematical coverage requirement based on the regulations of § 198 and § 211 of the ACC in the version of the Changes in Accounting Act 2014 (RÄG 2014) while taking the AFRAC statement »Provisions for pension, severance, service anniversary and comparable long-term due obligations according to the stipulations of the ACC« from June 2016 into account. Guideline tables according to Pagler & Pagler were used as accounting bases. The 10-year average interest rate for an average term to maturity of eleven years at 3.75% (previous year: 3.0%) is used as actuarial interest.

**Other provisions** account for all recognisable risks and liabilities that have not yet been determined according to the amount and are applied according to the settlement amount, which is optimally estimated. Other provisions than those that are legally envisaged are not formed.

### ➔ Liabilities

Liabilities are assessed with the repayment amount while taking the cautionary principle into account.

### ➔ Currency conversion

Receivables and liabilities are evaluated with the average exchange rate at the time of occurrence or according to the strict lowest or highest-value principle on the reporting date.



# Notes

## Notes on the balance sheet

### ASSETS

#### ■ Fixed assets

Reference is made to the Fixed Asset Movement Schedule (annex to the notes) in regard to the development of individual items of the fixed assets and the itemisation of the annual depreciation. All fixed assets are valued on the reporting date at EUR 16,484,105.28 (previous year: kEUR 15,871.1). Investments in the shortened financial year 2016 amount to a total of EUR 1,642,486.10 (previous year: kEUR 3,479.1) contrasted with on-going depreciations in the amount of EUR 1,233,280.53 (previous year: kEUR 2,467.5). Disposals for historical acquisition costs amounted to EUR 1,770,305.34 (previous year: kEUR 2,647.7) in the shortened financial year 2016.

**Intangible assets** include software and data transmission rights with a book value of EUR 243,143.00 (previous year: kEUR 202.9).

Additions in the amount of EUR 128,083.86 (previous year: kEUR 176.6) are allotted for the purchase of licenses and various software.

**Tangible assets** amount to EUR 14,485,249.03 (previous year: kEUR 13,901.8) on the reporting date. The land value amounts to EUR 2,656,523.66 (previous year: kEUR 2,656.5). EUR 2,916,091.00 (previous year: kEUR 3,043.4) of the building value for developed buildings and buildings on third-party land in the amount of EUR 6,359,037.00 (previous year: kEUR 6,481.0) are purely allotted to the building value and EUR 1,284,067.00 (previous year: kEUR 1,241.2) to structural changes; thus EUR 4,200,158.00 (previous year: kEUR 4,284.6) are allotted for buildings on own land and EUR 2,158,879.00 (previous year: kEUR 2,196.4) for investments in third-party buildings. Additions in the total amount of EUR 1,514,402.24 (previous year: kEUR 3,076.3) first and foremost pertain to the provision of state-of-the-art scientific equipment for the company's research activity and the further expansion of the technological EDP infrastructure. Disposals for historic acquisition costs in the amount of EUR 1,720,305.34 (previous year: kEUR 2,481.70) essentially pertain to the

discarding or, to a lesser extent, sale of scientific devices, equipment for electronic data processing and various office equipment. Partial value depreciations have not been performed.

Shares in affiliated companies in the amount of EUR 150,000.00 (previous year: kEUR 200.0) pertain to shares in JR-AquaConSol GmbH in Graz. The disposal in the amount of EUR 50,000.00 results from the merger of JOANNEUM RESEARCH Forschungsgesellschaft mbH with NanoTecCenter Weiz Forschungsgesellschaft mbH.

In alphabetical order, the item **equity interests**, totaling EUR 255,038.25 (previous year: kEUR 221.0) includes

- interest in ACIB GmbH, Graz
- interest in BIOENERGY 2020+ GmbH, Graz
- interest in CBmed GmbH, Graz
- interest in decide Clinical Software GmbH, Graz
- interest in EPIG GmbH, Graz
- interest in FH JOANNEUM Gesellschaft mbH, Graz
- interest in Geo5 GmbH, Leoben
- interest in Holz.Bau Forschungs GmbH, Graz
- interest in Human.technology Styria GmbH, Graz
- interest in Kompetenzzentrum – Das virtuelle Fahrzeug, Forschungsgesellschaft mbH, Graz
- interest in Know-Center GmbH Research Center for Data-Driven Business & Big Data Analytics, Graz
- interest in Materials Center Leoben Forschung GmbH, Leoben
- interest in Polymer Competence Center Leoben GmbH, Leoben and
- interest in Research Center Pharmaceutical Engineering GmbH, Graz.

## Notes

**Securities held as fixed assets** are valued at EUR 1,350,675.00 (previous year: kEUR 1,345.3) on the reporting date.

### ➔ Write-ups or appreciation

A write-up in the amount of EUR 33,999.00 has been performed in the shortened financial year 2016 after the reasons for a previously performed, unscheduled depreciation for equity interests in Polymer Competence Center Leoben GmbH have meanwhile ceased.

A write-up in the amount of EUR 5,400.00 has also been performed for the securities of the fixed assets.

No unscheduled depreciation for financial assets has been performed in the reporting year.

Depreciations of other fixed assets result entirely from normal depreciations.

## ■ Current assets

### ➔ Inventories

**Consumables** in the amount of EUR 5,178.20 (previous year: kEUR 7,1) were predominantly activated for paper, colour ribbons, PC network adaptors, spare parts for laser printers and various incidental materials.

The item contract **research work in progress** comprises work in progress and services not yet invoiced totalling EUR 8,746,242.57 (previous year: kEUR 9,306.5) of which administration overheads of EUR 1,753,845.36 (previous year: kEUR 1,860.2) for orders requiring more than twelve months were capitalised. The company's project structure requires a respective capitalisation of administration overheads in order to portray an accurate and consistent image of the company.

**Prepayments** for inventories amount to EUR 18,854.30 (previous year: kEUR 29.6).

### ➔ Receivables and other assets

**For accounts receivable**, individual value adjustments in the amount of EUR 69,450.69 (previous year: kEUR 108.9) were formed and actively deducted for prospective debtor losses.

The item **receivables from affiliated companies** pertains to accounts receivable.

**Receivables from subsidies and project grants** relate to assurances from various promotional bodies. Discounting in the amount of EUR 28,400.00 (previous year: kEUR 27.8) has been performed since the execution and thus the receipt of payment extends beyond a time period of three months. The actuarial interest rate amounts to 1.67% (previous year: 2%).

**Other receivables and assets** essentially include receivables from the insurance company acquired through insurance expenses, receivables from Finanzamt Graz-Stadt, various accrued and deferred interest as well as remuneration and allowances. Moreover, a liability commitment by the Province of Styria in the amount of EUR 5,600,000.00 (previous year: EUR 5,600.0) is also identified under this item for the loss coverage from the large-scale enterprise audit by Finanzamt Graz-Stadt.

### ➔ Securities held as current assets

**Securities held as current assets** in the amount of EUR 2,000,000.00 (previous year: kEUR 1,994.0) pertain to bank bonds with a term until the end of September 2020. A write-up in the amount of EUR 6,000.00 has also been performed for the securities of current assets.

