



Use the digital transformation.
For country and people.

digi report

Report on the progress of digitalization
in Lower Austria

Examples of recent projects and 2020
in retrospect



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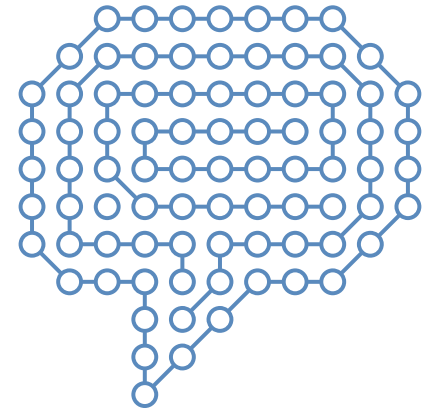
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Forewords



Exploiting the opportunities of digital transformation in a sensible way

The corona pandemic has been a major challenge for us in the past year and is still part of our lives. Yet, against all odds and in spite of having to do without a lot of things, this time has turbo-charged the process of ongoing digitalization. The benefit of this, of course, was and still is that the Province of Lower Austria has already elaborated a digitalization offensive and is actively helping shape the process of digital transformation. With a clear plan in view, the Provincial Government of Lower Austria has managed successfully to yet increase the speed of implementation of digital changes as regards matters of administration. The digi report for 2020 also illustrates this with more than 40 key figures and indicators.

Johanna Mikl-Leitner
Governor of Lower Austria



New digital world as the key to success

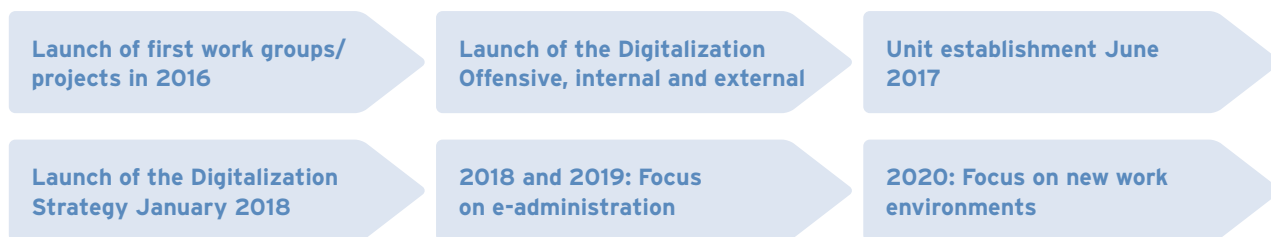
Once again, the digi report provides insight into the large variety of more than 30 innovative projects and facts within the framework of Lower Austria's digitalization strategy. Many of the sample projects have substantially contributed to make work from home possible even during the lockdown period. For this purpose, new applications, platforms and IT applications have been established, possibilities for working from home have been provided, and a multitude of web seminars and online meetings has been held. This has also made us forge new, partly more effective paths the implementation of which have never seemed feasible before. Digitalization has reached a comprehensive level. I am confident that we'll continue making Lower Austria future-proof by establishing long-term, innovative procedures!

Jochen Danninger
Member of the Provincial Government

1. Implementation of the Digitalization Offensive in 2020

The Digitalization Offensive provides the ideal spatial and technical-scientific requirements to utilise digitalization in Lower Austria and, by identifying synergies, establish strong partnerships and a network that is successful in terms of both economics and science.

Approach



Since 2016, work groups have been dealing with the aspects of digitalization and have initiated several projects. The digitalization offensive that was started in this context utilised a holistic concept to involve stakeholders both within and outside the sphere of government administration. In 2017 the office for digitalization was founded, and in this regard the topic spectrum was enhanced to the digitalization of the administrative sector. An extensive exchange of views, also involving consultation with academic experts, resulted in the launch and consequent implementation of the Digitalization Strategy for Lower Austria in early 2018.

Emphasis was placed on digital administration in 2018 and 2019. In 2020 the focus was placed on **establishing new work environments**, in order to meet the given requirements. The progress of the digitalization process is being monitored by an **internal expert advisory board** that assesses the results generated by subject groups, provides recommendations and proposes measures. In order to expedite the **networking and exchange at EU level**, the Department of Economic Affairs of Lower Austria is involved in several EU projects. These insights are also integrated into the digitalization process.



Interreg- Europe project: Next2Met

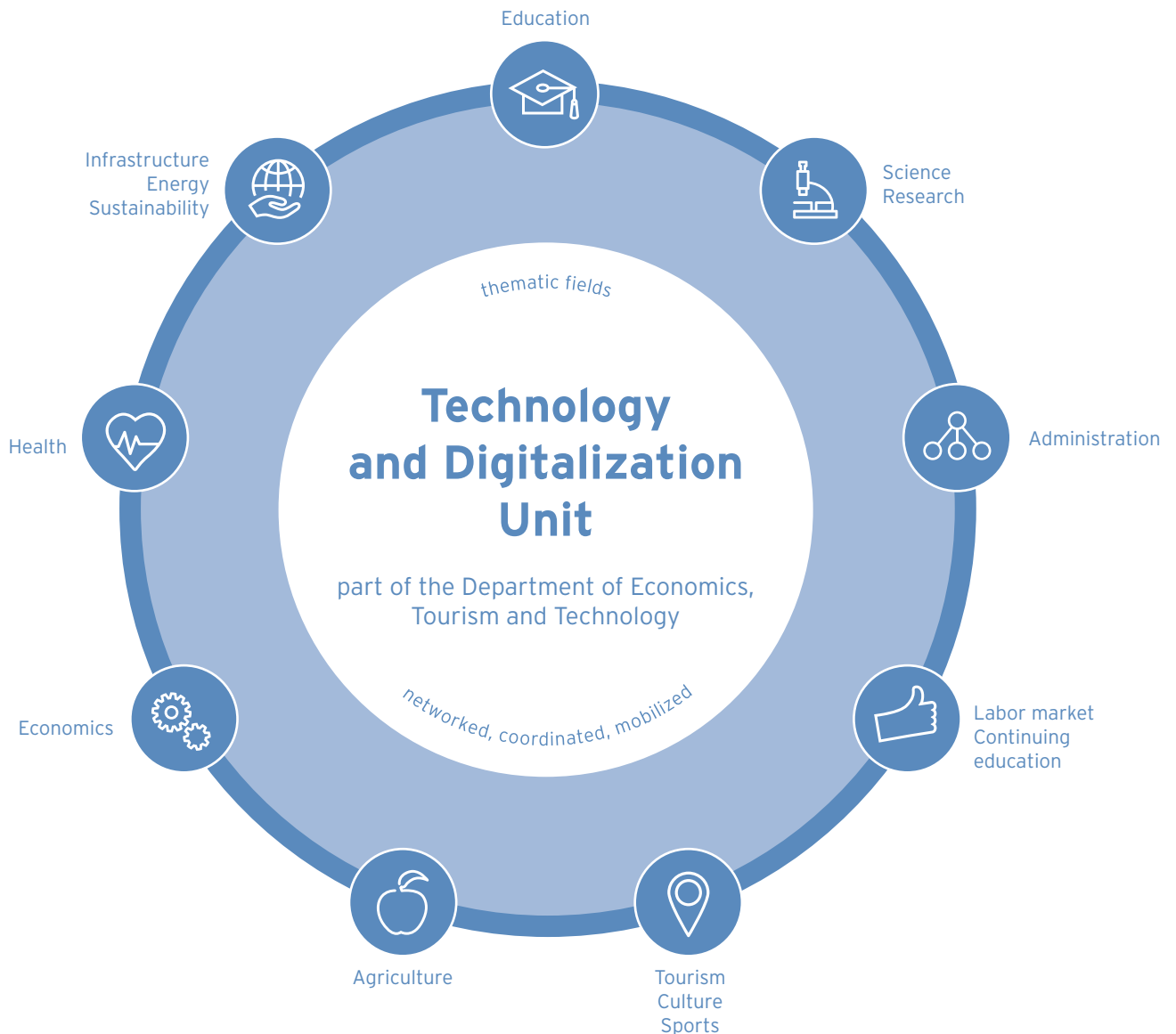
Next2Met identifies established digital practices from the respective partner countries and exchanges these practices among the countries, thus enabling the countries to learn from one another. Based on these insights, an individual action plan is developed for each region, the purpose of which is to improve the procedure and the financing instruments. Duration: August 2019 to 31 January 2023.

Technology and Digitalization Unit

The Technology and Digitalization Unit was established in the Department of Business, Tourism and Technology at the Office of the Lower Austrian Provincial Government, in order to coordinate the various digitalization projects being undertaken by the Province of Lower Austria.

Its main mandate is to develop and implement the Province's Digitalization Strategy. The Unit brings together all internal and external stakeholders in the various fields of activity so as to create a forum for working jointly

on the digital transformation process. Administration-related work groups are busy developing concepts for the efficient and effective e-administration of tomorrow. As a coordinating entity, the Technology and Digitalization Unit provides the stimulus for innovative projects and provides a platform through which information on examples of best practice can be disseminated. Flagship projects have demonstrated the potential that Lower Austria will be able to exploit with the help of digitalization.



