Weidmüller – Your Partner in Industrial Connectivity

As experienced experts, we support our customers and partners around the world with products, solutions and services in the industrial environment of power, signals and data. We are at home in their industries and markets and know the technological challenges of tomorrow. We are therefore continuously developing innovative, sustainable and value-creating solutions for their individual needs. Together, we set standards in Industrial Connectivity.

Optimising processes in panel building with complete workplace solutions
Let's connect.

WORKPLACE SOLUTIONS

Архангельск (8182)63-90-72
Астана (7172)727-132
Астрахань (8512)99-46-04
Барнаул (3852)73-04-60
Белгород (4722)40-23-64
Брянск (4832)59-03-52
Владивосток (423)249-28-31
Волгоград (844)278-03-48
Вологда (8172)26-41-59
Воронеж (473)204-51-73
Екатеринбург (343)384-55-89
Иваново (4932)77-34-06

Ижевск (3412)26-03-58
Иркутск (395)279-98-46
Казань (843)206-01-48
Калининград (4012)72-03-81
Калуга (4842)92-23-67
Кемерово (3842)65-04-62
Киров (8332)68-02-04
Краснодар (861)203-40-90
Красноярск (391)204-63-61
Курск (4712)77-13-04
Липецк (4742)52-20-81
Киргизия (996)312-96-26-47

Магнитогорск (3519)55-03-13
Москва (495)268-04-70
Мурманск (8152)59-64-93
Набережные Челны (8552)20-53-41
Нижний Новгород (831)429-08-12
Новокузнецк (3843)20-46-81
Новосибирск (383)227-86-73
Омск (3812)21-46-40
Орел (4862)44-53-42
Оренбург (3532)37-68-04
Пенза (8412)22-31-16
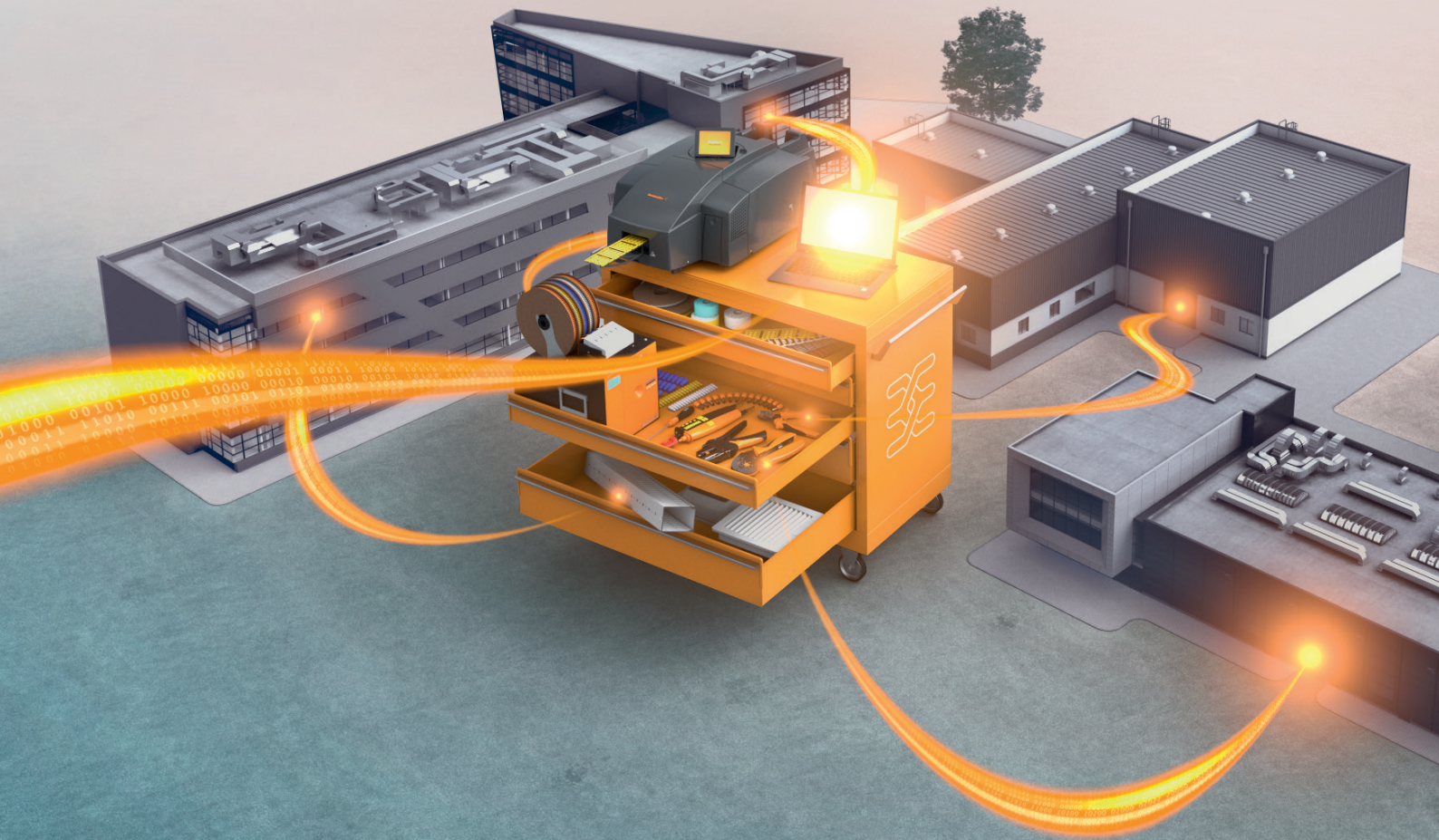Казахстан (772)734-952-31

