

DOCUMENT TITLE:

SMART FACTORY SOLUTIONS FROM HUNGARY

Project: Improving RD and business policy conditions for transnational cooperation in the manufacturing industry

Acronym: Smart Factory Hub

Work package	WP4: Improving Knowledge Base
Activity	A 5.4: Learning demonstration workshops
Deliverable	D 5.4.1: Report of Smart factory solutions
Date of issue	18.04.2018
Document issued by	PBN
Contributors	Solution providers
Version	D0.1
Number of Pages	35

Dissemination level		
PU	Public	X
PP	Restricted to other Programme participants	
RE	Restricted to a group specified by the consortium	
CO	Confidential, only for members of the consortium	

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1 ISeeSec Ltd.

Smart Factory solution provider profile

Organization:

ISeeSec Ltd. – Brics-SOFT
H-9400 Sopron, Szépvölgyi str. 9.

Website and social media:

Website: <http://www.brics-soft.hu/index.html>
Social media (Facebook):
Social media (Twitter):
Social media (LinkedIn):
Social media (Google+):

Contact details:

Attila Zámbo - Managing director
zambo.attila@brics-soft.com

Type of organization:

SME

Market sectors:

Digital economy

Services provided:

Services

Smart Factory solution

iSeeSec Ltd.

Product/Solution webpage:

<http://www.brics-soft.hu/index.html>

Type of solution:

Service

Smart Factory description:

ISeeSec Ltd. was established in 2012. The main activity of the company is the creation of different types of security systems. After the establishment they created for example vehicle tracking security system and IT system for restaurants. But from 2015th the main profile of

ISeeSec Ltd. is the BiCS ERP system. This is an IT system which contains different modules like financial module, logistic module and storage management modul.

Keywords:

- ERP system
- Industry 4.0 ready information system

Example of Product/Service usage:

When developing the BriCS ERP system, the goal is to create a customizable, modular system of enterprise management systems that can be tailored to the highest possible extent, which can provide a lot of useful information to help the workflow and the leadership decisions.

The system can operate as a simple business management system and a complex corporate governance system depending on the customer's needs.

Advantages:

- querying and systematizing data, saving data
- Adapts to the customer's own and business needs
- a unified system that simplifies the whole company
- multilingual interface
- outstanding operational safety
- simple contact
- there is no IT dependency
- No downtime and data loss

Modules

- Store management
- Finance: Inbound and Outbound Accounts, Financial Planning, Liquidity Forecasting
- Accounting: account mirror, financial reports
- Process Management: Process Templates, Process Design
- Logistics: customer systems, delivery notes, freight planning
- Document management: registration, electronic contract management
- Individual registers: motor vehicles, property, insurance, investments
- Reporting system: customizable reports
- BriCSAPI: Gate for other IT systems

Improvement areas covered by the Product/Solution:

Implementation of the human resource management systems

Product/Solution is related to the following type of implementation:

Increased speed of production operations
Improved information for production decisions
Improved information for business analytics

Other relevant information about the product/service:

Attachment1: Brics-Erp logo

Attachment2: promotional material
Attachemnt3 : product presentation

Product/service technological focus:

ELECTRONICS, IT AND TELECOMMS:

- Information Processing & Systems, Workflow
- IT and Telematics Applications

Market availability: 2015

2 Julius Globe

Smart Factory solution provider profile

Organization:

Julius Globe

Headquarter: H-1056 Budapest, Váci str.. 60.,

Production site: H-9081 Győrújbarát, István str.. 176.,

Website and social media:

Website: <http://www.jglobe.hu/main.php?Lang=EN>

Social media (Facebook):

<https://www.facebook.com/profile.php?id=100013306456365>

Social media (Twitter):

Social media (LinkedIn):

Social media (Google+):

Contact details:

Mrs. Erika Rác - Quality Manager and Customer Support

Tel.: 00-36-96-543-286

Fax.: 00-36-96-355-161

E-mail: erika.racz@jglobe.hu

Type of organization:

SME

Market sectors:

Automotive industry

Services provided:

Manufacturing

Smart Factory solution

Julius Globe

Product/Solution webpage:

<http://www.jglobe.hu/main.php?Lang=EN>

Type of solution:

Service

Smart Factory description:

Julius-Globe Ltd. is one of the leading SMEs in West-Hungarian region among companies who are using novel technologies in their production.