Focus 2020: New work environments

The corona pandemic has significantly increased the implementation speed of digital transformation in work processes and structures, thus ensuring that work could still be continued reliably even whilst the containment measures for the pandemic were carried out. This gave way to the inspiration of a profound organisational and cultural change.

Lockdown – swift IT solutions within the Provincial Administration

The Provincial Administration of Lower Austria has responded rapidly to the new challenges. Within the shortest time possible, the Department of Management and Administration/Information Technology and the Health Agency of the Provincial Government have found and refined IT applications, so as to keep the Provincial Government's Administration Sector running. In the following you'll find some examples:

60 % of the 7,500 users of Lower Austria's Provincial Administration staff worked from home during the 2020 lockdown

The high degree of digitalization has made it possible for them to practically "replace" their workplaces by virtual workplaces on a one to one basis. All documents in files and 150 business applications can be accessed via the portal. The only two things required are Internet access and the mobile phone signature for secure registration on the portal.

129,277 digital office appointments were allocated to customers in 2020

Electronic appointment management has made it considerably easier to re-open offices of the Provincial Administration to customers after the first lockdown. By the targeted access control of the administrative buildings, gatherings of people could be prevented. In addition to the allocation of appointments in offices in 2020, also 29,349 appointments for COVID-19 testing and flu vaccinations were organised by the administration staff.

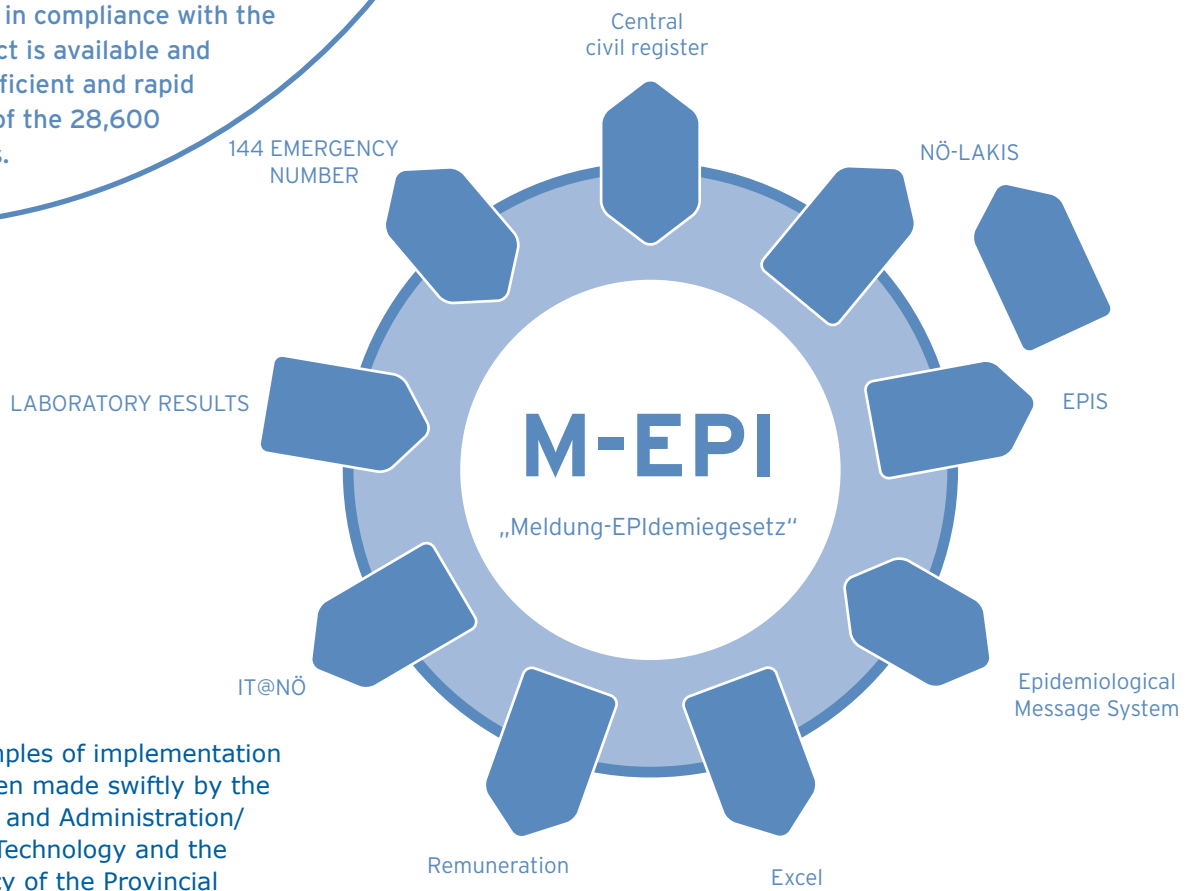
At
<https://noe.gv.at/digitalisierung>

More information relating to digitalization in Lower Austria

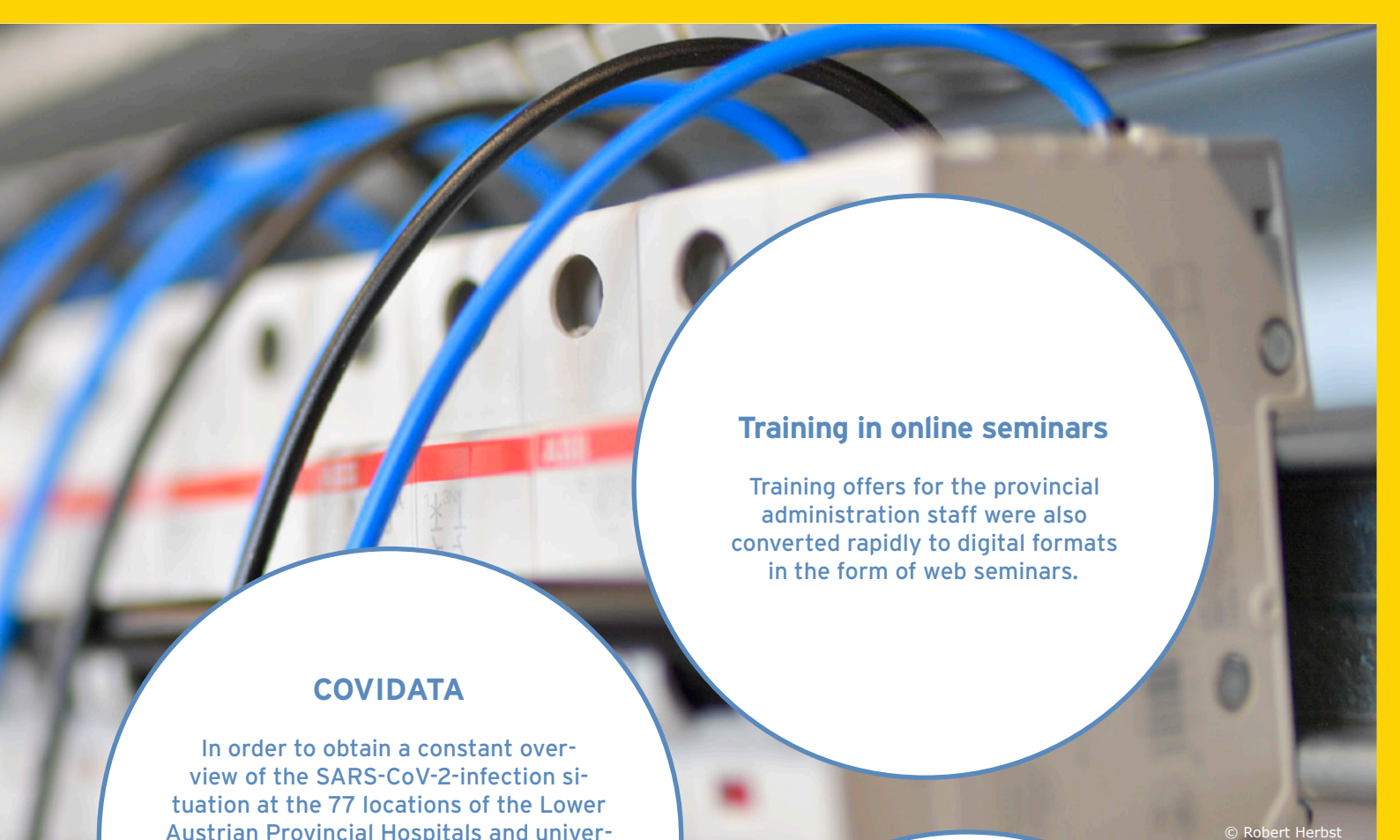
Continued on pages 8 and 9

7 development days to regular operation: M-EPI "Meldung-EPIdemiegesetz" (Notification Epidemics Act)

With M-EPI "Meldung-EPIdemiegesetz", the LAD1-IT department developed an IT solution in seven days for the Provincial Administration of Lower Austria, by means of which public health officers and district administration authorities can access vital real-time data for fighting the COVID-19 virus. This specialist application, tailored to the requirements of the Lower Austrian Sanitary staff unit and the staff units of the district administration authorities, provided for a high degree of automation in terms of the data management of approx. 500,000 persons by the generation of 320,000 assessments in 2020. Numerous interfaces to the emergency number 144 and to the EMS system of the Federal Government allow for data transfers and continuous processes. A major database for the assessment of remuneration applications in compliance with the epidemics act is available and allows for efficient and rapid processing of the 28,600 applications.