### ➔ Cash in hand and at bank

This item in the amount of EUR 4,703,696.44 (previous year: kEUR 5,922.2) consists of cash in hand of EUR 9,151.77 (previous year: kEUR 11.3) as well as bank deposits of EUR 4,694,544.67 (previous year: kEUR 5,910.9).

## Notes

|   | Receivables as at<br>31.12.2016<br>(30.06.2016) | Term to<br>maturity more<br>than 1 year | Secured<br>by bills of<br>exchange | Capitalised<br>accruals as<br>per § 225 (3)<br>of the ACC | Valuation<br>allowance for<br>bad debts |
|---|---|---|------------------------------------|---|---|
|   | EUR   | EUR                                     | EUR                                | EUR   | EUR                                     |
| Accounts receivable   | 1,892,095.64<br>(1,568,700.66)                  | 0.00<br>(0.00)                          | 0.00<br>(0.00)                     | 0.00<br>(0.00)  | 41,300.00<br>(29,800.00)                |
| Receivables from affiliated companies                             | 132,436.03<br>(9,927.06)                        | 52,200.00<br>(0.00)                     | 0.00<br>(0.00)                     | 0.00<br>(0.00)  | 0.00<br>(0.00)                          |
| Receivables from companies in which<br>an equity interest is held | 211,585.42<br>(188,982.11)                      | 82,423.84<br>(93,423.84)                | 0.00<br>(0.00)                     | 0.00<br>(0.00)  | 0.00<br>(0.00)                          |
| Receivables from owners   | 156,492.78<br>(14,758.75)                       | 0.00<br>(0.00)                          | 0.00<br>(0.00)                     | 156,492.78<br>(14,758.75)                                 | 0.00<br>(0.00)                          |
| Receivables from subsidies and project<br>grants                  | 3,622,356.47<br>(3,379,475.86)                  | 0.00<br>(0.00)                          | 0.00<br>(0.00)                     | 3,622,356.47<br>(3,379,475.86)                            | 0.00<br>(0.00)                          |
| Receivables from the liability commit-<br>ment Province of Styria | 5,600,000.00<br>(5,600,000.00)                  | 5,600,000.00<br>(5,600,000.00)          | 0.00<br>(0.00)                     | 5,600,000.00<br>(5,600,000.00)                            | 0.00<br>(0.00)                          |
| Other receivables and assets                                      | 7,444,784.98<br>(6,014,733.47)                  | 0.00<br>(0.00)                          | 0.00<br>(0.00)                     | 7,322,618.35<br>(5,895,865.58)                            | 0.00<br>(0.00)                          |
| <b>Total</b>  | <b>19,059,751.32<br/>(16,776,577.91)</b>        | <b>5,734,623.84<br/>(5,693,423.84)</b>  | <b>0.00<br/>(0.00)</b>             | <b>16,701,467.60<br/>(14,890,100.19)</b>                  | <b>41,300.00<br/>(29,800.00)</b>        |

### ► Accruals and deferrals

**Prepaid expenses and deferred charges** in the amount of EUR 608,544.97 (previous year: kEUR 433.8) contain payments performed in the shortened financial year 2016 that are to be charged to the following year and essentially pertain to advanced payments for maintenance expenses, various subscriptions, membership fees, insurances, travel costs and congress fees. Moreover, additional expenses from the calculation change for both the severance and pension provision are identified here.

### ■ Trust assets

Trust assets include cash at bank for projects with Österreichische Forschungsförderungsgesellschaft mbH or the European Commission in which JOANNEUM RESEARCH Forschungsförderung mbH acts as a coor-

dinator and manages payments for project partners as a trustee (see trust liabilities).

## LIABILITIES

### ■ Equity

The company's **share capital** amounts to EUR 3,420,000.00 and is held by the Province of Styria with 85% of the share capital in the amount of EUR 2,907,000.00 (previous year: kEUR 2,907.0) and 15% of BABEG – Kärntner Betriebsansiedlungs- und Beteiligungsgesellschaft m.b.H in the amount of EUR 513,000.00 (previous year: kEUR 513.0).

# Notes

A net profit of EUR 508,771.61 (previous year: EUR 101,112.53) results while taking the annual profit of EUR 59,833.46 (previous year: EUR 6,484.53) and the profit brought forward in the amount of EUR 448,938.15 (previous year: EUR 94,628.00) into account.

## ■ Appropriated capital reserves

The shareholders agreed that appropriated capital reserves in the extent of the usage determined in the equity interest and cooperation contract from 18 December 2014 are released. This does not result in a disadvan-

tage for creditors since the measure does not change the equity, but only constitutes a shift from appropriated capital reserves to the balance result. Profit distribution for net profit is excluded according to § 6 of the company contract.

## ■ Special items for investment grants from public funds

**Investment grants from public funds** have developed as follows in the reporting year:

| Investment grants from public funds                  | As at 01.07.2015 prior to takeover NTC Weiz | As at 01.07.2015 after takeover NTC Weiz | Additions         | Usage in line with depreciation | Releases          | Reallocation or corrections | As at 31.12.2016    |
|--|---|--|-------------------|---------------------------------|-------------------|-----------------------------|---------------------|
| <b>Tangible assets</b>                               | <b>EUR</b>                                  | <b>EUR</b>                               | <b>EUR</b>        | <b>EUR</b>                      | <b>EUR</b>        | <b>EUR</b>                  | <b>EUR</b>          |
| 1. Buildings including buildings on third-party land | 1,515,757.00                                | 1,689,009.00                             | 22,093.22         | -104,634.22                     | -47,817.00        | 0.00                        | 1,558,651.00        |
| 2. Machines, scientific equipment and EDP equipment  | 88,705.00                                   | 88,950.00                                | 0.00              | -28,778.00                      | 0.00              | 0.00                        | 60,172.00           |
| 3. Other equipment, operating and office equipment   | 130,328.00                                  | 131,705.00                               | 91,267.00         | -22,608.00                      | 0.00              | 0.00                        | 200,364.00          |
| <b>Financial assets</b>                              |   |  |                   |                                 |                   |                             |                     |
| 1. Shares in affiliated companies                    | 25,000.00                                   | 25,000.00                                | 0.00              | 0.00                            | -25,000.00        | 0.00                        | 0.00                |
| <b>Total</b>   | <b>1,759,790.00</b>                         | <b>1,934,664.00</b>                      | <b>113,360.22</b> | <b>-156,020.22</b>              | <b>-72,817.00</b> | <b>0.00</b>                 | <b>1,819,187.00</b> |



## Notes

### ■ Provisions

Of the **provisions for severance payments**, EUR 90,659.00 (previous year: kEUR 746.7) was utilised. EUR 567,229.00 (previous year: allocation kEUR 292.0) was added in order to reach the coverage requirement of EUR 3,992,400.00 (previous year kEUR 3,515.8).

Of the **pension provisions** (of former CEOs), EUR 124,238.80 (previous year: kEUR 249.3) was utilised for pension payments. EUR 310,828.80 (previous year: kEUR 428.2) was added in order to reach the mathematical insurance coverage requirement of EUR 4,556,360.00 (previous year kEUR 4,369.8).