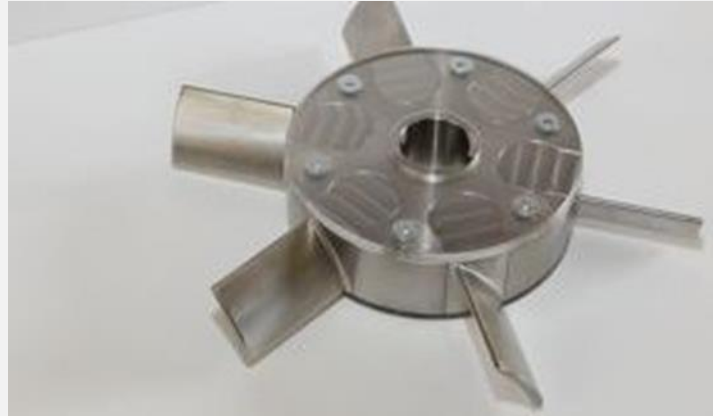
1. Research and development:

- Research and development according to customer orders and needs
- 7 development engineers
- Used programs: CATIA V5-6 R2016-CAD, CREO 2, ESPRIT

2. Realised research and development

- Development of Engine Block (oil of body water) contamination testing equipment
- Digital display, surface roughness measuring device-specific improvement
- Support the development of production technology, glass roof blind
- Raw material feed roller surface material non-stick and wear-resistant experiment
- Research and introduction of raw material-dependent optimal coating experiments
- Integration of advanced technologies and measurement equipment into manufacturing technology which helps to improve customers' production
- Manufacturing production of medical device testing - knee replacement - Medical University of Szeged
- Development of new heat treatment units
- Development and construction of propeller
- The aim was to develop new production technologies - development of only from one material screw blade propellers, the longer the blade size and the larger the number of blades.
- Ideal blade design, development of edge geometries
- Mounted propeller design manufacturing
- Manufacturing of a greater number of propeller blades
- Straight and twisted blade propellers airflow engineering study

One of the most innovative SME in the region in the advanced manufacturing. Competitors are on lower level in R&D and also the machine park is well equipped.



1 Figure: R&D at Julius Globe

Keywords:

i4.0 applications are utilized at production level
C- manufacturing
C27.9.0 - manufacture of other electrical equipment
C28.9.0 - manufacture of other special - purpose machinery

Example of Product/Service usage:

The service has been tested and validated in Hungary, West-Hungary.
Actors in automotive industry, advanced manufacturing are the main target audience of the company, mainly large companies.

Using of the machine park connected to advanced manufacturing, cost reduction is possible
As customer, using the industry 4.0 based solutions makes possible to gain a wider knowledge about advanced manufacturing technologies.



2 Figure: European Business Awards

Improvement areas covered by the Product/Solution:

Improved maintenance/uptime

Product/Solution is related to the following type of implementation:

Implementation in the production processes

Other relevant information about the product/service:

Attachment4: Company logo

Attachment5: http://www.jglobe.hu/Open_doors_open_minds.html

Attachment6:

http://www.jglobe.hu/Competitiveness_in_Focus_Institutions_for_the_Development_of_SME.html

Attachment7:

http://www.jglobe.hu/JuliusGlobe_Ltd_named_as_one_of_Europes_best_in_first_eve_r_One.html

Attachment8: <https://www.youtube.com/watch?v=Kn6GkJyseBQ>

Attachment9: product presentation

Product/service technological focus:

Industrial Manufacture

Market availability: 2013

3 MediTel Kft.

Smart Factory solution provider profile

Organization:

MediTel Kft.
H-9700 Zánati str. 32-36

Website and social media:

Website: <http://www.meditel.hu/>
Social media (Facebook):
Social media (Twitter):
Social media (LinkedIn):
Social media (Google+):

Contact details:

Joós Attila
coordinator
E-mail: joos@am-lab.hu
Tel.: +36 30 330 2112

Type of organization:

OTHER: Business Support organisation

Market sectors:

OTHER: additive manufacturing

Services provided:

Education /Training
Manufacturing
Service
Research and Development

Smart Factory solution

MediTel Kft.

Product/Solution webpage:

<http://www.meditel.hu/>

Type of solution:

Service

Smart Factory description:

Meditel Kft. is a new innovative enterprise which is based on more than one decade of business-development experiences. The service center specialized for the application and presentation of most recent manufacturing technologies.

Meditel's team consists of highly experienced economic-, engineering-, technological- and medical professionals, who are able to solve the most challenging tasks with open-mindedness and great openness.

The demonstration center has been evolved so all their interested people – such as leader of the company, professional who working in manufacturing, or young person who wants to learn – have the opportunity to experience and try the newest manufacturing and industrial technologies in the real form.

In the open days and trainings, they personally demonstrate to clients the new technology solutions of Industry 4.0, most recent tools of our age such as 3D printing, robot technology or virtual production planning.

Services:

- unique product development and manufacturing
- research & development
- prototype production
- precision scanning
- digital manufacturing technology – 3D printing (FDM printing, SLA printing)
- metal printing – with German production technology background
- manufacturing optimization
- robotics, robot programming
- education of 3D printing
- organization of open days for demonstration purposes
- technology audits – technology maturity testing

Keywords:

3D printing
3D scanning
digital shape and shape design
3D scanning and design at industrial level
Reverse engineering
CAD design, industry 4.0
C18.1.2 - Other printing

Example of Product/Service usage:

The service has been tested and validated in Hungary, Vas county.

Meditel could help a lot with taking the first step towards a quite modern technology like

additive manufacturing to get to know it better and help (mainly) the local population to learn this valuable knowledge and use it.

The company is meant to be working in the additive manufacturing sector, 3D printing is the main direction.

Meditel has been working with 2 technological solutions, one of them is FDM technology and the other one is SLA technology.