Further examples of implementation that have been made swiftly by the Management and Administration/ Information Technology and the Health Agency of the Provincial Government.



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COVIDATA

In order to obtain a constant overview of the SARS-CoV-2-infection situation at the 77 locations of the Lower Austrian Provincial Hospitals and university hospitals, care and nursing facilities, Lower Austria relies on the "COVIDATA" database system that was designed in the Provincial Health Agency of Lower Austria.
See page 29

Training in online seminars

Training offers for the provincial administration staff were also converted rapidly to digital formats in the form of web seminars.

Automatic notification of COVID-19 test results to the EMS of the Provincial Government

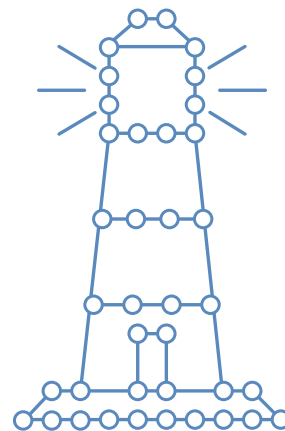
Since the automatic notification to the Epidemiological Message System has been introduced at the end of November 2020, the hospital staff has been spared the manual registration of more than 30,000 notifications per month. At the same time it was ensured that the public health authorities receive the necessary notifications promptly. See page 25

800-900 video conferences every day

Video conferences additionally provided for the necessary, direct exchange of information in the Lower Austrian Provincial Administration.

Status quo of the digi contest's winning projects

At the digi contest in 2019, all state employees were given the opportunity to hand in project concepts with regard to the subject of digitalization. From a large range of concepts, four winning projects were selected. Since then, the project concepts of the first digi contest winners were given priority with regard to implementation. What has happened so far:



noegis-mobile/ geoinformation micro apps for citizens and state employees

*Submitted by: Georg Ramler
Implementation: Georg Ramler,
Josef Simetzberger*

The aim of this project is the development of a software ecosystem on the basis of which it will be possible to generate micro apps that can be used by citizens and state employees. This will mean that it will be possible to disseminate geoinformation in real time and irrespective of location through mobile devices. This will for instance allow citizens to report cases of road surface damage via mobile phone with a photograph, forest rangers can record, document and geo-reference notifications on site, or water control supervisory authorities can record damage to bodies of water directly on site, document it by means of photos and initiate the necessary action immediately.

#Current status: On the basis of the noegis-mobile/geoinformation micro apps, the design of a mobile control program for the systematic inspection of water bodies was started. The app can access the GIS-based water status data in a mobile fashion and without having to be online and document all legally required supervisory activities with regard to the control of water bodies. The data is integrated into the WIS NÖ¹ or continuously synchronised using data that is already available. In the course of this implementation, a modular, component-based

microapp system with interfaces is to be elaborated in the IT infrastructure of the Province of Lower Austria. In mid-2021, the inspection app is to be put into operation for the Lower Austrian supervisory authorities for water control.



Virtual outpatient concept in the Provincial Clinic Mauer – Department for addictive disorders

Submitted and implemented by: Christian Korbel

This virtual outpatient concept is designed to make it easier for individuals suffering from alcoholism to gain access to care and counselling, without the necessity of travelling considerable distances to obtain this. Furthermore, communication with digital media is to be simplified, and personnel resources are to be utilised more efficiently.

#Current status: The pilot projects with the mobile addiction counselling via video telephony are running successfully with several Caritas addiction counselling centres. In addition, video conferences between the provincial clinic Mauer and the university hospital Tulln take place at regular intervals, in which patients also participate and which are used to arrange the further treatment schedule

¹ WIS = Niederösterreichisches Wasserinformationssystem



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Digitalization of all veterinary inspection processes

Submitted and implemented by: Christina Riedl, Johannes Graf, Alois Nigl

The electronic control recording (ELKE) makes it possible to record all official veterinary inspections in a large variety of fields (cross compliance, animal protection, animal feed, etc.) in an unbureaucratic and centrally digital fashion and import them into the databases of AGES², the ministries, statistics Austria and AMA⁴. For inspections on site, the controlling bodies can access all background information and the current checklists online and offline. The inspection results are delivered electronically to the persons checked.

#Current status: In 2020, the programming and commissioning of the application on test servers was effected. The first checklist went online as of the 1st January 2021. 40 tablets were requested for official veterinarians. The data recorded on the tablet is transferred directly to AGES² and to VIS³. The interface to AMA⁴ has been established, and data is now exchanged successfully. The program is rolled out in the form of modules for further inspections. The next steps are the finalisation of cross-compliance and hygiene monitoring. Since March 2021, the "Feed control" module has been implemented in Lower Austria and in other federal provinces.



Electronic land planning concept (eFWP)

*Submitted by: Doris Schober-Schütt
Implementation: Antonia Müller*

With the electronic land planning concept, land planning processes throughout Lower Austria are to be digitalised and automated as far as possible. The core of this concept is a platform that facilitates the communication and processes between the stakeholders (municipalities, civil engineers and engineering offices as well as the Province of Lower Austria with multiple roles) in the framework of procedures for the amendment of the regional planning programme. The consistent use of validated geodata constitutes the centre of digital reorientation. This ensures a high data quality of spatial analyses for technical inspections and provides the basis for the creation of digital land utilisation plans. For the public, the legally reliable information regarding the currently valid designation of areas as well as historic zoning states will be accessible via the Lower Austria Atlas or a legal platform.

#Current status: The technical and legal procedural assistance (specification sheet, etc.) has been commissioned. In preparation for the invitation to tender, a market survey (testing of the market's power spectrum) has been carried out.

² AGES = Austrian agency for food security
³ VIS = Veterinarian Information System
⁴ AMA = Agricultural Market Austria

2.

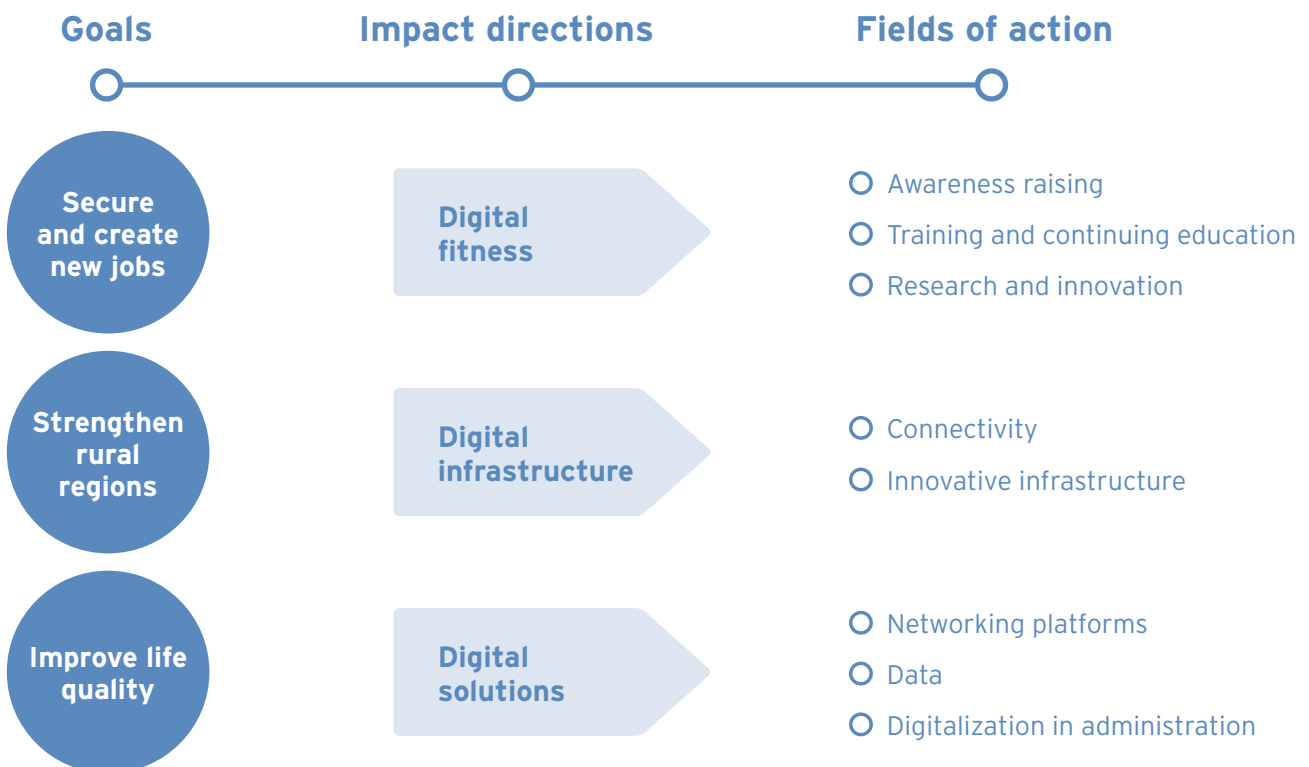
The Digitalization Strategy of Lower Austria

“Use the digital transformation. For country and people.”