**Other provisions** include provisions for not yet consumed vacation days as essential items in the amount of EUR 2,028,800.00 (previous year: kEUR 2,544.5), provisions for contingent repayment demands by various grant providers in the amount of EUR 761,600.00 (previous year: kEUR 735.0), provisions for time credits in the amount of EUR 713,500.00 (previous year: kEUR 790.00) as well as provisions for expected losses or costs from services currently in progress in the amount of EUR 679,800.00 (previous year: kEUR 629.4).

In further consequence, the **provisions for the large-scale enterprise** audit by Finanzamt Graz-Stadt in the amount of EUR 7,694,500.00 (previous year: kEUR 7,154.8) is identified under this item.

### ■ Liabilities

The liabilities toward **credit institutes** indicate an export fund framework credit of EUR 712,193.77 (previous year: kEUR 712.2) as well as a cash advance in the amount of EUR 2,000,000.00 (previous year: kEUR 0.0).

**Received prepayments** for orders, deductible from the inventories in the shortened financial year amount to EUR 6,716,889.06 (previous year: kEUR 7,765.8).

**Accounts payable** are valued at EUR 2,185,001.42 (previous year: kEUR 2,078.7) on the reporting date and, for the most part, apply towards domestic suppliers.

Among the item **other liabilities**, the shareholder loan granted by the Province of Styria as of 1 November 2004 is also stated in the amount of EUR 1,387,477.00 (previous year: kEUR 1,387.5) with a term to maturity of over five years. Furthermore, the item first and foremost consists of the settlement with Steiermärkische Gebietskrankenkasse as well as other necessary distinctions.

### ■ Other financial obligations

Based on the business plan of JR-AquaConSol GmbH and the decree of the Supervisory Board of JOANNEUM RESEARCH Forschungsgesellschaft mbH from 6 June 2016, financial obligations result for the company in the amount of EUR 410,000.00 (previous year: kEUR 0.0) for the shortened financial year 2016. Beyond this, a degressive shareholder contribution in the maximum amount of EUR 1,660,000.00 is granted to JR-AquaConSol GmbH until 31.12.2020.

## Notes

Existing obligations resulting from the usage of tangible assets not identified in the balance amount to:

| Other financial obligations | For the next financial year in EUR | For the next 5 financial years in EUR |
|-----------------------------|------------------------------------|---------------------------------------|
| Space rental                | 903,777.00                         | 4,611,771.00                          |
| (PY)                        | (440,047.00)                       | (3,871,241.00)                        |
| Equipment rental            | 32,760.00                          | 163,800.00                            |
| (PY)                        | (15,930.00)                        | (155,100.00)                          |
| Leasing instalments         | 191,947.00                         | 293,572.00                            |
| (PY)                        | (95,974.00)                        | (485,519.00)                          |
| <b>Total</b>                | <b>1,128,484.00</b>                | <b>5,069,143.00</b>                   |
| <b>(PY)</b>                 | <b>(551,951.00)</b>                | <b>(4,511,860.00)</b>                 |

### ■ Accruals and deferrals

**Deferred income** of EUR 444,222.59

(previous year: kEUR 1,886.0) essentially pertains to license revenues.

### ■ Contingent liabilities

(Please refer to:

Other disclosures, contingent liabilities).

### ■ Trust liabilities

Trust liabilities are based on projects with Österreichische Forschungsförderungsgesellschaft mbH or the European Commission in which JOANNEUM RESEARCH Forschungsförderung mbH acts as a coordinator and manages payments for project partners as a trustee (see trust assets).

## Notes

### Notes on the income statement

**Sales revenues** in the financial year are divided as follows according to activity areas as well as domestic and foreign sales:

| Domestic sales              | Shortened financial year 7-12/2016 EUR | 2015/2016 EUR        |
|-----------------------------|--|----------------------|
| Research                    | 4,248,950.74                           | 8,080,147.60         |
| License revenues            | 1,027,969.05                           | 304,463.95           |
| Conference fees             | 54,625.39                              | 8,889.31             |
| Other                       | 358,306.80                             | 1,190,279.45         |
| <b>Total domestic sales</b> | <b>5,689,851.98</b>                    | <b>9,583,780.31</b>  |
| <b>Foreign sales</b>        |  |                      |
| Research                    | 1,962,496.35                           | 5,161,229.69         |
| License revenues            | 17,886.01                              | 62,152.83            |
| Conference fees             | 0.00                                   | 1,710.00             |
| Other                       | 218.25                                 | 30.00                |
| <b>Total foreign sales</b>  | <b>1,980,600.61</b>                    | <b>5,225,122.52</b>  |
| <b>Total sales revenue</b>  | <b>7,670,452.59</b>                    | <b>14,808,902.83</b> |

Of the expenses identified under item 8.b) in the amount of EUR 641,300.87 (previous year: kEUR 950.0), EUR 98,878.02 (previous year: kEUR 217.6) pertains to services for the company's employee pension fund and EUR 542,422.85 (previous year: kEUR 732.4) to severance pay.

### Other disclosures

#### ■ Shares in affiliated companies and equity interests

On the reporting date, an equity interest was held in JR-AquaConSol GmbH, founded on 9 June 2016, in the amount of 100% or EUR 150,000.00.

All other equity interests are below 20%.

#### ■ Personnel

445 employees (previous year: 429) were employed on the reporting date with an aliquot consideration of 378.1 part-time employees (previous year: 366.2). The average employee status with aliquot consideration of part-time employees amounted to 369.0 persons (previous year: 371.5).

An itemisation of wages, severances and pensions for business management according to § 239 (1) of the ACC is disregarded according to the regulations of § 241 (4) of the ACC.

Credits or advances have not been granted to members of the Management Board or Supervisory Board. Liabilities benefitting this group of persons were also not performed.

Remuneration for members of the Scientific Advisory Committee and Supervisory Board amounted to EUR 42,982.14 (previous year EUR 88.5).

No further significant procedures that might have affected the asset, financial and profit situation in the shortened financial year 2016 occurred after the completion of the financial year.

## Notes/Executive Bodies

The following executive bodies were active in the shorted financial year 2016:

### ■ Scientific Advisory Committee

Prof. Dr Dr Gerald **SCHÖPFER**  
*Chairman*

Prof. Dr Gerhard **FRIEDRICH**  
*Deputy Chairman*

Prof. Dr Hansjörg **ALBRECHER**  
(as of 30.11.2016)

Prof. Dr Horst **BISCHOF**

Dr Michaela **FRITZ**

Prof. Dr Günter **GETZINGER**

Prof. Dr Dr Manfred **HUSTY**

Prof. Dr Joachim **KRENN**

Dr Mario **MÜLLER**  
(as of 30.11.2016)

Prof. Dr Annette **MÜTZE**  
(until 07.07.2016)

Michael **PATAK**

Reinhard **PETSCHACHER**

Herbert **RITTER**, MBA

Bruno **SAURER**  
(until 07.07.2016)