There are several materials which they can use to find the best possible solution during the production.

Materials:

PLA	HT-PLA	Innoflex	General Resin
ABS	Nylon	Ninjafelx	Castable Resin
PVA	PC	Laybrick	Durable Resin
HIPS	PP	Carbon Fiber	Dental LT Clear
CPE	PET	Woodfill	Dental SG Resin
CPE+	PRO1	Laywood	Tough Resin
TPU95A	ASA	T-Glass	Flexible Resin

The center uses 4 kind of 3D printer.

Prusa I3 MK2

Ultimaker 3 Extende

FormLabs Form 2

Extreme Builder 1000

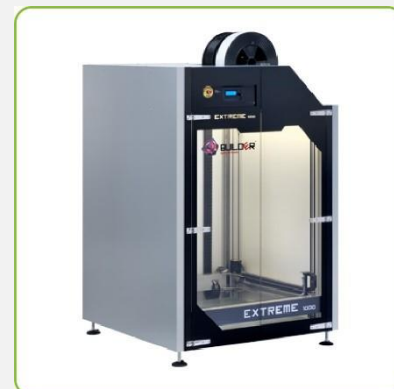


They are able to produce a standard print with a good quality, which is good to use as an illustrative prototype

It is a big-size 3D printer and thanks for this, it is able to create a 600x600x720 product



3 Figure.: Ultimaker 3 Extended



4. Figure:Extrem Builder 1000



5.Figure: Formlabs Form 2



6.Figure: Prusa I3 MK2

The centre has received the ISO qualification.

The solution is in line with the existing risk management

The devices are available in the Center so there is an opportunity to rent them. The Centre also provides training to help in the use of the devices and gain more knowledge about advanced manufacturing.

Resources are necessary for implementation: cost calculation for the manufacturing, technical devices, human resources.

Improvement areas covered by the Product/Solution:

- Increased speed of production operations
- Decreased manufacturing costs

Product/Solution is related to the following type of implementation:

- Implementation in the production processes

Other relevant information about the product/service:

- Attachment10: Company logo
- Attachment11: Presentation

Product/service technological focus:

- Design and Modelling / Prototypes

Market availability: 2017

4 Vesz-Mont 2000 Ltd.

Smart Factory solution provider profile

Organization:

Vesz-Mont 2000 Ltd.
H-8248 Nemesvámos Huszárok str. 3.

Website and social media:

Website: <http://veszmont.hu/en>
Social media (Facebook): <https://www.facebook.com/veszmont/>
Social media (Twitter):
Social media (LinkedIn):
Social media (Google+):

Contact details:

Horváth Norbert
managing director
sales@veszmont.hu
Tel: +36 88 505 730

Type of organization:

SME

Market sectors:

Automotive industry

Services provided:

Manufacturing

Smart Factory solution

Vesz-Mont 2000 Ltd.

Product/Solution webpage:

<http://veszmont.hu/en>

Type of solution:

Service
Product

Smart Factory description:

The Vesz-Mont 2000 Ltd. is a continuously developing company since 1999. During the last 17 years they have gained great experience in the manufacture of special purpose machines, assembly lines and in any kind of automation task and also in laser and robotic applications.

In 2010 they realized that they need to provide wider service portfolio to their customers. They targeted technologies they were not proficient at the time. Focus was on laser technologies. They were looking for companies with this competency and they were able to keep moving on this path. Nowadays Vesz-Mont 2000 Ltd - one of the largest Special Purpose Machinery builder in Hungary.

Their goal is to keep the current development in the future and gain more influence on foreign markets.

Keywords:

Special purpose machinery
advanced manufacturing
laser technology
C33.2 - Installation of industrial machinery and equipment
universal robot supplier

Example of Product/Service usage:

The main services of Vesz-Mont 2000 Ltd:

- Special purpose machines
- Universal collaborative robots
- HIWIN Linear technology
- Nikon Metrology System
- Wage measurement
- Engineering services
- CNC milling
- Water jet cutting
- Sheet-metal plant – laser cutting, bending, deburring
- Manufacture of welded machine frames
- Traditional machining tools.

When the company was founded, they were engaged in assembly technology for welded structures manufacturing. Shortly after the start, more and more difficult work was done, which led to rapid development.

Special purpose machinery is one of the main services of Vesz-Mont 2000 Ltd. The major content of the service is the complex design of purpose machines from the offer to production and integration which includes the creation of production process, the appropriate engineering solution, the mechanical design, and of course the electrical installation, programming and on-site assembly too. This service can be used in many industries such as car industry, health industry, food or furniture industry.

Out of the above-mentioned services sheet-metal plant-laser cutting, bending, deburring is also a core element in Vesz-Mont 2000 Ltd.'s life. Their sheet-metal plant is furnished to the industry today's requirements. Their universal laser cutting machine, CNC bending machine and

automatic deburring equipment meet their customers requirements, and they undertake to design and weld frames up to 2500x2500x1000 mm.