The Digitalization Strategy of Lower Austria has been formulated taking into account the existing diversity of business, structural and geographical conditions in the province. The underlying objectives of the Digitalization Strategy are to secure and generate jobs, to boost rural regions and to improve the quality of life of the population in general. The purpose of the Digitalization Strategy is to create digital opportunities for individuals and organisations. In order to achieve these objectives, it is essential that the population, businesses and public services are made “fit for the future”. This will involve

comprehensive establishment of the infrastructure necessary for the development and subsequent exploitation of digital innovations and solutions. Hence, within the formulated directions of impact “Digital fitness”, “Digital infrastructure” and “Digital solutions”, the spotlight will be placed on eight fields of activity.

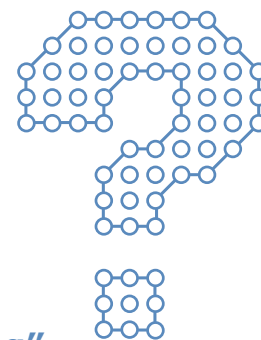
Events are being organised, presentations given, contests held and Digitalization projects designed and implemented in the case of each of these eight fields.





3.

The eight fields of action and innovative projects



Digital fitness

Field of action "Awareness raising"
The field of action of "Awareness raising" includes the confrontation of current topics and trends, the possibilities and opportunities of the digital transformation and the integration of all age groups.



Core indicators and results 2020

212

participants at the "digi4KMU" funding package online seminar

> 180

Short clips in the riz up DIGITHEK

> 110

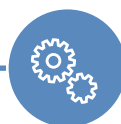
participants were given the opportunity for further training in the riz-up-Business-Power-programme

~ 70

visitors for guided tours and events of FOTEC⁵

6

workshops (via DIH-OST) at FOTEC⁵



Selected events

Even in times of the pandemic, a great number of (virtual) events took place in 2020.

In the following you'll find some examples:

- **A series of web seminars regarding the topic of working from home** including free-of-charge and publicly accessible online seminars on the subject of "Working from home securely". The twelve-part web seminar series is provided online.
- **Social-Media-Fitness-training for scientists** at the Technopol Tulln with approx. 40 scientists. The training dealt with social media platforms and with the use of scientific networking platforms.
- **ecoplus business lounge** on the subject "Cyber Attack – a guide to self-protection" with numerous experts.
- **11. Regional event of the Business 4.0 initiative** as an online event for the first time. The digi4KMU support package was in the focus of this event.
- **"Zukunftsheuriger" (workshop day) of the House of Digitalization** in the Francisco Josephinum. Some of the central themes that were made the subject of discussion were the house of digitalization, the innovation farm, IoT technologies and AR in the construction sector.

FTI strategy of Lower Austria 2027

The FTI strategy of Lower Austria 2027 defines the basic orientation of the Lower Austrian research, technology and innovation policy until 2027. With regard to the FTI policy, Lower Austria places a strong focus on interdisciplinary and transdisciplinary networking, the opening of science and research to society as well as efficient and transparent funding instruments.



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DIHOST – Digital Innovation Hub OST (Digital Innovation Hub EAST)

The objective of the DIHOST⁶ project is to enhance the transformation ability and increase the transformation speed of the small and medium-sized companies in East Austria towards digital innovation. In 2020, a large number of cooperation projects were initiated and implemented. An example of this is the twelve-part **web seminar series on the subject “Working from home securely”**, in the framework of which free-of-charge and publicly accessible web seminars on the subject of “Working from home securely” were offered on behalf of the Federal Province of Lower Austria and in cooperation with the University of Applied Sciences St. Pölten. The web seminar series is provided online. A further project is meinschaufenster.at in cooperation with the FOTEC⁵ Wiener Neustadt. The platform is a free-of-charge service for small and medium-sized businesses that have to be kept closed due to COVID-19. Further projects can be found at <https://dih-ost.at>.



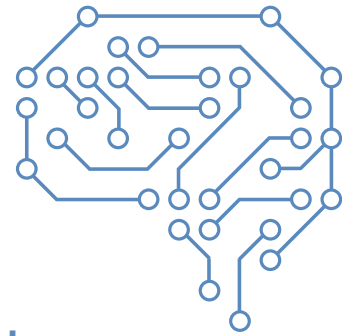
Request for funding Business 4.0 taking the online portal Bakabu as an example

With the request for funding “Business 4.0: commercialisation in the digital age”, both new concepts and the implementation of new procedure, process and service innovations are financially supported. A grant of the eligible costs up to 50 % is allowed. The funding campaign is open to all Lower Austrian companies of the commercial industry. Upon submission, an expert jury decides on the best projects.⁷

One of these sample project is the **online portal Bakabu**. It is the objective to establish a digital audio on demand or video on demand platform as a subscription system. On the platform, the pedagogically worthwhile Bakabu songs used for early language training for children as well as the entire digital content by the Lower Austrian publisher Vermes with regard to the character “Bakabu”, the catchy tune, are to be made accessible. In the meantime, the online portal has been implemented: www.bakabu.at

⁶ Sponsored by the Austrian Research Promotion Agency FFG and the Federal Provinces of Lower Austria and Burgenland

⁷ The request for funding is implemented by the Department of Business, Tourism and Technology, Province of Lower Austria.



Digital fitness

Field of action "Training and continuing education"

In the field of action "Training and continuing education", the transfer of digital skills – already starting at kindergarten age – taking all levels of the population into account.



Core indicators and results 2020

> **50,000**

calls of the "Jugend forscht digital!" (Young digital researchers) YouTube channel

> **2,300**

children and youths participated in 175 online seminars of the "Jugend forscht digital!" (Young digital researchers)

> **75**

online seminars with more than 1,600 pupils at schools in Lower Austria

> **1,500**


measures presented at sciencecenter.noel.gv.at

Young digital researchers! – experiencing science from home

"Young digital researchers!" supports schools with digital educational materials and provides input for learning from home or for leisure activities.

The initiative comprises the following measures:

- On the **YouTube channel "Young digital researchers!"** experiments and explanatory videos are published.
- The **"DIY experiment manual"** comprises more than 40 experiments which can be implemented at home using simple everyday objects. It was designed by the Department of Science and Research and can be ordered free of charge at noe.gv.at/Wissenschaft.
- 75 **web seminars** with more than 1,600 pupils have taken place at schools in Lower Austria. More than 700 children and youths participated in more than 100 web seminars dealing with subjects such as the climate change, household chemistry or astrophysics in their free time.



Online application: Application platform REXX new

With a platform <https://bewerbungen.noel.gv.at/>, the provincial administration of Lower Austria as an employer of diversity allows to specifically apply for a job in the provincial administration. Documents can be uploaded securely and provide a good overview of the field of job applicants for the administration. The “Job alert” feature ensures that no interesting job offer can be missed.

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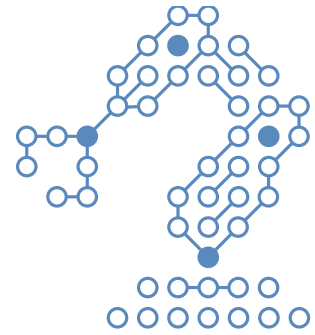
E-learning in the firefighting and safety department of Lower Austria (NÖ FSZ)

By the e-learning offer of the NÖ FSZ, a realignment of the training for firefighters takes place: Open modules such as “Training principles and design of firefighting exercises (AU11/AU12)” will take place as online events and can be accessed at all times by members of the firefighting department – if the corresponding requirements are met and presented. Closed modules such as “Management level 1 (FÜ10)” will take place as blended learning courses, so as to combine the advantages of attendance courses and e-learning. As they can be used anywhere in the world and at all times, the digital offers increase autonomous learning for the trainees and improve networking and the interactive options between trainees and instructors. Currently, the plot modules are being evaluated, the launch of the first modules is scheduled for spring 2021. It is the objective to convert and implement further modules.



New apprenticeship professions with a digital focus

The current technological developments make a structural reorganisation of many apprenticeship professions necessary. The new apprenticeship profession of the **bookbinding technique and postpress technology** takes the technological development due to digitalization and automation, in particular in industrial bookbinderies, printing houses and publishing houses into consideration. The apprenticeship period was extended to three and a half apprentice years due to the new, digital contents. Another new apprenticeship profession can be found in the field of **production measurement technology**: Training regulations in the technical sector only include elements of measurement technology. The apprenticeship profession now comprises the requirements from Industry 4.0 and Big Data, the major focuses of the training being product measurement and production control. So far, there is neither a specialised school-based nor a corresponding dual training.



Digital fitness

Fields of action "Research and innovation"

The field of action of "Research and Innovation" focuses on accelerating the development of new digital options for the creation of technological product, process and organisational innovations. The measures relating to digital fitness are designed to secure jobs and also create new work opportunities.