Prof. Dr Karin **SCHAUPP**

Dr Stefan **TASCH**

### ■ Aufsichtsrat

Prof. Dr Wolf **RAUCH**  
*Chairman*

Brigitte **HASEWEND**  
*Deputy Chairman*

Dr Elfried **TAURER**  
*Deputy Chairman (as of 10.11.2015)*

Prof. Dr Werner **HAUSER**

Sonja **JÖBSTL-FINDEIS**

Dr Thomas **KRAUTZER**

Martin **LATZKA**  
(until 20.12.2016)

Martin **PÖLZL**

Ingolf **SCHÄDLER**

Dr Martin **WIEDENBAUER**  
(until 20.12.2016)

### ■ Appointed to the Supervisory Board by the Works Council:

Ferdinand **GOLJA**  
*Chairman of the Works Council*

Clemens **HABSBURG-LOTHRINGEN**, MAS

Helen **HASENAUER**, MSc

Gertrude **MATZER**, BA MSc

Gerhard **PROBST**

### ■ Board of Management:

Prof. Dr Wolfgang **PRIBYL**, MBA



## Notes

### ■ Contingent liabilities

According to § 199 of the ACC, payment guaranties are identified in the balance sheet for Voestalpine Schienen GmbH (EUR 15,290.00) as well as rental deposits for Zentrum für Wissens- und Technologietransfer in der Medizin GmbH (EUR 110,890.00), W.E.I.Z. Immobilien GmbH (EUR 35,554.36), Lakeside Science & Technology Park GmbH (EUR 24,924.36) and SFL technologies Science Tower GmbH (EUR 36,000.00) as well as a coverage relief guarantee for Autobahnen- und Schnellstraßen-Finanzierungs Aktiengesellschaft (EUR 69,850.39).

In the previous year, payment guaranties were identified in the balance sheet for Voestalpine Schienen GmbH (EUR 15,290.00) according to § 199 of the ACC as well as rental deposits for Zentrum für Wissens- und Technologietransfer in der Medizin GmbH (EUR 110,890.00), W.E.I.Z. Immobilien GmbH (EUR 35,554.36) and Lakeside Science & Technology Park GmbH (EUR 24,924.36) as well as a coverage relief guarantee for Autobahnen- und Schnellstraßen-Finanzierungs-Aktiengesellschaft (EUR 51,382.68).

### ■ Other items

According to the goals determined in § 1 (3) of the company contract, the company exclusively and directly pursues the promotion of the public in the interest of public welfare in the areas of research, development and science. Profit distribution for a net profit is not performed.

According to the decree of the Financial Administration of the Province of Styria, ref. 29/31-10/94 from 16 January 1995, JOANNEUM RESEARCH Forschungsgesellschaft mbH is a beneficiary recipient according to § 4 (4) I 5 lit. e of the Income Tax Act 1988 in the version of Art I I 4 lit. a of the Tax Reform Act 1993.

Auditor expenses for the audit of the financial statements amount to EUR 10,950.00 (previous year: EUR 12,500.00). The auditor has not performed other confirmation services, tax consultation services or other services in the current or previous financial year.

Graz, 03.03.2017

  
Prof. Dr Wolfgang Pribyl, MBA  
Chief Executive Officer

# Fixed Assets Movement Schedule 2016

| Development of fixed assets  | Acquisition values                         |  |                     |                     |                    |                      |  |
|--|--|--|---------------------|---------------------|--------------------|----------------------|--|
|  | 01.07.2016<br>prior to<br>takeover<br>NTCW | 01.07.2016<br>after take-<br>over NTCW | Additions           | Disposals           | Reallo-<br>cations | 31.12.16             |  |
| <b>I) Intangible assets</b>  |  |  |                     |                     |                    |                      |  |
| Software, data transfer and other rights   | 2,152,970.10                               | 2,176,744.56                           | 128,083.86          | 0.00                | 0.00               | 2,304,828.42         |  |
| Total intangible assets  | 2,152,970.10                               | 2,176,744.56                           | 128,083.86          | 0.00                | 0.00               | 2,304,828.42         |  |
| <b>II) Tangible assets</b>   |  |  |                     |                     |                    |                      |  |
| 1) Real property and equivalent rights and buildings, including buildings on land owned by third parties |  |  |                     |                     |                    |                      |  |
| a) Land value  | 2,656,523.66                               | 2,656,523.66                           | 0.00                | 0.00                | 0.00               | 2,656,523.66         |  |
| b) Value of buildings  | 14,894,064.92                              | 15,574,372.27                          | 89,493.15           | 1,051,316.38        | 30,454.46          | 14,643,003.50        |  |
| Total land and buildings   | 17,550,588.58                              | 18,230,895.93                          | 89,493.15           | 1,051,316.38        | 30,454.46          | 17,299,527.16        |  |
| 2) Machines, scientific equipment and electronic data processing equipment                               | 22,576,646.99                              | 24,826,717.06                          | 589,746.28          | 486,497.35          | 99,227.35          | 25,029,193.34        |  |
| 3) Other equipment, operating and office equipment   | 3,213,517.12                               | 3,357,660.61                           | 46,127.97           | 167,306.15          | 500.00             | 3,236,982.43         |  |
| 4) Advance payments and assets under construction  | 395,235.60                                 | 395,235.60                             | 846,751.47          | 0.00                | -133,938.21        | 1,108,048.86         |  |
| VAT Advance payment assets under construction  | -10,014.80                                 | -10,014.80                             | -72,902.09          | 0.00                | 3,756.40           | -79,160.49           |  |
| Total adv. payment and assets under construction   | 385,220.80                                 | 385,220.80                             | 773,849.38          | 0.00                | -130,181.81        | 1,028,888.37         |  |
| 5) Low-value assets  | 0.00                                       | 0.00                                   | 15,185.46           | 15,185.46           | 0.00               | 0.00                 |  |
| Total tangible assets  | 43,725,973.49                              | 46,800,494.40                          | 1,514,402.24        | 1,720,305.34        | 0.00               | 46,594,591.30        |  |
| <b>III) Financial assets</b>   |  |  |                     |                     |                    |                      |  |
| 1) Shares in affiliated companies  | 200,000.00                                 | 200,000.00                             | 0.00                | 50,000.00           | 0.00               | 150,000.00           |  |
| 2) Equity interests  | 255,038.25                                 | 255,038.25                             | 0.00                | 0.00                | 0.00               | 255,038.25           |  |
| 3) Certificated and uncertificated securities held as fixed assets                                       | 1,354,050.00                               | 1,354,050.00                           | 0.00                | 0.00                | 0.00               | 1,354,050.00         |  |
| Total financial assets   | 1,809,088.25                               | 1,809,088.25                           | 0.00                | 50,000.00           | 0.00               | 1,759,088.25         |  |
| <b>Total fixed assets</b>  | <b>47,688,031.84</b>                       | <b>50,786,327.21</b>                   | <b>1,642,486.10</b> | <b>1,770,305.34</b> | <b>0.00</b>        | <b>50,658,507.97</b> |  |