Vesz-Mont 2000 Ltd. also uses universal collaborative robots. The UR (Universal Robots) arms can be implemented in virtually any industry, in any process and by any employee. The UR robots can work collaboratively right alongside employees due to built-in force-sensing causing the robots to automatically stop operating when they encounter obstacles in their route. The robot can be programmed to operate in reduced mode when a person enters the work zone. It can be used in many areas like packaging and structure, screwing, injection molding, admissibility adaptation and welding.

The service has been tested and validated in Hungary, West Hungary

The target group of good practice are all companies that have production in their establishments.

The applied technology is cost efficient compared to the old technologies.

Buying or using the available technology of Vesz-Mont Ltd is the way to implement the innovative solution.



7. Figure: Quantum Lesertech from close



8. Figure: Quantum Lesertech

Improvement areas covered by the Product/Solution:

Improved maintenance/uptime

Product/Solution is related to the following type of implementation:

Implementation in the production processes

Other relevant information about the product/service:

Attachment12: Company logo

Attachment13:

<https://www.youtube.com/watch?v=c0PqjNYEUQA>

Attachment14: Presentation

Product/service technological focus:

INDUSTRIAL MANUFACTURING, MATERIAL AND TRANSPORT

- Construction Technology
- Industrial Manufacture

Market availability: 2015

5 Borsodi Műhely Ltd.

Smart Factory solution provider profile

Organization:

Borsodi Műhely Ltd.
H-9027 Győr, Juharfa str. 8.

Website and social media:

Website: <http://www.borsodimuhely.hu/en>
Social media (Facebook): <https://www.facebook.com/borsodi.muhely/>
Social media (Twitter):
Social media (LinkedIn):
Social media (Google+):

Contact details:

Horváth Szabolcs - Technical Manager
Telephone: +36 96 529 071
Fax: +36 96 529 072
e-mail: info@borsodimuhely.hu

Type of organization:

SME

Market sectors:

Automotive industry

Services provided:

Manufacturing

Smart Factory solution

Borsodi Műhely Ltd.

Product/Solution webpage:

<http://www.borsodimuhely.hu/en>

Type of solution:

Service

Smart Factory description:

The main aim of the Borsodi Műhely Ltd. is to satisfy the procurers needs.

Borsodi Műhely Ltd. has professional experiences in the production of unique and precision accessories and gauges. Thanks for the continuous technological developments, the company has the most modern technologies and machines, and this guarantees a high level of quality.

The most important requirement is to provide the optimal solution for their partners. This may be carried out through the careful and through analysis of requirements and by taking into consideration the prevailing regulations, striving for optimal design and implementation.

For the perfect quality, Borsodi Műhely Ltd is ascertaining the quality of the raw materials in its own measuring laboratory.

Keywords:

high quality

custom component manufacturing

internship training

Industry 4.0

C25.1 - Manufacture of structural metal products

C25.1.1 - Manufacture of metal structures and parts of structures

S.P.M. – special purpose machinery

Example of Product/Service usage:

The main profile of Borsodi Műhely Ltd. is the design and implementation of custom-made devices, single -purpose machines and production lines.

With custom-made testing and measuring instruments it is possible to quickly qualify the work pieces. The further advantage for the custom-made tools that their operation does not require high expertise.

Based on the tasks we can differentiate main types:

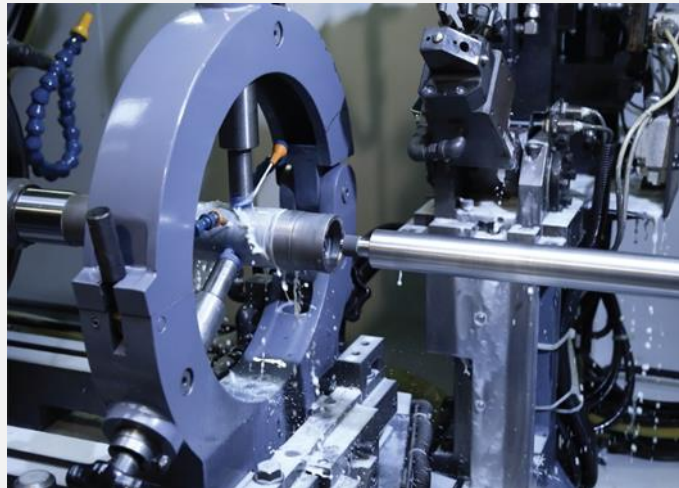
1. The controllers can qualify the workpiece, i.e. with the help of this, it is easier to decide that the workpiece meets the standards or not.
2. Certification is verified with the help of numerical data which provided by the measuring equipment.

Borsodi Műhely Ltd. also undertake the implementation of geometric testing and measuring equipment and density tester.

Borsodi Műhely Ltd. also deal with the production of clamping, compass devices. The company has a huge experience in the design and production of mechanical and hydraulic clamping devices. The company collect all the necessary data – about the machine itself and about the

production technologies – to be able to produce a good quality clamping device which is fitting to the customer requirements.

They are also undertaking the design and implementation of an assembly line.