Core indicators and results 2020

4

Funding initiatives⁹:
digi-4Business,
prototype design,
3D print-bonus,
FTI call

971

Applications for
the digi4Wirt-
schaft funding
package⁸

10,620,451

Euros for grants
for funding projects
digi4Wirtschaft⁸

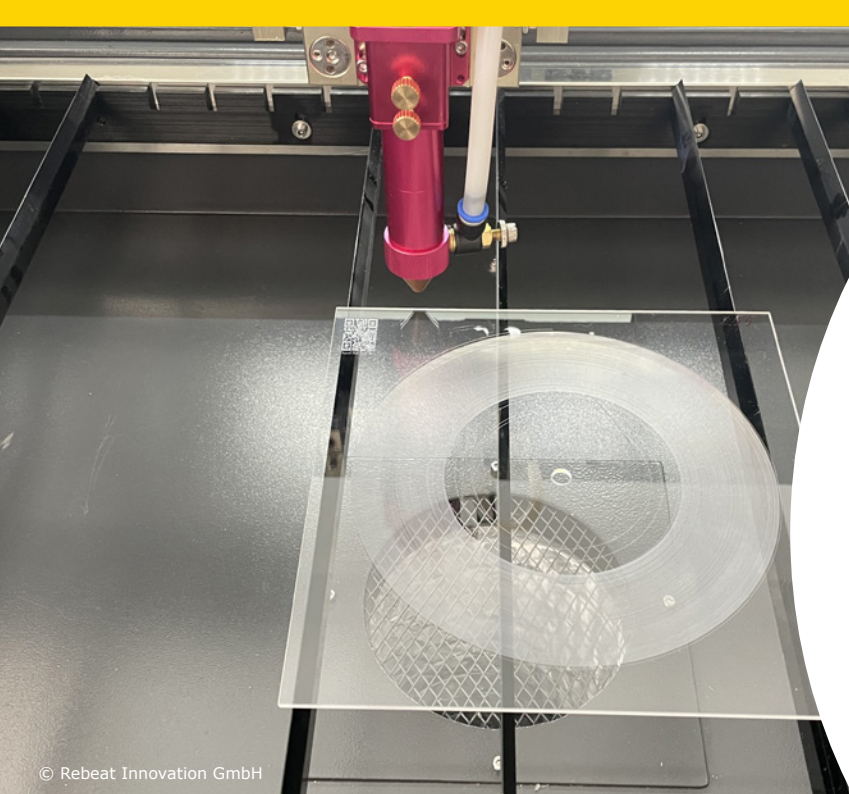
Technology promotion taking the Innovation Farm Wieselburg as an example

It is the basic aims of the Innovation Farm to work out the benefit of innovative technical solutions for Austrian agriculture and to make the new developments more easily accessible to farmers, thus being a major contribution to sustainable agriculture. Practical tests, optimisation and the sharing of modern, technical advances, products and concepts in the fields of both indoor livestock farming and outdoor farming (agriculture, grassland) are the tasks to be implemented. By means of the interaction between manufacturers and research, practicable solutions are to be evaluated for modern farm businesses and are also to be provided to them. The project structure and project development was promoted by the technology funding¹⁰ which focuses on the application-oriented research, development and cooperative innovation projects. The Innovation Farm is subsidised by funds from the federal government, federal provinces and the European Union until the end of 2022.

⁸ Formerly digi4KMU

⁹ The funding initiatives have been implemented by the Department of Economics, Tourism and Technology and by the Department of Science and research at the Office of the Lower Austrian Provincial Government.

¹⁰ The technology funds implemented by the Department of Economics, Tourism and Technology at the Office of the Lower Austrian Provincial Government.



© Rebeat Innovation GmbH

The first step to an “Intelligent road management” in Lower Austria

Digital application with the use of an entirely innovative technology, including the provision of an address service and civil register query, integrated basemap.at and routing function, provides applicants with a proposal for securing traffic obstructions in line with regulations. The application data is automatically assigned to the competent authority. The quality of the applications has been substantially improved, and the administration costs could be reduced.



Support package digi4Wirtschaft taking Rebeat Innovation as an example: Innovative laser technology for vinyl records

In the framework of the digi4Wirtschaft¹¹ support package, Lower Austrian SMEs and major companies are supported with grants, liabilities and counsellings, so as to exploit new business opportunities in the digital world. Rebeat Innovation GmbH has made use of this unbureaucratic and targeted promotion for developing a revolutionary, laser-based production technique for pressing tools. The ordering process of the pressing tools and the transmission of the topography data is to be digitalised and automated more strongly in the future. For this purpose, the data transmitted by the customer is to be provided with a unique ID and engraved into the corresponding substrate with further corresponding project data at the start of production. Engraving barcodes or QR codes makes it possible to follow the production process. This makes Rebeat Innovation GmbH the inventor of the patented HD vinyl technology for the production of a new generation of optimised records that are also backwards-compatible with the record players available today.

¹¹ The support package digi4Wirtschaft is implemented from the business and tourism fund of Lower Austria at the Office of the Lower Austrian Provincial Government, the Lower Austrian Chamber of Commerce and Niederösterreichische Bürgschaften und Beteiligungen GmbH.



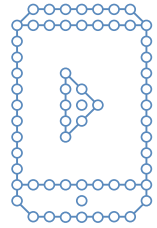
Virtual reality at the Red Cross

In order to train emergency services for major accidents and other “special situations”, mostly elaborate scenarios are re-enacted, scripts are written, and “actors” are made up as injured persons. The pandemic poses severe restrictions to these possibilities. In the context of the collaborative project “MRBC4I” of the ecoplus mechatronic cluster, the Red Cross of Lower Austria developed a virtual scenario together with the University of Applied Sciences in St. Pölten, providing (future) heads of operations with the possibility of immersing in their role. The scenario designed was tested in the framework of a course for chief emergency doctors and evaluated with regard to the criteria of acceptance and learning success. Conclusion: Real training events can be replaced at least partly by virtual ones. The identification of hazards, for instance, can be trained and assessed well by the use of VR scenarios. After the end of the project, the project results, software libraries/applications are made accessible to everyone, in order to obtain a wide-ranging impact that is as large as possible.

Digital infrastructure

Field of action "Connectivity"

By means of connectivity, society, businesses and the state sector will have the opportunity to together discuss the aspect of digitalization and assume responsibility for the implementation of the digital future. With the help of digital management, existing infrastructures will be transformed – taking into account data security and data ownership – into intelligent infrastructures.



Core indicators and results 2020

For
53,200

connections, the bandwidth could be increased.

42,507,333

route calculations on AnachB.at (web and app)



Road Construction GIS Austria

On behalf of the other federal provinces, the Lower Austrian Provincial Government developed an Austrian-wide coordination tool for excavation work, which is provided via the portal group. The objective was the creation of an information system, enabling the central recording of excavation work on Austrian roads planned in the long-term, and in this way facilitating the exchange of information between the developers. The users of this application are primarily municipalities and private firms planning or operating infrastructure networks in Austria. Furthermore, this information system can also be used by all organisations involved to comply with their reporting obligation to the regulatory authority (RTR-GmbH) with regard to construction projects alongside roads which are usable for the communication infrastructure. This information is transmitted automatically to the regulatory authority on a daily basis. The Road Construction GIS will be put into operation step by step as of the 1st quarter of 2021.



Request for funding “WiFi4EU”

With the fourth request for funding, “WiFi4EU”, eight municipalities from Lower Austria have assured themselves EU subsidies. Since 2018, 109 municipalities from Lower Austria have received 15,000 Euros from Brussels. With the WiFi4EU initiative, people are to receive high-quality and free WiFi hotspots in public spaces and administrative buildings in their home towns.

© nÖGIG, Rainer Mirau



Fibre-optic infrastructure: The “Lower Austria Model”

The Province of Lower Austria is the only federal province in Austria to have developed an overall concept for the area-wide extension of an efficient broadband infrastructure on the basis of fibre optics up to the households. In total, almost all 800,000 households and companies can be provided with an efficient broadband infrastructure. However, this will take a joint effort of all players.

Urban areas – supply by telecommunications companies: In densely populated areas, the market is working. Here it can be assumed that traditional telecommunications companies provide for a sufficient infrastructure equipment.

Rural communities – fibre optics up to the house with a private financing partner: For municipalities with up to 5,000 inhabitants, the fibre optics infrastructure company of Lower Austria (nÖGIG) is establishing an open, public and future-proof fibre optics infrastructure. In the pilot phase, already 35,000 households and companies could already be developed. In the current phase,

another 100,000 households are added. As regards the funding, the federal province has agreed on an investment package of €300 m with a financing partner. In 12 municipalities the expansion was started at the beginning of this year, respectively, the start of construction will not be long. For the next step of the expansion in 12 municipalities, which was started at the beginning of 2021, €26 m will be invested. The preparations for further municipalities are ongoing.

Peripheral regions – fibre optics up to the house with an additional €100 m from the Lower Austrian Provincial Government and the municipalities: In June 2020 the Province of Lower Austria decided on further grants of €100 m. These grants supplement the federal funding. This makes it possible to provide another 115,000 households with fibre-optic infrastructure in peripheral regions. Here too, the major prerequisite for the expansion is that the 40 percent hurdle is exceeded.