## Fixed Assets Movement Schedule 2016

|  | Cumulative depreciations                   |   |              |           |              |               | Book values   |  |   |                        |
|--|--|---|--------------|-----------|--------------|---------------|---------------|--|---|------------------------|
|  | 01.07.2016<br>prior to<br>takeover<br>NTCW | 01.07.2016<br>after<br>takeover<br>NTCW | Additions    | Write-ups | Disposals    | 31.12.16      | 31.12.16      | 30.06.2016<br>prior to<br>takeover<br>NTCW | 30.06.2016<br>after<br>takeover<br>NTCW | Book value<br>disposal |
|  | 1,950,044.10                               | 1,973,068.56                            | 88,616.86    | 0.00      | 0.00         | 2,061,685.42  | 243,143.00    | 202,926.00                                 | 203,676.00                              | 0.00                   |
|  | 1,950,044.10                               | 1,973,068.56                            | 88,616.86    | 0.00      | 0.00         | 2,061,685.42  | 243,143.00    | 202,926.00                                 | 203,676.00                              | 0.00                   |
|  |  |   |              |           |              |               |               |  |   |                        |
|  | 0.00                                       | 0.00                                    | 0.00         | 0.00      | 0.00         | 0.00          | 2,656,523.66  | 2,656,523.66                               | 2,656,523.66                            | 0.00                   |
|  | 8,413,041.92                               | 8,917,596.27                            | 283,795.61   | 0.00      | 917,425.38   | 8,283,966.50  | 6,359,037.00  | 6,481,023.00                               | 6,656,776.00                            | 133,891.00             |
|  | 8,413,041.92                               | 8,917,596.27                            | 283,795.61   | 0.00      | 917,425.38   | 8,283,966.50  | 9,015,560.66  | 9,137,546.66                               | 9,313,299.66                            | 133,891.00             |
|  |  |   |              |           |              |               |               |  |   |                        |
|  | 18,922,741.99                              | 21,007,937.06                           | 728,392.63   | 0.00      | 484,664.35   | 21,251,665.34 | 3,777,528.00  | 3,653,905.00                               | 3,818,780.00                            | 1,833.00               |
|  | 2,488,373.12                               | 2,620,472.61                            | 117,289.97   | 0.00      | 164,052.15   | 2,573,710.43  | 663,272.00    | 725,144.00                                 | 737,188.00                              | 3,254.00               |
|  | 0.00                                       | 0.00                                    | 0.00         | 0.00      | 0.00         | 0.00          | 1,108,048.86  | 395,235.60                                 | 395,235.60                              | 0.00                   |
|  | 0.00                                       | 0.00                                    | 0.00         | 0.00      | 0.00         | 0.00          | -79,160.49    | -10,014.80                                 | -10,014.80                              | 0.00                   |
|  | 0.00                                       | 0.00                                    | 0.00         | 0.00      | 0.00         | 0.00          | 1,028,888.37  | 385,220.80                                 | 385,220.80                              | 0.00                   |
|  | 0.00                                       | 0.00                                    | 15,185.46    | 0.00      | 15,185.46    | 0.00          | 0.00          | 0.00                                       | 0.00                                    |                        |
|  | 29,824,157.03                              | 32,546,005.94                           | 1,144,663.67 | 0.00      | 1,581,327.34 | 32,109,342.27 | 14,485,249.03 | 13,901,816.46                              | 14,254,488.46                           | 5,087.00               |
|  |  |   |              |           |              |               |               |  |   |                        |
|  | 0.00                                       | 0.00                                    | 0.00         | 0.00      | 0.00         | 0.00          | 150,000.00    | 200,000.00                                 | 200,000.00                              | 50,000.00              |
|  | 33,999.00                                  | 33,999.00                               | 0.00         | 33,999.00 | 0.00         | 0.00          | 255,038.25    | 221,039.25                                 | 221,039.25                              | 0.00                   |
|  | 8,775.00                                   | 8,775.00                                | 0.00         | 5,400.00  | 0.00         | 3,375.00      | 1,350,675.00  | 1,345,275.00                               | 1,345,275.00                            | 0.00                   |
|  | 42,774.00                                  | 42,774.00                               | 0.00         | 39,399.00 | 0.00         | 3,375.00      | 1,755,713.25  | 1,766,314.25                               | 1,766,314.25                            | 50,000.0               |
|  | 31,816,975.13                              | 34,561,848.50                           | 1,233,280.53 | 39,399.00 | 1,581,327.34 | 34,174,402.69 | 16,484,105.28 | 15,871,056.71                              | 16,224,478.71                           | 188,978.00             |

# Management Report

The management report for the reporting period of the shortened financial year 2016 from 1 July 2016 to 31 December 2016 is divided into 3 sections: I. Report on the development of business and the economic situation, II. Report on the expected development of business and risks faced by the organisation and III. Report on research and development.

## I. Report on the development of business and the economic situation

### ■ I.1 Corporate organisation

As of 31 December 2016, JOANNEUM RESEARCH is divided into six research units that represent the focal points of the company's activities.

#### Research units

MATERIALS – Institute for  
Surface Technologies and Photonics

HEALTH – Institute for  
Biomedicine and Health Sciences

DIGITAL – Institute for  
Information and Communication Technologies

POLICIES – Institute for  
Economic and Innovation Research

ROBOTICS – Institute for  
Robotics and Mechatronics

LIFE – Centre for  
Climate, Energy and Society

### ■ I.2 Report on equity interests

As of 31 December 2016, JOANNEUM RESEARCH had corporate holdings in the following companies:

#### ➔ I.2.1 Shares in affiliated companies

##### Share

|                    |         |
|--------------------|---------|
| JR-AquaConSol GmbH | 100.0 % |
|--------------------|---------|

#### ➔ I.2.2 Corporate holdings

##### Share

|                               |        |
|-------------------------------|--------|
| decide Clinical Software GmbH | 10.0 % |
| EPIG GmbH                     | 25.0 % |
| FH JOANNEUM Gesellschaft mbH  | 14.9 % |
| Geo5 GmbH                     | 10.0 % |
| Holz.Bau Forschungs GmbH      | 8.7 %  |
| Human.technology Styria GmbH  | 7.0 %  |

#### ➔ I.2.3 Corporate holdings – COMET Competence Centres for Excellent Technologies Programme (K1 and K2 centres)

As of 31 December 2016, the company owns shares in the following companies, which are promoted by the competence centre programme COMET of the Federal Ministry for Transport, Innovation and Technology (bmvit) and the Federal Ministry for Science, Research and Economics (bmwfw):



# Management Report

| Share  |        |
|--|--------|
| ACIB GmbH  | 8.0 %  |
| BIOENERGY 2020+ GmbH   | 10.0 % |
| CBmed GmbH   | 12.5 % |
| Kompetenzzentrum – Das virtuelle Fahrzeug, Forschungsgesellschaft mbH          | 10.0 % |
| Know-Center GmbH Research Center for Data-Driven Business & Big Data Analytics | 10.0 % |
| Materials Center Leoben Forschung GmbH   | 17.5 % |
| Polymer Competence Center Leoben GmbH  | 17.0 % |
| Research Center Pharmaceutical Engineering GmbH                                | 15.0 % |

In the framework of corporate holdings, turnover with companies in which an interest is held amounted to approx. EUR 0.3 m in the period from 1 July 2016 to 31 December 2016 compared to expenses amounting to EUR 0.5 m.