9. Figure: Manufacture of precision parts spare parts



10. Figure: Machine, machine repair renovations and maintenance

Improvement areas covered by the Product/Solution:

Improved maintenance/uptime

Product/Solution is related to the following type of implementation:

Implementation in the production processes

Other relevant information about the product/service:

Attachment15: Company logo

Attachment16: https://www.youtube.com/watch?v=ofWkJRx_E5A

Attachment17: https://www.youtube.com/watch?v=JU_1_ZxCK4&feature=youtu.be

Attachment18:

http://www.borsodimuhely.hu/en/entrepreneur-of-year-2017-award_3682-n.html

Attachment19: product presentation

Product/service technological focus:

Industrial Manufacture

Market availability: 2015

6 Systemathx Zrt.

Smart Factory solution provider profile

Organization:

Systemathx Zrt.

H-1118 Budapest, Menta str. 4

Website and social media:

Website: <http://www.systemathx.hu/>

Social media (Facebook): <https://www.facebook.com/systemathx.hu/>

Social media (Twitter):

Social media (LinkedIn):

Social media (Google+):

Contact details:

Péter Garisa – Managing Director

Tel: +36-20/227-0588

Email: info@systemathx.hu

Type of organization:

SME

Market sectors:

Technology audit

Services provided: 2016

Smart Factory solution

Systemathx Ltd.

Product/Solution webpage: <http://www.systemathx.hu/>

Type of solution:

Service

Smart Factory description:

Systemathx Zrt. has 10 years of experience in the following technological fields: IT infrastructure design, implementation, operation; production planning in automotive industry; quality assurance; cost optimization; and implementation of logistics projects. These fields are essential for Systemathx Zrt., because with the help of this they are able to do a proper industry 4.0 technology audit for enterprises.

They have 5 years of experience in the implementation and education of business intelligence systems. Besides all this Systemathx Zrt. deal with the development of Industry 4.0 solutions and installation of systems.

Keywords:

Industry 4.0 technology audit

Example of Product/Service usage:

With the help of Industry 4.0 maturity survey Systemathx zrt. provides a comprehensive and transparent picture of the current status of maturity of business and production processes. The results of the maturity survey show the focus areas where the greatest progress and results can be achieved. And this diagnosis is necessary to develop a strategy. The aim is that with the help of this strategy the company identifies the realistic development directions and priorities which fitted directly to the customer needs. It coordinates the organization's functional activities to achieve the targeted goals too.

With the self-service business intelligence, "on the job" training business analysts can independently compile personalized reports and they can analyze the available data. During the training BI capabilities in Microsoft Business Intelligence (Power Query, Power Pivot, Power BI, etc.) will be presented.

Furthermore, Systemathx zrt. is able to support and operate of business solutions, tools (application, data warehouse, database, server, PC, embedded systems, PLC, network), and is able to do the related administrative tasks.

Improvement areas covered by the Product/Solution:

Improvement of the novel technology

Product/Solution is related to the following type of implementation:

Increased speed of production operations

Decreased manufacturing costs

Improved information for production decision

Improved product quality
Improved maintenance/uptime
Improved remote monitoring capabilities

Other relevant information about the product/service:

Attachement20: company logo
Attachemnt21: services
Attachment22: presentation

Product/service technological focus:

OTHER INDUSTRIAL TECHNOLOGIES
- Other Industrial Technologies

Market availability: 2017

7 Karma Interactive

Smart Factory solution provider profile

Organization:

KARMA Interactive
H-9700 Szombathely, Alsó-hegyi str. 10/A

Website and social media:

Website: <http://www.karma-interactive.hu/hu/index.html>
Social media (Facebook): <https://www.facebook.com/karmainteractivekft/>
Social media (Twitter):
Social media (LinkedIn):
Social media (Google+):

Contact details:

András Magyarfalvi – Managing Director
info@karma-interactive.hu
Tel: +36 30 640 2554

Type of organization:

SME

Market sectors:

OTHER: ICT

Services provided:

Services

Smart Factory solution

KARMA Interactive Ltd.

Product/Solution webpage: <http://www.karma-interactive.hu/hu/index.html>

Type of solution:

service

Smart Factory description:

KARMA Interactive Ltd was founded in 2009, by a fusion of two strategic partner companies. They had been working together since 2001, and the fusion was necessary because new technologies have appeared, and the market grow rapidly. Experts in their team have many years of high-level experience in internet technologies, web pages, applications design, development as well as project management.

KARMA Interactive has the ability to give right solutions for complex IT problems. Whether it is a unique application development, electronic billing system, electronic auction system, some kind of complex news portal with DRM rights management or it is a ticket sales system, their professionals will be involved in the concept design and will implement the project.

Keywords:

CRM

integrative production

Example of Product/Service usage:

KARMA Interactive Ltd.'s experts have an experience related to Internet technologies and webpages. KARMA Interactive also has a competence to develop and operate applications. The other main activity of KARMA Interactive Ltd. is to supply – nearly 300 client – with IT tools and to provide them the continuous operation of their IT systems.

KARMA provides the operation of the created IT systems with the help of web-based servers.