Digital infrastructure

Field of action “Innovative infrastructure”

The “Digital Infrastructure” strategy is designed to boost rural regions and improve the quality of life in Lower Austria.



Core indicators and results 2020

4,282

e-vehicles newly registered

96

fast charging stations¹² in Lower Austria

1,326

normal charging stations in Lower Austria

25

organisations jointly used 3D printers of FOTEC.¹³

Digitalization of road marking application

So far, using conventional techniques for applying ground marking and carrying out the necessary preliminary marking on the road surface, has involved a considerable amount of time and personnel costs. Digital technologies for the most part make it possible to apply the preliminary marking in an automated fashion. This requires digitalising the road marking for new building projects and maintenance projects in a preliminary step (e.g. for new construction projects via BIM or via the assistance of drones for maintenance projects by Lower Austrian Road Services). The application itself is carried out using an autonomously running robot producing the preliminary marking, automatically applying the preliminary marking on the asphalt at a high speed on the basis of digital planning data and high-precision position technology. The use of this technology leads to an efficiency gain with regard to time, personnel deployment, safety and accuracy – and thus saves costs.

¹² Charging capacity higher than 50 kW

¹³ Forschungs- und Technologietransfer GmbH



As the 4th quarter 2022, LISA.TULLN will start with 5 mobility stations – the stations combining various mobility offers, here in Raggendorf, Weinviertel. © VOR Josef Bollwein

Mobility and pilot project LISA.TULLN

The House of digitalization already contributes to the development of Tulln as a digital model region and Green Smart City. One milestone on this path is an innovative mobility concept for the town. Until the end of 2022, the pilot project LISA.TULLN will create a fast connection to the most important sites in the town with its train stations Tullnerfeld and Tulln and on to Vienna or Linz.



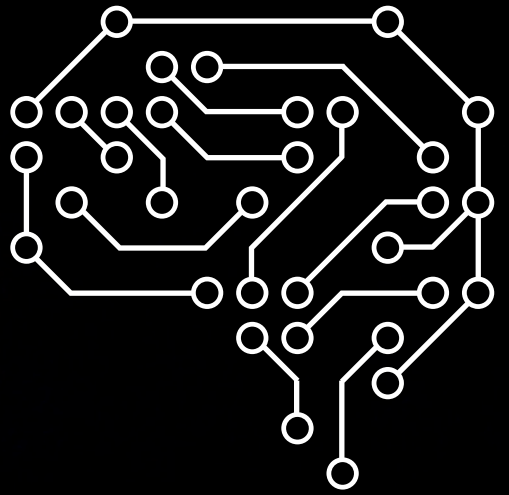
BIM used at the new construction of the Lower Austrian Care and Nursing Centre (PBZ) Korneuburg

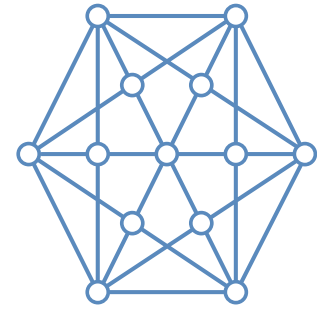
Building Information Modelling (BIM) is a technique that stands for the optimised planning and implementation with the aid of software. Planning is based on a digital building model that offers numerous benefits: All persons involved in the project can participate in the planning work and its implementation. In this process, all current and relevant data is accessible directly and continuously. A spatial representation of map details and a virtual tour through the 3D building model are provided. Furthermore the planning quality as well as cost and date transparency is increased. Planning control is optimised. BIM has been used in a **pilot project for the new construction of the Lower Austrian Care and Nursing Centre**. In the future, BIM is to be used for all construction forms of the federal province.



Completion of the RIS/PACS harmonisation in the Mostviertel region

For the clinics of the Mostviertel health region, a radiological combined system was established, providing full digital support to the seamless, cross-hospital collaboration in the fields of clinical diagnostics and evaluation of medical findings. This innovative and future-proof concept provides patients' images in maximum quality to the doctors establishing the diagnostics and can be easily expanded to other sites of the Lower Austrian Health Agency. Modern web technologies allow for access from any workstation. The system is applied in the radiology, nuclear medicine and cardiology departments. In the Mostviertel region, approx. 250,000 radiological examinations are carried out by more than 70 diagnosing doctors and employees of the medical-technical service every year.





Digital solutions

Field of action “Networking Platforms”

“Networking Platforms” can help stimulate new socio-technological developments, such as improvements to communication processes between the authorities and the public, and facilitate the active involvement of business and citizens.



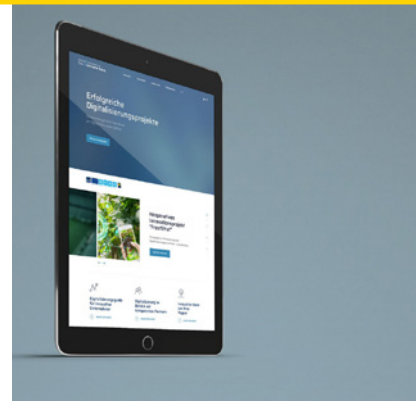
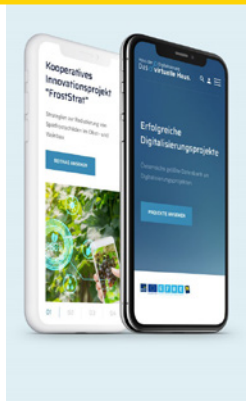
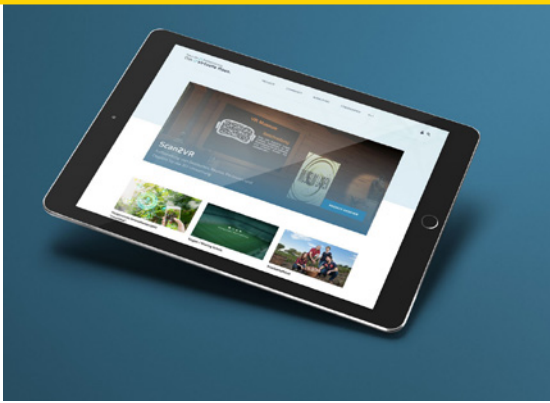
“Lower Austrian Challenge”: The digital sports competition for companies and municipalities

From March to May, the digital competition “Lower Austrian Challenge” determines the most sportive companies, and from July to September the most active municipalities of Lower Austria are identified. Here, the trend towards digital self-tracking is used: By means of the tracking app for the smartphone, the competition participants can determine their activities in the GPS-tracked sport disciplines walking, hiking, nordic walking, running, cycling, bicycle racing, mountain biking and inline skating. By registration to the competition at www.noechallenge.at, the exercising minutes are registered at the same to the companies selected or the municipality’s account. The more people take part, the greater the chance of winning the title. The digital competition that has taken place since 2017 records a continuously increasing number of participants. In the framework of the Lower Austrian Challenge, more than 100 million exercise minutes have already been recorded.



COVID-19 test results: Automatic message to the EMS

Since the nationwide introduction of the Epidemiological Message System (EMS), diagnosed infectious diseases have been reported to the Federal Ministry in Lower Austrian hospitals by manual entry into a web portal. Depending on the pathogen, the recording may vary, however, takes approx. two minutes on average. In regular everyday hospital life, the occurrence of reportable diseases and the corresponding manual recording is a practicable approach. However, the situation has changed abruptly by the COVID-19-pandemic outbreak. Every day, hundreds of entries have to be made by the employees of laboratory institutes at the clinic locations of the Lower Austrian Health Agency. By electronically connecting the corresponding IT systems to the federal system, these entries can now be made in a fully automated fashion. Since the end of November 2020 an average of more than 30,000 automatic EMS messages are sent every month.



© ecoplus Digital GmbH

Digital solutions

Field of action "Networking Platforms": House of Digitalization (HdD)

The programme "House of Digitalization"¹⁴ is a process that includes a network, www.virtuelleshaus.at, and the real House of Digitalization.

Core indicators and results 2020

> **450**

companies in the HdD network

> **1,400**

subscribers to the House of Digitalization on Facebook.

4,200

m² surface area for HdD at Tulln

The network

In 2018 an intelligent, digital network was established, which utilises available know-how and relies on cross-border networking and international cooperation, in order to identify relevant developments in the field of digitalization at an early stage. Partner companies in the network are for instance Microtronics, myProduct.at/Kastner, Schiner 3D Repro, Welser Profile etc. The network is the motor of the overall project.

Examples of best practice from the network:

- The **company Microtronics** from Ruprechtshofen in joint collaboration with Sensor Network Services has developed an information network of special temperature probes, sensors and measuring points, to improve forecasts in the viticultural and orcharding sector so as to detect the hazard of late frost and other hazards to the plants. The **winery Bründlmayer** at Langenlois is already using these frost sensors, which supply regular and closely meshed data to improve the detection of potential hazards.

¹⁴ The program "House of Digitalization" is subsidised by the Federal Government of Lower Austria.