Пермь (342)205-81-47
Ростов-на-Дону (863)308-18-15
Рязань (4912)46-61-64
Самара (846)206-03-16
Санкт-Петербург (812)309-46-40
Саратов (845)249-38-78
Севастополь (8692)22-31-93
Симферополь (3652)67-13-56
Смоленск (4812)29-41-54
Сочи (862)225-72-31
Ставрополь (8652)20-65-13
Россия (495)268-04-70

Сургут (3462)77-98-35
Тверь (4822)63-31-35
Томск (3822)98-41-53
Тула (4872)74-02-29
Тюмень (3452)66-21-18
Ульяновск (8422)24-23-59
Уфа (347)229-48-12
Хабаровск (4212)92-98-04
Челябинск (351)202-03-61
Череповец (8202)49-02-64
Ярославль (4852)69-52-93

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Weidmüller

Ideally equipped for every work phase
Increase efficiency and save time

The current industry boom is confronting panel builders with new challenges. On the one hand, order books are full. On the other hand, international competition is intensifying. This leads to increased cost pressure and the necessity for efficient processes. The solution to the dilemma here is not just a single action, but a continuous optimisation of the entire panel building process.

Weidmüller is the perfect partner to support you in this process by offering perfectly coordinated workplace solutions for every phase of your production chain. Based on years of experience in panel building, we will enable you to speed up your work processes through effective utilisation of our comprehensive portfolio. Discover our tools, markers, printers, software, automated systems and cabinet infrastructure components for every process – from planning to installation and finally operation.

Planning

With our software solutions for marking (M-Print® PRO), semi-automated wire processing (WPC Tool) and configuration (WMC) you are perfectly prepared for every project phase. Thanks to interfaces with your CAE system, you profit from optimum data transfer from planning through to commissioning.

Installation

Certified, premium quality tools, intuitive automatic stripping and crimping machines as stand-alone or semi-automated solutions as well as a coordinated marking system ensure a time-efficient and reliable assembly process for you. An additional benefit is the minimisation of potential sources of error. Our complete range is rounded off by versatile installation materials and infrastructure components for the panel. In addition to professional hand tools, we also offer you sets that combine tools and suitable accessories in a sensible and efficient way or even a complete tool chest developed according to 5S and lean principles.