Furthermore, KARMA services include:

- Preparation of project plans
- Development of webpages (graphical designing, programming, consultation, text writing)
- The planning and accomplishment of the market introduction of a webpage
- Development of a unique web-based application
- Webhosting (domain, storage service, e-mail service)
- Handling the advertisement of a product on the internet (creation of a strategy, search optimization, creation of keywords advertisement campaign)

Besides of the above-mentioned services, KARMA Interactive Ltd. has a self-developed content management system. This system enables time and cost-effective development of custom web-

based systems. If required, they can implement the development with Open Source (e.g.: Drupal).

The security of the system receives special attention during the development.

Improvement areas covered by the Product/Solution:

Implementation of the human resource management system

Product/Solution is related to the following type of implementation:

Improved coordination with suppliers

Improved coordination with customers

Improved compliance with customer specs or regulatory requirements

Improved information for business analytics

Improved remote monitoring capabilities

Other relevant information about the product/service:

Attachment23: company logo

Attachment24: company brochure

Attachment25: product presentation

Product/service technological focus:

ELECTRONICS, IT AND TELECOMMS

- IT and Telematics Applications

Market availability: 2009

8 MediTel Kft.

Smart Factory solution provider profile

Organization:

MediTel Kft.

H-9700 Zánati str. 32-36

Website and social media:

Website: <http://www.meditel.hu/>

Social media (Facebook):

Social media (Twitter):

Social media (LinkedIn):

Social media (Google+):

Contact details:

Joós Attila
coordinator
E-mail: joos@am-lab.hu
Tel.: +36 30 330 2112

Type of organization:

OTHER: Business Support Organisation

Market sectors:

OTHER: Additive manufacturing

Services provided:

Education /Training
Manufacturing
Services
Research and Development

Smart Factory solution

MediTel Kft.

Product/Solution webpage: <http://www.meditel.hu/>

Type of solution:

Service

Smart Factory description:

Meditel Kft. is a new innovative enterprise which is based on more than one decade of business-development experiences. The service center specialized for the application and presentation of most recent manufacturing technologies.

Meditel's team consists of highly experienced economic-, engineering-, technological- and medical professionals, who are able to solve the most challenging tasks with open-mindedness and great openness.

The demonstration center has been evolved so all their interested people – such as leader of the company, professional who working in manufacturing, or young person who wants to learn – have the opportunity to experience and try the newest manufacturing and industrial technologies in the real form.

In the open days and trainings, they personally demonstrate to clients the new technology solutions of Industry 4.0, most recent tools of our age such as 3D printing, robot technology or virtual production planning.

Services:

- unique product development and manufacturing

- research & development
- prototype production
- precision scanning
- digital manufacturing technology – 3D printing (FDM printing, SLA printing)
- metal printing – with German production technology background
- manufacturing optimization
- robotics, robot programming
- education of 3D printing
- organization of open days for demonstration purposes
- technology audits – technology maturity testing

Keywords:

sensors
robotic arm
sensor technology
knowledge providing

Example of Product/Service usage:

Meditel Kft. other profile next to the 3D printing is the Robotic arm programming and equipped it with sensors.

Main objective is the integration employees with reduced working capacity to the labour market with Industry 4.0 technological solution. The Robotic arm enables the realization of repetitive workflows. The employee – implemented with the robotic arm – is able to work with (nearly) full value and speed. The aim is the development of a business model that offers a new, innovative Industry 4.0 technological solution – integration of the employees with reduced working capacity to the labour market with the help of robotic arm.

The aim of the sensor is that for example if the robotic arm perceives an automated guided vehicle (AGV), the robotic arm will be able to pick up the items from the AGV. Or imagine that there is a production line where we can find blue and red buttons and for example with the help of sensors the robotic arm will be able to pick up every red button from the line.

There are a thousand possibility with the combination of sensors and robotic arms. The only thing that is needed is the knowledge for programming robotic arm and sensors.

Meditel Kft. wanted to provide the appropriate knowledge for robotic arms and offer an opportunity to programming a sensor which is the most suitable together with the robotic arm during the production process of the customer's company.

Improvement areas covered by the Product/Solution:

Increased speed of production operations
Decreased manufacturing costs

Product/Solution is related to the following type of implementation:

Implementation in the production processes

Other relevant information about the product/service:

Attachment26: company logo
Attachment27: product presentation

Product/service technological focus:

Electronic circuits, components and equipment

Market availability: 2018

9 Adalon Solutions Ltd.

Smart Factory solution provider profile

Organization:

Adalon Solutions Ltd.
H-1138 Budapest, Madarász Viktor str. 47-49.

Website and social media:

Website: <https://adalon.hu/>
Social media (Facebook): <https://www.facebook.com/adalonsolutions/>
Social media (Twitter):
Social media (LinkedIn):
Social media (Google+):

Contact details:

Zénó Bundula – managing director
Tel.: +36 70 199 6892
E-mail: info@adalon.hu

Type of organization:

SME

Market sectors:

OTHER: ICT

Services provided:

Consulting
Services

Smart Factory solution

Adalon Solutions Ltd.