RegioStars award 2020: House of Digitalization among Europe's top 5 projects

Every year, the European Commission honours projects that demonstrate excellence and show new approaches in the regional development with the RegioStars award. The House of Digitalization is one of the five top European projects in the category of "Industrial change for an intelligent Europe".



© Architects Kronaus / Mitterer / Gallister + isochrom

- The **company Gnant** from Wimmersdorf uses 3D-controlled construction machinery with highly sensitive sensors on the blades. In this way, excavation work can be carried out as accurately and quickly as never before.
- The **bakery Weinberger** in Ybbs an der Donau is planning to improve the reliability and profitability of the routes travelled by digitalising the sales tours. This is to produce direct added value for the customers.

The virtual House of Digitalization

www.virtuelleshaus.at:

In 2019, a **virtual House of Digitalization** was established as a cross-sector, structured and virtual platform. As an **information hub** for projects, training courses, funding and news, the virtual house illustrates digital developments with the focus on Lower Austria.

After an **extensive relaunch** with a new design and new functions in January 2021, the online platform is more and more becoming a networking and support tool for persons and companies with digital interests. For this purpose, a **Community Area** was integrated into the virtual house. Here, the users can register, create a new profile and edit and expand this profile. After successful registration, the users can publish their own articles in the various areas, and they can **present their own projects**.

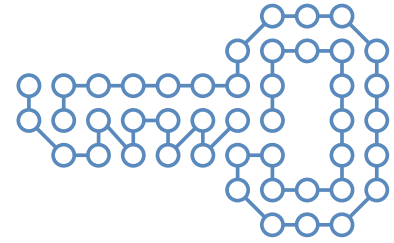
www.virtuelleshaus.at is the online hub of the overall project.

The real House of Digitalization

The real "House of Digitalization" is to become the central contact point for digitalization in Lower Austria and to lend a face to digitalization in Lower Austria as well as make projects, companies and the people dealing with digitalization transparent. On a total area of 4,200 m², in collaboration with ecoplus and the real estate company of the University of Applied Sciences, an architectural highlight at the Tulln campus will be created.

In the building there will be an entrance area with an infopoint, a showroom and event area, an area for the expansion of the University of Applied Sciences Wiener Neustadt, a catering area including an open-air restaurant, office units as well as incubator areas.

The purpose of the showroom is to amaze people, point out the digital possibilities and inspire people to reflect. Every year, an exhibition topic and its mise-en-scène by curators is elaborated.



Digital solutions

Field of action "Data"

The aim of the measures being undertaken in connection with the field of action of "Data" is the development of new business models for the service sector on the basis of improved data utilisation and evaluation.



Core indicators and results 2020

450,000

Proofs of delivery per year are returned electronically step by step and stored automatically.¹⁵

99.9%

of the forms of the Lower Austrian Government are available online

> 35.000

items of the State collections of Lower Austria are provided at www.landessamm-lungen-noe.at



Establishing a database structure for tectonic lines in Lower Austria

Tectonic lines (so-called "faults") are zones of weakness in the Earth's crust. The rock is often strongly fragmented and deeply weathered, so that these zones may have a strong impact on the development and in valley areas on the frequency of falling or sliding rock, i.e. hazards for people and buildings. Following the database structure of the USGS¹⁶, attributes have been assigned to these fault zones (e.g. assignments to higher-level fault systems), improving the usability and interpretability of their properties with regard to their earthquake activity and other properties for the assessment by experts. With the help of the GIS-assisted data record at hand, for the first time it is possible in Lower Austria to assess tectonic lines with regard to their activity ("earthquake hazard") and properties. The GIS¹⁷ data is to be implemented into the IMAP¹⁸, for instance to use them for creating a basis for planning and assessment for infrastructural construction projects (dimensioning with regard to earthquakes, the load-bearing capacity of the substrate).

¹⁵ Rounded figure; concerns the Provincial Administration of Lower Austria

¹⁶ United States Geological Survey or US geological service

¹⁷ GIS = Geo-information system

¹⁸ IMAP is the geographical information service for the Provincial Administration of Lower Austria.



© Michael Liebert

IT security: Secure e-mailing by SEPPmail

With SEPPmail, e-mail contents that are particularly worthy of protection (for instance sensitive personal data in terms of the data protection law) can be sent to external communication partners in an encrypted fashion, so as to transmit information in a state that is unreadable to non-authorised persons. With organisations that also use this product (e.g. BM.I) the encrypted exchange of e-mails is effected automatically for all inboxes.



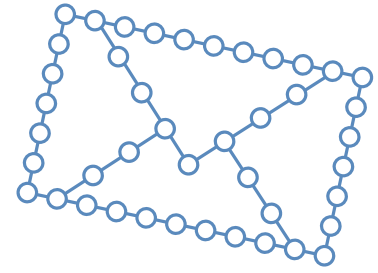
State collections of Lower Austria online and CollectCast of Lower Austria

In order to represent the State collections of Lower Austria, which comprise approx. six million objects and make them known to a wider public, an online collection with 35,000 objects that is continuously extended has been provided since April 2020 at www.landessammlungen-noe.at. The user-friendly navigation and graphically appealing visualisation provide a low-threshold access to interested persons. As a further digital offer, the CollectCast of Lower Austria presents some short, commented videos to provide insights into the twelve areas of the State collections of Lower Austria. The idea for this video podcast was started and developed in spring 2020 during the first lockdown. Since then, 21 episodes have been published, to be found on the YouTube channel "Kultur Niederösterreich FREI HAUS" of Lower Austria and at www.landessammlungen-noe.at.



COVIDATA

In the fight against COVID-19, the Health Agency of the Province of Lower Austria relies in its specially designed database and testing at regular intervals: In order to maintain a constant overview of the rate of SARS-CoV-2 infections in hospitals, nursing homes and care facilities in Lower Austria, the Health Agency of the Province of Lower Austria has developed the "COVIDATA" database system. It is the core objective of this continuous screening in Lower Austria to directly identify potential sources of infection, making it possible to implement all necessary measures immediately and in this way prevent the virus from spreading to other health facilities. The data provide the basis to generate a representative cross-section of the SARS-CoV-2 status with regard to employees, residents and patients of the Health Agency of the Province of Lower Austria. At the end of January 2021, more than 500,000 samples were already entered into the database, adding an amount of approx. 5,000 every day.



Digital solutions

Field of action “digitalization in administration”

By means of the introduction of digital applications, the government of Lower Austria is improving and simplifying its services and setting standards in our region, for example in the form of enhanced collaboration with the 573 local authorities.



Core indicators and results 2020

220,441

e-forms sent to the Provincial administration of Lower Austria

17

applications have supplied 291,981 progress reports to the transparency database so far.

41,219

housing allowance forms were most strongly demanded forms.

46

Lower Austrian Provincial kindergartens are participating in the testphase for noeKIGAnet.



Electronic transmission of profit shares to municipalities

Every month, the Government of Lower Austria sends the document “Settlement of municipal tax profit shares” to each municipality. So far, this letter has been created manually for each municipality and sent via mail. These documents are now being processed for electronic transmission to the individual municipalities. A file that is supplied, including corresponding entry lines for the municipality, allows for the entry into the municipality accounting system. The electronic transmission of the profit shares is also meant to be an additional incentive for municipalities to use the electronic inbox “My inbox” at www.oesterreich.gv.at.



© NÖ Landesarchiv

Digital long-term archive of Lower Austria

Lower Austria is the first federal province to digitalise its long-term archive. The digital archive ensures the permanent and authentic preservation and use of the electronic documents that are worth to be archived as well as further digital documents that are legally and historically relevant. In addition to the transparent storage, convenient research, irrespective of time and place, is ensured.



noeKIGANet – digital kindergarten management program

In the framework of the digitalization offensive, the design of a digital kindergarten management program was already started in 2019. “noeKIGANet” was elaborated in joint collaboration with all groups of persons working with it in practice. Its goal is to facilitate organisational processes and create a central digital interface for kindergarten-relevant data. The standardisation and unification of the data entry in a common system will make administrative processes in the kindergarten considerably easier and produce far less red tape.

At the end of 2020, the roll-out to the 46 pilot kindergartens, municipalities and offices started, in order to test live operation. Starting from spring 2021, the program is to be rolled out step by step to all 1,060 Provincial kindergartens of Lower Austria. At the same time, laptops will be provided to all Provincial kindergartens of Lower Austria, so that the kindergarten management program can be used.