An essential goal of the equity interests is the networking and support of company goals and thus an increase in competitiveness of JOANNEUM RESEARCH. Moreover, the interests provide a significant added value for the company portfolio.

## ■ 1.3 Branches

The company has no branches.

## ■ 1.4 Development of business

On 31 December 2016, the order status amounted to approximately EUR 64.8 m and has increased by approximately EUR 4.5 m compared to the previous year. Work supply amounts to approximately EUR 28.7 m. The offer status is stated at approximately EUR 37.7 m. The net loss for the shortened financial year 2016 amounts to approximately kEUR 41.3 (previous year: net loss of approx. kEUR 130.2). A concomitant self-financing level (operating per-

formance/sum of expenses) is calculated at 80% (previous year: 82%).

First of all, it must be noted that the change of the reporting date to 31 December and the resulting shortened financial year from July to December 2016 only allows for a conditional comparison with values from previous years.

The operating performance for commissioned research is approximately EUR 7.3 m (previous year: approx. EUR 15.5 m) in the shortened financial year 2016. An operating performance of approximately EUR 7.7 m (previous year: approx. EUR 15.1 m) was achieved in promoted research.

Internationally, JOANNEUM RESEARCH was able to realise commissioned research and promoted research projects in the reporting year in the total amount of approximately EUR 3.9 m (previous year: approx. EUR 9.1 m). Of these, approximately EUR 1.9 m (previous year: approx. EUR 4.3 m) is allotted to projects with the European Union and approximately EUR 2.0 m (previous year: approx. EUR 4.8 m) to commissioned research projects. JOANNEUM RESEARCH's equity interests in European Union programmes and European Space Agency (ESA) tenders have resulted in revenues in the total amount of approximately EUR 2.7 m in the shortened financial year 2016. Projects with a promotional volume of approximately EUR 2.3 m have been awarded within the context of Horizon 2020; orders in the amount of approximately EUR 1.1 m have been achieved within the context of ESA projects.

In the shortened financial year 2016, revenues in the amount of approximately EUR 3.6 m (previous year: approx. EUR 6.5 m) were achieved due to national, cooperative research projects within the context of Österreichische Forschungsförderungsgesellschaft mbH (FFG).

Funds in the amount of EUR 9.4 m were granted due to the Funding Agreement 2015–2018 with the Federal Ministry for Transport, Innovation and Technology (bmvit). In the reporting period, JOANNEUM RESEARCH has achieved revenues in the total amount of EUR 1.0 m from the Federal Ministry for Transport, Innovation and Technology (bmvit).

The imputed economic share in the shortened financial year 2016 amounts to EUR 6.1 m and thus exceeds the targets of the Financing Agreement with the Province of Styria.

# Management Report

## **NanoTecCenter Weiz Forschungsgesellschaft mbH (NanoTecCenter Weiz)**

At the beginning of the shortened financial year 2016, NanoTecCenter Weiz, which was the sole property of JOANNEUM RESEARCH, has merged retroactively with JOANNEUM RESEARCH and was integrated in the MATERIALS institute with the decree of the General Assembly from 18 November 2016.

### ➤ **I.4.1 Financial position**

The company's asset and financing positions developed as follows:

On the reporting date of 31 December 2016, JOANNEUM RESEARCH indicated balance sheet assets in the amount of approximately EUR 53.6 m (previous year: approx. EUR 51.3 m), which consist of fixed assets in the amount of EUR 16.5 m, current assets (including prepaid expenses and deferred charges) in the amount of approximately EUR 35.1 m and trust assets in the amount of approximately EUR 1.9 m.

On the reporting date of 31 December 2016, the equity amounted to kEUR 8,955.9 compared to the previous year (kEUR 8,649.3). Equity including investment grants amounted to approximately EUR 10.8 m (of which approximately EUR 1.82 m were investment grants) or 20% of the total assets on the balance sheet compared to approximately EUR 10.4 m or 20% of the assets on the balance sheet in the previous year. Third-party capital (including deferred income and trust liabilities) increased by approximately EUR 1.9 m to approximately EUR 42.8 m (previous year: EUR 40.9 m) and amounts to 80% (previous year: 80%) of the total assets on the balance sheet.

The cash flow from the result as the sum of the generated annual profit and the income and expense items (internal financing potential of the company) amounts to approximately EUR 1.6 m in the shortened financial year 2016. The working capital (current assets minus short-term third-party capital) amounts to approximately EUR 6.1 m (previous year: approx. EUR 4.5 m).

No derivative financing instruments were deployed in the lapsed shortened financial year 2016.

The financial instruments identified in the balance sheet are the object of the company's general risk management, which is recorded via bookkeeping and balancing methods.

### ➤ **I.4.2 Earnings position**

The operating performance including activated own contributions and other operational income without shareholder contribution amounts to approximately EUR 16.5 m (previous year: approx. EUR 38.9 m) in the shortened financial year 2016.

67% of the operating performance consists of domestic revenues and 33% of foreign revenues. The portion of operational performance allotted to Styria amounts to 16% and remains unchanged compared to the previous year.

The inventory of not yet invoiced services has decreased by EUR 0.6 m compared to the previous year and amounts to approximately EUR 8.8 m as of 31 December 2016.

Expenses in the amount of approximately EUR 20.6 m (previous year: approx. EUR 47.6 m) consist of personnel expenses including statutory social security contributions, voluntary social contributions, the allocation for pension provisions (of former CEOs), severance payments in the amount of approximately EUR 13.5 m (previous year: approx. EUR 28.0 m), costs for materials and other purchased services in the amount of approximately EUR 1.7 m (previous year: approx. 3.2 m), depreciations in the amount of approximately EUR 1.2 m (previous year: approx. EUR 2.5 m) as well as other operating expenses in the amount of approximately EUR 4.2 m (previous year: approx. EUR 13.9 m).

The self-financing level (operating performance/sum of expenses) is 80% on the reporting date. Shareholder contributions from the Province of Styria, the Province of Carinthia via Kärntner Betriebsansiedlungs- und Beteiligungsgesellschaft m.b.H. (BABEG) and the Funding Agreement with the Federal Ministry for Transport, Innovation and Technology (bmvit) are essential components of company financing and ensure the fulfilment of the company contract.

# Management Report

The company closes the shortened financial year 2016 with earnings before tax of kEUR 40.4 (previously earnings from ordinary activities). The net profit amounts to EUR 508.771,61 while taking income and revenue tax in the amount of EUR 876.00, the release of free revenue reserves of EUR 101,102.31 as well as the profit brought forward from the previous year in the amount of EUR 448,938.15 into account.

## ➤ I.4.3 Investments

In the shortened financial year 2016, approximately EUR 1.5 m (previous year: approx. EUR 3.1 m) were invested in the area of tangible assets (scientific devices, equipment for electronic data processing, operating and office equipment, land including buildings).

## ➤ I.4.4 Human resources

On the reporting date, the number of employees is 445 (163 women and 282 men), +3.73% (+5.84% women and +2.55% men) compared to the value from the previous year. This corresponds to 378.1 full-time equivalents as of 31 December 2016 and thus indicates an increase of approximately 3.25% compared to the previous year.