Product/Solution webpage:

<https://adalon.hu/>

Type of solution:

Service

Smart Factory description:

Adalon Solutions Ltd, was established in 2014. In the previous years the staff - with 10-15 years of professional experience – were able to solve the problems of micro-enterprises and multinational-companies. In the last years, Adalon Solutions Ltd. has been working successfully with SOHOs (Small Office Home Office) SMEs, large enterprises, online media enterprises, ICT-companies, start-ups, starter web shops, and state companies. The main services of Adalon Solutions Ltd. are the followings:

- Consultancy
- Software development
- Operation of the developed software

Keywords:

- Consultation
- Software development
- Agrep system

Example of Product/Service usage:

Adalon Solutions Ltd. has a new project. Within the framework of this project Adalon solutions Ltd. will be developing a system called: “Agrep System”.

“Agrep System” provides a solution for agricultural actors. This system is a niche application for agricultural entrepreneurs and primary producers. The “Agrep System” provides a unique IT solution with small investment cost. This system based on subscription, and any time you want you can resign your subscription

“Agrep System” has got 6 main modules:

1. Land and machine-registry module: database about the private and rented cultivated areas with the related information about it. This database also contains the information about the private, rented and leased machines and tools
Database contains: growing data, deadlines (payment, contract renewal), general machine information, warnings related to machines and tools, and setting suggestions
2. HR module: contains all data which is related to the employees like: general data, documents related to the education, CV, overtime,
3. Land-rental management module: contains contracts, payment, and related warnings, other administrative data
4. Warehouse control module: include crop storage, component storage, sowing storage and possible to set notifications related to store data
5. Reporting module: maintenance work diary, financial statement, making legal statements, farming diary

6. Pesticide catalogue module: where you can find the list of legal pesticides (also includes: the application area of different pesticides, waiting time)

Improvement areas covered by the Product/Solution:

Implementation of novel technology

Product/Solution is related to the following type of implementation:

Improved information for business analytics

Improved remote monitoring capabilities

Other relevant information about the product/service:

Attachment28: company logo

Attachment29: product presentation

Product/service technological focus:

ELECTRONICS, IT AND TELECOMMS

- Information Processing & Systems, Workflow
- IT and Telematics Applications

Market availability: 2014

10 Meditel Kft.

Smart Factory solution provider profile

Organization:

MediTel Kft.

H-9700 Szombathely, Zanati str. 32-36.

Website and social media:

Website: <http://www.meditel.hu/>

Social media (Facebook):

Social media (Twitter):

Social media (LinkedIn):

Social media (Google+):

Contact details:

Joós Attila

coordinator

E-mail: joos@am-lab.hu

Tel.: +36 30 330 2112

Type of organization:

OTHER: Business Support Organisation Spin-off

Market sectors:

OTHER: Additive manufacturing

Services provided:

Education /Training
Manufacturing
Services
Research and Development

Smart Factory solution

MediTel Kft.

Product/Solution webpage: <http://www.meditel.hu/>

Type of solution:

Service

Smart Factory description:

Meditel Kft. is a new innovative enterprise which is based on more than one decade of business-development experiences. The service center specialized for the application and presentation of most recent manufacturing technologies.

Meditel's team consists of highly experienced economic-, engineering-, technological- and medical professionals, who are able to solve the most challenging tasks with open-mindedness and great openness.

The demonstration center has been evolved so all their interested people – such as leader of the company, professional who working in manufacturing, or young person who wants to learn – have the opportunity to experience and try the newest manufacturing and industrial technologies in the real form.

In the open days and trainings, they personally demonstrate to clients the new technology solutions of Industry 4.0, most recent tools of our age such as 3D printing, robot technology or virtual production planning.

Services:

- unique product development and manufacturing
- research & development
- prototype production
- precision scanning

- digital manufacturing technology – 3D printing (FDM printing, SLA printing)
- metal printing – with German production technology background
- manufacturing optimization
- robotics, robot programming
- education of 3D printing
- organization of open days for demonstration purposes
- technology audits – technology maturity testing

Keywords:

sensors
robotic arm
sensor technology
knowledge providing

Example of Product/Service usage:

Meditel Kft. - next to the 3D printing and Robotic arm programming - provides opportunity to learn how to use and operate an Automated Guided Vehicle (AGV). Meditel Kft owns a MiR100 – which is a unique collaborative robot is now used by manufacturers in a wide range of industries and sectors, to automate their in-house transportation. You can install Mir100 quickly and easily without changing the workplace layout. MiR100 is very user-friendly and it is easily programmed without prior experience. MiR100 autonomously picks up and unloads carts and is ideal for a wide range of towing jobs The towing capacity of Mir100 is 300kg. It is able to communicate with the help of Wi-Fi, Bluetooth or Internet. With the help of a fully charged battery it is able to run 10hours (20km). This solution offers fast ROI in as little as one year.