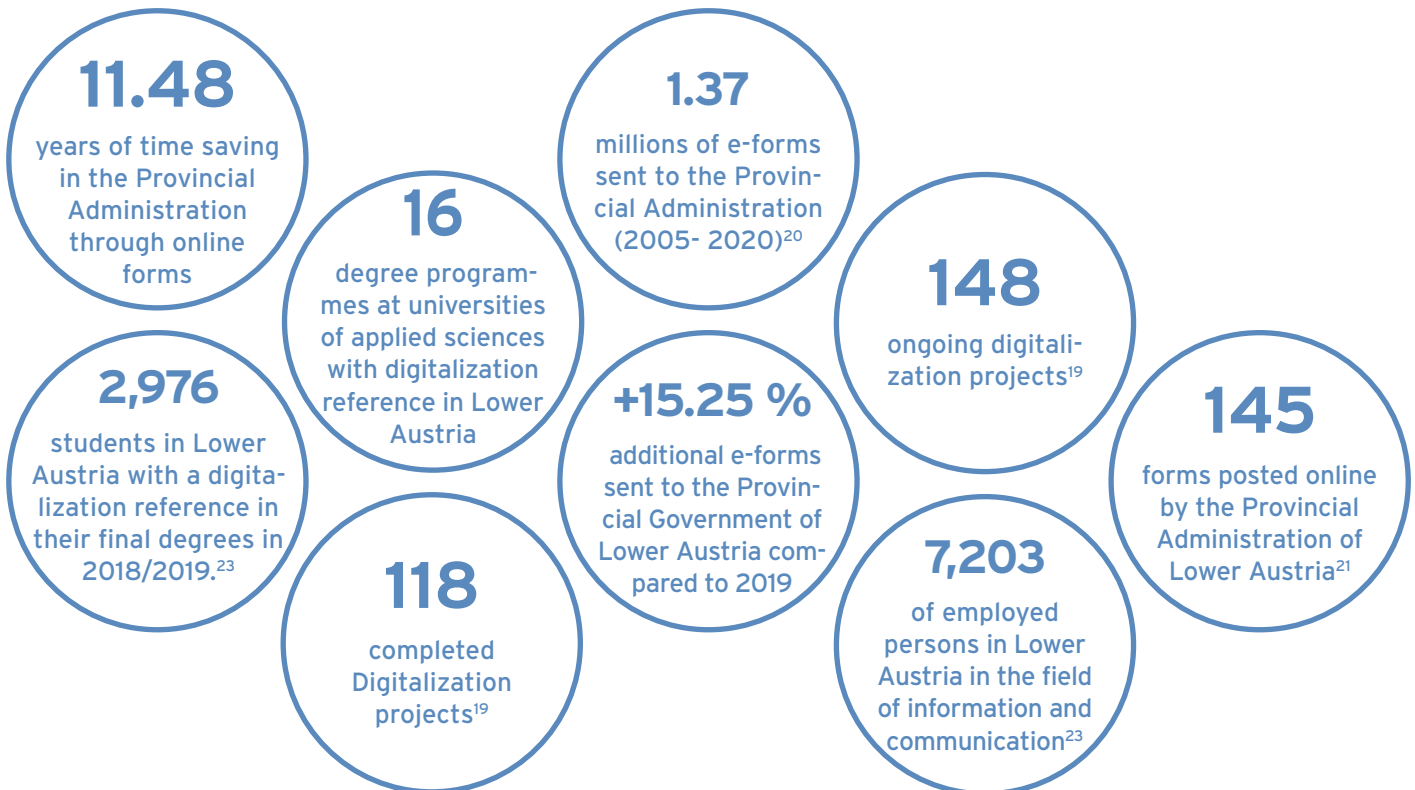
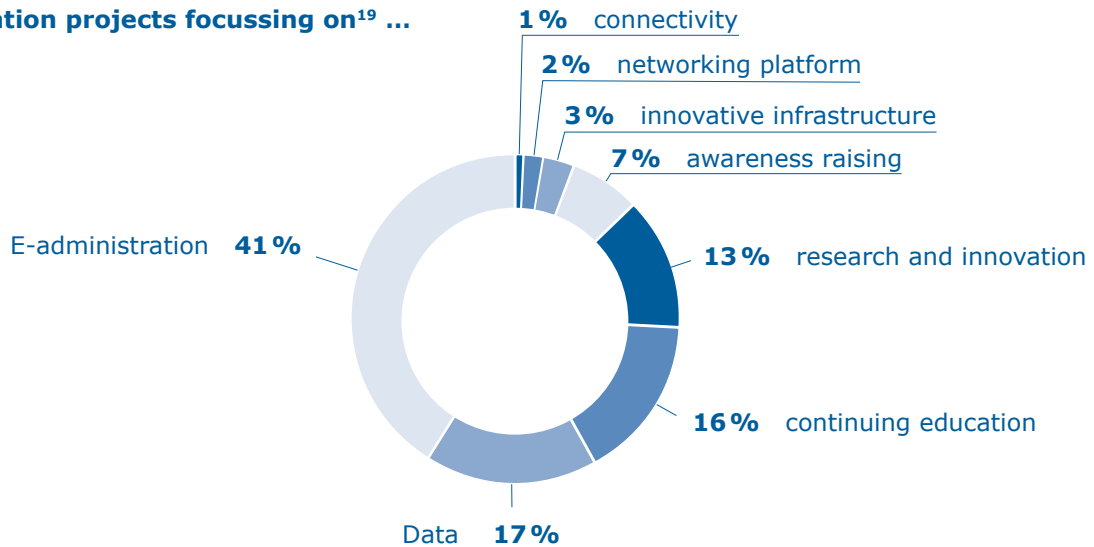


FPM-fleet management

By means of the FPM fleet management application, approx. 180 service cars will be managed in the future. The objective to be achieved by this is to be able to retrieve the life-cycle cost of a service car (procurement, maintenance, repairs, cases of damage, insurance, recycling) on a daily basis. For this purpose, a large variety of recording and evaluation functions are included, for instance the CO₂ emission or the due dates of the recurring inspection. The management of the in-house workshop including the order entry and accounting is also integrated, for example for cases of damage (to be reported to the insurance) as well as the documentation of the damage by photographic material. Fuelling data from card systems as well as the company filling station will be accepted and processed automatically. In 2020, the implementation of the new program that will replace the out-dated Access application in the future, was started. The project is to be completed in autumn 2021.

4. Facts and figures 2020

Digitalization projects focussing on¹⁹ ...




¹⁹ The figures are based on those for all sample projects registered by organisations in Lower Austria with the Technology and Digitalization Unit.

²⁰ Rounded figure

²¹ Average value

²³ Source: Main association of the Austrian social insurance agencies





[https://noe.gv.at/
digireport](https://noe.gv.at/digireport)
digi report for
download.

5.

Outlook for the future

Digitalization concerns all spheres of society and has far-reaching impacts. Digital processes help us increase our productivity, flexibility and agility. Digitalization is a driver of innovation. An innovative infrastructure and digital solutions increase effectiveness and efficiency. These facts are even more clearly emphasised by the COVID-19 pandemic. The Digitalization Strategy of Lower Austria takes a holistic approach to make the most of these potentials:

The sharing and exchange of data generates new information, application options, solutions and services in all spheres of life. A targeted, intelligent use of data is especially substantial for the innovative strength of public facilities. Therefore, **the annual theme "Data" was taken up by the Province of Lower Austria for 2021.** In workshops and in working teams, trends and application options are analysed and processed. Furthermore, the-Government of Lower Austria will carry out a so-called "Sandpit procedure", in order to, together with diverse interest groups, develop digital solutions for a successful village and community life. To complement this, the Digitalization Forum will again be taking place, where state employees will have the opportunity to discover digital novelties and at which winning digi contest projects will be showcased. The provincial administration intends to continue on its future-orientated course.

The economic strategy of Lower Austria 2025 also focuses on the topics of "Digitalization, Big Data and new business models". Therefore, **well-established and new support possibilities are offered to companies of Lower Austria,** in order to boost their already high level of competitive and innovative capacity. In 2021 this goal will for example be implemented by the promotional action 3D print bonus and prototype construction and prototype testing as well as the digi4Wirtschaft support package. One of the flagship projects is the **House of Digitalization**, which, with its intelligent digital network and the virtual House of Digitalization,

already contributes to the utilisation of the tremendous growth and business opportunities. The real House of Digitalization at Tulln will be completed in 2023. It is meant to be a key element when it comes to creating awareness, information and education the fields of digitalization and innovation. Apart from the University of Applied Sciences Wiener Neustadt, primarily "Service institutions" will be using the House of Digitalization, which can assist SMEs with their transformation in the direction of digitalization. All companies are to benefit from this service and from the possibilities generated by the growing digitalization network of Lower Austria – directly in the House of Digitalization, but also at their company locations.

The requirements of the existing **communication infrastructure** will also be adapted to the technical progress and the level of digitalization, which is why the supply of households and companies in Lower Austria with a fibre-optic infrastructure is driven forward.

The COVID-19 pandemic has also strongly changed the **education sector**. Distance learning and blended learning schemes have been established within a very short time. Innovative and high-quality educational media as well as new methodical-didactical approaches are used for school lessons to support pupils as well as possible and to refine digital skills. In addition to the continuous expansion of the IT infrastructure, the pupils of fifth and sixth grade, which is a total of 1,617 classes in 352 schools in Lower Austria, will be equipped with digital terminals (tablet PCs, notebooks, chromebooks etc.) in the school year 2021/22. Approx. 1,100 Android tablet PCs, 4,800 iPads, 300 chromebooks, 23,500 Windows notebooks, 14,700 Windows tablet PCs and 900 refurbished notebooks will be procured and will become the pupils' property.

www.noel.gv.at

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