There were 80 entries (35 women and 45 men) and 64 exits (26 women and 38 men) in the reporting period; thus, a fluctuation of approximately 14.38% (women 15.95% and men 13.48%) was recorded for active employees, a lower value compared to the previous year (18.65%).

The average employee age is 40.5 years and has only slightly changed compared to the previous year (41.2 years).

As of 31 December 2016, the proportion of university and university of applied sciences graduates amounts to 68.54% of which 31.15% are women; the proportion of Matura graduates is 20.22%.

On the reporting date, there were 9 apprentices, 5 females and 4 males in training at JOANNEUM RESEARCH.

During the reporting time frame, the company had a total of 15 interns (12 women, 3 men) who completed their mandatory internships within the context of their education at universities of applied sciences, universities and international exchange programmes. Moreover, 15 students (7

women and 8 men) were given the opportunity to write their diploma theses and dissertations within the context of their service at JOANNEUM RESEARCH in cooperation with their respective universities.

## II. Report on the expected development of the business and risks faced by the organisation

### ■ Economic and political framework conditions for research and development (R&D)

Distinctive changes in the worldwide economic development are presently not foreseeable for the calendar year 2017. A combination of stagnant economic development in connection with continued and new insecurity factors (crises hot spots in the Middle East and Africa, Brexit negotiations, new US president) dominate international trade relationships and allow little room for significant and sustained economic recovery. Some tendencies, for example presently stabilising raw material prices, suggest a timid positive development for the world's economy in the coming years.

According to current prognoses, real growth of the gross domestic product (GDP) of 1.5% is expected for 2017 and 2018 (WIFO Monthly Report 1/2017) in the eurozone compared to the previous year. While some countries, in particular Germany (low inflation rate and low unemployment), have exceeded expectations in some areas, other national economies, e.g. Italy, give cause for sustained concern due to the absence of economic reforms.

For the business location of Austria, a real annual growth rate of 1.5% has been predicted for 2017 and 1.4% for 2018 according to WIFO; these figures are based on the gross domestic product. Besides sustained strong consumerism of private households, the main factors for this trend are the somewhat more beneficial economic situation in various sectors, in particular in the service sector and in construction as well as the expansion of the gross fixed capital formation. Exports remain a factor that hardly contributes to economic growth (WIFO Press Release from 28.12.2016 and 31.01.2017).

# Management Report

In an EU-wide comparison, Austria takes third place with a research ratio of 3.07% in the year 2016 behind Finland and Sweden and ahead of countries such as Denmark or Germany (STATISTICS AUSTRIA Press Release 11.262-073/16). This corresponds to annual expenses for research and experimental development (R&D) in Austria of approximately EUR 10.74 billion. However, the development of the research ratio has stagnated compared to 2015 (3.1%).

## ■ Shareholder contribution Kärntner Betriebsansiedlungs- und Beteiligungsgesellschaft m.b.H. (BABEG)

The contract for granting shareholder contributions between BABEG and JOANNEUM RESEARCH envisages a term until 31 December 2020.

## ■ Shareholder contribution Province of Styria

The provincial government of Styria has decided to grant JOANNEUM RESEARCH a shareholder contribution in the amount of EUR 7.5 m in 2017 for the fulfilment of targets determined in the company contract.

The continuation of the agreement for granting shareholder contributions is currently being negotiated with the Province of Styria for the years 2018 to 2021.

## ■ Funding Agreement with the Federal Ministry for Transport, Innovation and Technology (bmvit)

The Funding Agreement 2015-2018 was signed on 13 July 2015 between the Federal Ministry for Transport, Innovation and Technology (bmvit) and JOANNEUM RESEARCH. The Federal Ministry for Transport, Innovation and Technology (bmvit) provides funds according to the Funding Agreement 2015-2018 in the total amount of EUR 9.40 m for a total project cost of approximately EUR 11.02 m for basic research projects.

Shareholder contributions with the Province of Styria and Kärntner Betriebsansiedlungs- und Beteiligungsgesellschaft m.b.H. (BABEG) as well as the Funding Agreement with the Federal Ministry for Transport, Innovation and Technology (bmvit) are essential financing instruments for JOANNEUM RESEARCH.

## ■ Risks and prospective development

The framework conditions in the promotional landscape are becoming increasingly demanding both nationally and internationally as effective promotional rates are decreasing and competition is becoming increasingly fierce.

A stable earnings position for the company is assumed for the financial year 2017.

## ■ IT security at JOANNEUM RESEARCH

IT systems of companies and critical infrastructures are increasingly threatened and under attack. In particular, fraudulent activities are causing enormous (financial) damage due to the lack of IT security measures.

Therefore, JOANNEUM RESEARCH has increased and further developed its security measures in IT, controlling and internal business processes in order to be able to react appropriately to such threats. At JOANNEUM RESEARCH, measures for IT security are based on processes defined in the quality management system (QM system).

JOANNEUM RESEARCH has vast and comprehensive expertise in IT. IT security measures are continuously adapted to the latest threats, and utilised software is continuously updated in order to block intrusion pathways. Employees as well are informed and sensitised to this topic on an on-going basis.

# Management Report

## III. Report on research and development

### ■ III.1 Research units

#### ➤ MATERIALS – Institute for Surface Technologies and Photonics

*Activities planned for the financial year 2017:*

The currently good order position, in particular a significant increase in commissioned research projects provides a well-founded basis for proactive further development of the research unit. The goal for the financial year 2017 is to strengthen our national and international reputation as one of the leading research units for nanotechnology, surface technologies and photonics. The new organisation structure based on four research groups outlines the course for this endeavour. Publications in renowned scientific journals are to be intensified and accelerated. Furthermore, partnerships with universities, universities of applied sciences and industrial companies are to be expanded and established within the field of 3D metal printing.

#### ➤ HEALTH – Institute for Biomedicine and Health Sciences

*Activities planned for the financial year 2017:*

HEALTH has a strong local, national and international network within scientific and economic institutions as well as among players in the life sciences field. In the financial year 2017, HEALTH, on account of strategic cooperation, can present itself as an interdisciplinary provider of total solutions in the areas of medicine, pharmacy, medical technology and health-services research within the health-care sector. HEALTH is actively involved in projects for the pharmaceutical industry, but also for the public sector while utilising its key technologies such as OFM, metabolomics, data management, etc. Studies on market opportunities, pre-clinical and clinical studies on the effects of medications and issues related to cost reimbursement, clearance analytics for production and market monitoring are among the focal points.

#### ➤ DIGITAL – Institute for Information and Communication Technologies

*Activities planned for the financial year 2017:*

DIGITAL is working on an R&D portfolio that encompasses web and Internet technologies, signal processing in the areas of image, video and acoustics as well as remote sensing, communication and navigation technologies in essential social and economic areas such as transport, security and health. In the financial year 2017, DIGITAL will further expand its portfolio based on technological competences and increasingly seek out partnerships with industry for marketing and development. In general, DIGITAL pursues the goal of developing technologies in all business fields into innovative products or services with appreciable returns. This is why strategic partnerships with industry and commerce will be increasingly expanded.