Improvement areas covered by the Product/Solution:

Increased speed of production operations
Decreased manufacturing costs

Product/Solution is related to the following type of implementation:

Implementation in the production processes

Other relevant information about the product/service:

Attachment30: company logo
Attachment31: product presentation

Product/service technological focus:

Electronic circuits, components and equipment

Market availability: 2018

Attachments

- **MANDATORY: 10 minutes (5-15 slides) presentation of the SF Product/Service in PPT or PDF**
- **MANDATORY: Organization logo or Solution/product logo in a *.jpeg or *.gif format**
- Additional material about the Product/Service (such as datasheets, videos, pictures,...)

LEGEND (PLEASE DELETE FOR THE FINAL VERSION):

Type of organization	Select one from the following: <ul style="list-style-type: none"> • Business support organization • Development agency • Large company • Ministry/Government/State agency • R&D • SME • University • University incubator • OTHER (Please specify)
Market sectors	Select one or more sectors the organization is focusing to: <ul style="list-style-type: none"> • Aeronautics industries • Automotive industry • Biotechnology • Chemicals • Construction • Cosmetics • Defense industries • Digital economy • Electrical and electronic engineering industries • Food industry • Gambling • Healthcare industries • Maritime industries • Mechanical engineering • Medical devices • Postal services • Pressure equipment and gas appliances • Raw materials, metals, minerals and forest-based industries • Social economy • Space • Textiles, Fashion and creative industries • Tourism • Toys • OTHER (Please specify)
Services provided	Select one or more services provided by the Organization: <ul style="list-style-type: none"> • Consulting • Education/Training • Engineering • Manufacturing • Policy

	<ul style="list-style-type: none"> • Research and development • Services • OTHER (Please specify)
Type of Smart Factory solution	<p>Select the type of a Smart Factory:</p> <ul style="list-style-type: none"> • Product • Service
Product/Solution is related to the following type of implementation	<p>Select one or more areas improved by the Product/Service implementation:</p> <ul style="list-style-type: none"> • Improved coordination with suppliers • Increased speed of production operations • Decreased manufacturing costs • Lower energy costs • Improved information for production decisions • Improved agility and responsiveness in the production process • Improved product quality • Improved coordination with customers • Improved compliance with customer specs or regulatory requirements • Improved maintenance/uptime • Improved information for business analytics • Improved remote monitoring capabilities • Improved safety • Developed visualization capabilities
Improvement areas covered by the Product/Solution	<p>Select the improvement area:</p> <ul style="list-style-type: none"> • Implementation of the novel technology • Implementation in the production processes • Implementation of the human resource management systems
Product/service technological focus	<p>Select one or more technologies that the product/service is addressing:</p> <p>AGRICULTURE AND MARINE RESOURCES</p> <ul style="list-style-type: none"> • Agriculture • Resources of the Sea, Fisheries • Silviculture, Forestry, Forest technology <p>AGROFOOD INDUSTRY</p> <ul style="list-style-type: none"> • Food quality and safety • Micro- and Nanotechnology related to agrofood • Technologies for the food industry <p>BIOLOGICAL SCIENCES</p> <ul style="list-style-type: none"> • Biology / Biotechnology • E-Health • Genome Research • Industrial Biotechnology • Medicine, Human Health • Micro- and Nanotechnology related to Biological sciences <p>ELECTRONICS, IT AND TELECOMMS</p> <ul style="list-style-type: none"> • Electronic circuits, components and equipment • Electronics, Microelectronics • Information Processing & Systems, Workflow • IT and Telematics Applications • Multimedia • Telecommunications, Networking <p>ENERGY</p>

	<ul style="list-style-type: none"> • Biogas and anaerobic digestion (AD) • Carbon capture and energy • Energy efficiency • Energy production, transmission and conversion • Energy storage and transport • Fossil Energy Sources • Nuclear Fission / Nuclear Fusion • Other Energy Topics • Renewable Sources of Energy <p>INDUSTRIAL MANUFACTURING, MATERIAL AND TRANSPORT</p> <ul style="list-style-type: none"> • Aerospace Technology • Construction Technology • Design and Modelling / Prototypes • Industrial Manufacture • Materials Technology • Packaging / Handling • Plant Design and Maintenance • Process control and logistics • Traffic, mobility • Transport and Shipping Technologies • Transport Infrastructure <p>MEASUREMENTS AND STANDARDS</p> <ul style="list-style-type: none"> • Amplifier, A/D Transducer • Electronic measurement systems • Measurement Tools • Recording Devices • Reference Materials • Standards <p>OTHER INDUSTRIAL TECHNOLOGIES</p> <ul style="list-style-type: none"> • Other Industrial Technologies <p>PHYSICAL AND EXACT SCIENCES</p> <ul style="list-style-type: none"> • Chemistry • Meteorology / Climatology • Micro- and Nanotechnology • Physics • Separation Technologies <p>PROTECTING MAN AND ENVIRONMENT</p> <ul style="list-style-type: none"> • Environment • Safety • Waste Management • Water Management <p>SOCIAL AND ECONOMICS CONCERNS</p> <ul style="list-style-type: none"> • Citizens participation • Creative products • Creative services • Education and Training • Information and media, society
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	<ul style="list-style-type: none">• Infrastructures for social sciences and humanities• Socio-economic models, economic aspects• Sports and Leisure• Technology, Society and Employment
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