#### ➤ POLICIES – Institute for Economic and Innovation Research

*Activities planned for the financial year 2017:*

In the financial year 2017, POLICIES will continue its activities geared towards increased scientific output. As security for its competence basis, POLICIES is especially striving for an expansion of new analysis methods that rely on large databases (big data). The goals for the financial year 2017 are to establish a sustainable cooperation track with private and public companies, in particular in the focal points of research as well as continuing and further developing existing project tracks with companies. In the financial year 2017, the institute will, first and foremost, enhance the business field of user-oriented technology development and develop projects in this area.

#### ➤ ROBOTICS – Institute for Robotics and Mechatronics

*Activities planned for the financial year 2017:*

In the financial year 2017, the consistent advancement of practically relevant expertise will, in the medium and short term, provide a broadly structured economic activity along the entire robotics value chain and in mechatronics in general. The institute's structural activities also incorporate targeted, complementing basic research in order



# Management Report

to sustainably secure a strong theoretical foundation for the required application competence. In the financial year 2017, ROBOTICS will maintain the institute's focal points in the areas of human-robot collaboration, coexistence, robot safety (safety and security) and specialised robotics and complement these areas with safety-oriented gripping technology, mobile manipulation and application-oriented artificial intelligence.

## ► Centre for Climate, Energy and Society

*Activities planned for the financial year 2017:*

In the financial year 2017, collaboration with existing cooperation partners will be intensified, in particular with preferential business partners. Calls and programmes from promotional research are to be increasingly serviced together with these industry partners and partners from public administration (preferential policy partners). The target group consists of local players with high ambitions as well as companies from the energy sector or climate-sensitive sectors (insurance).

As of 2017, the scientific profile will be essentially characterised by the establishment of the »LIFE Doctoral Programme«, which principally envisages a three-year employment for scientific employees who are working on their doctorate.

In accordance with the further development of the R&D portfolio, the area of 3D printing of the MATERIALS institute at the Niklasdorf site and the area of (partially) automated driving at the DIGITAL institute, among others, will be further expanded in the financial year 2017 in cooperation with industry and universities on-site. The content structure of the ROBOTICS institute in Klagenfurt will be continued as planned in close internal cooperation and coordination with Carinthian businesses and research partners. The existing high-quality research infrastructure as the basis for scientific activity will be continually renewed and improved. Amongst others, replacement investments have begun at the HEALTH institute in the financial year 2017, and moving into the new LIFE centre in the Science Tower expands research opportunities. International activities will

also be continued with the participation of POLICIES at the »Joint Institute for Innovation Policy« (JIIP) in Brussels as well as by shaping Austria's positions in regard to the 9th EU-Framework Programme.

Involvement in new initiatives such as »Silicon Austria« and the Styrian-Carinthian initiative »Silicon Alps – Microelectronics Cluster« will also be advanced and provide input for further content-related portfolio developments as well as open up new opportunities for the company as a whole.

Graz, 3.3.2017



**Prof. Dr Wolfgang Pribyl, MBA**  
Chief Executive Officer

## Contact Information

### Board of Management

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### Corporate services

- AGF – Assistance to the CEO  
and Internal Coordination
- INR – Internal Audit
- PEM – Human Resources  
and Training
- IUR – Legal
- ZQS – Central Quality  
Assurance
- SFE – Safety, Health  
and Ergonomics

### Corporate departments

- STP – Strategic Planning
- IMM – Innovation Manage-  
ment and Marketing
- FLA – Future Lab
- FCO – Finance and Controlling
- RJZ – Data Centre
- IFS – Infrastructure und  
Facility Services
- PRM – Public Relations &  
Marketing

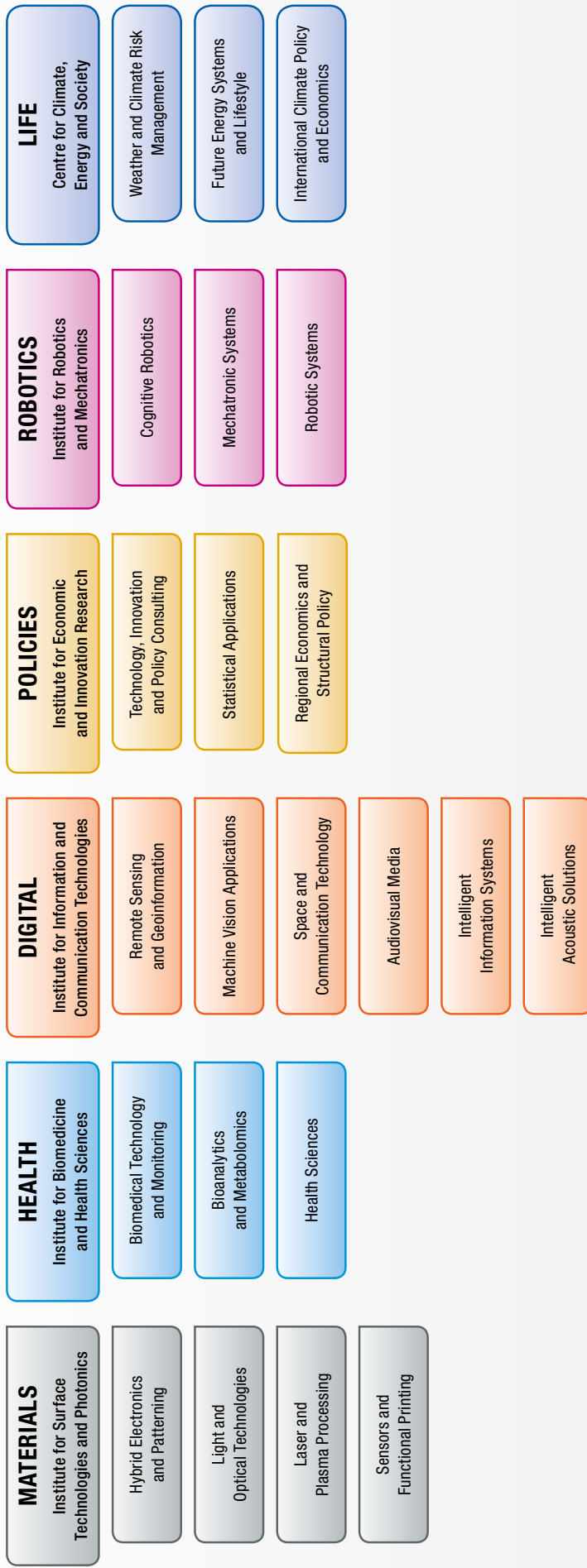
# JOANNEUM RESEARCH Forschungsgesellschaft mbH

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prn/alg 16324-2



## Research Units



## Equity Holdings

| Affiliated Company   | Shareholdings   | In the frame of COMET K1 programme  | In the frame of COMET K2 programme   |
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|  |   |   | <ul style="list-style-type: none"> <li>ACIB GmbH</li> <li>Kompetenzzentrum – Das virtuelle Fahrzeug, Forschungsgesellschaft mbH</li> <li>Materials Center Leoben Forschung GmbH</li> </ul> |

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