Operation

The efficiency benefits resulting from the perfect interaction of products and tools from a single source continue long after the panel has been commissioned. For example, our extensive range of measuring and testing tools provides you with dependable support for troubleshooting. Seamless marking of all panel components and digital data consistency simplify and speed up maintenance work. This helps reduce downtime and increase the operating efficiency of your processes.
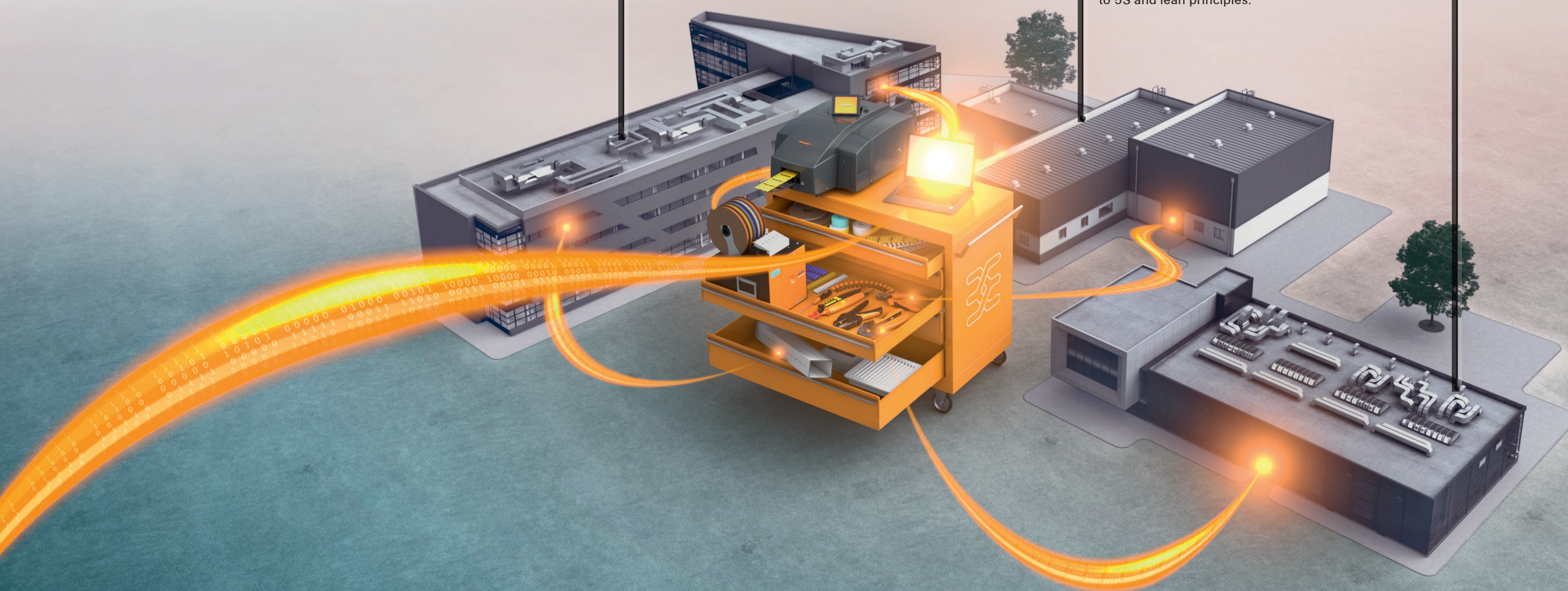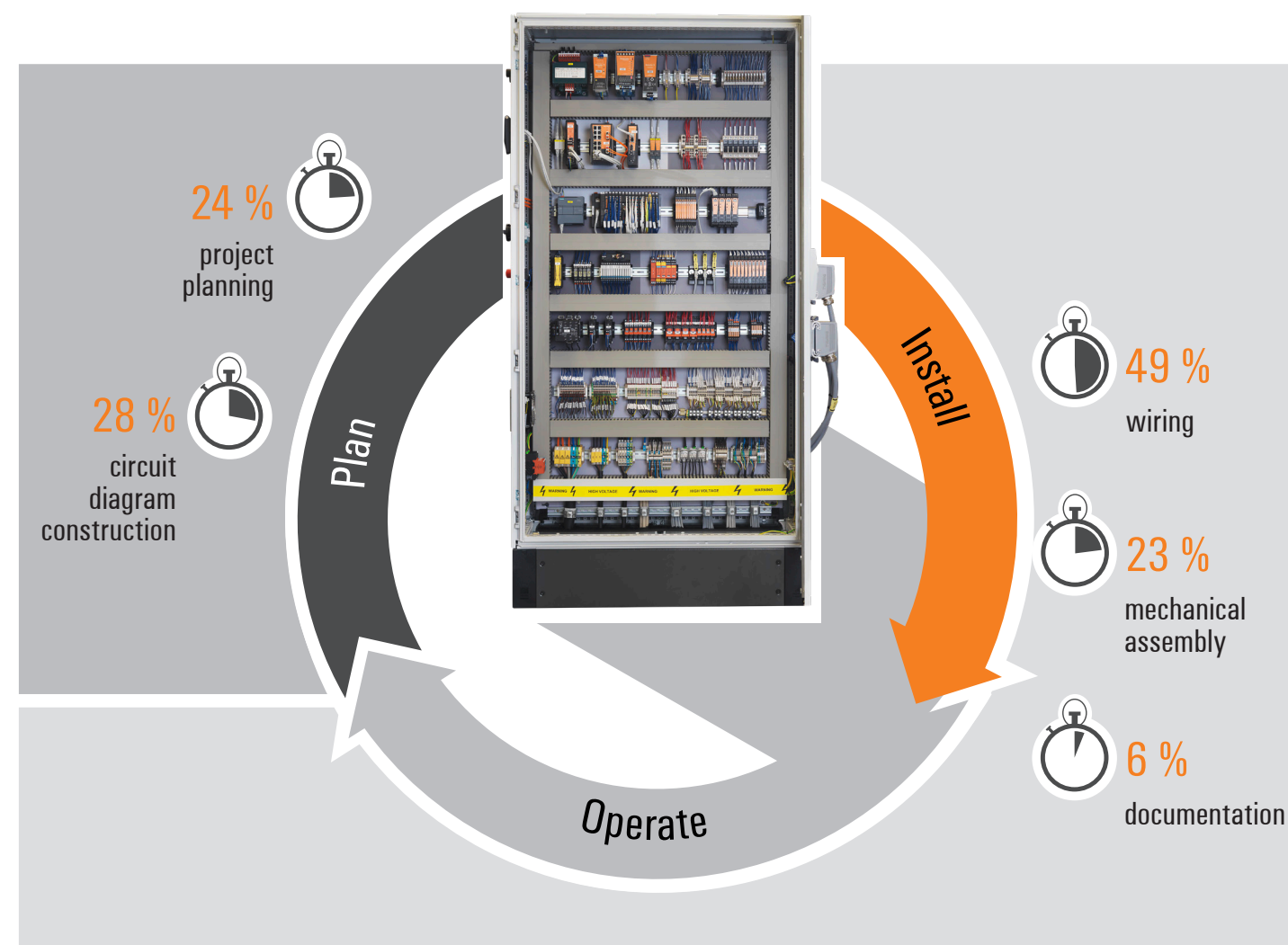
Identifying and tapping the potential of industry 4.0
Smart panel building increases efficiency

The product development process in classic panel building incorporates numerous steps that still require manual labour. This means that in addition to a high expenditure of time and resources, there are also numerous opportunities for errors to occur. A study by the German University of Stuttgart on the subject of "Panel building 4.0*" shows that the most time consuming phases for classic panel builders are planning and installation. More precisely: The steps project planning and circuit diagram construction account for more than 50 % of the time spent on the entire planning process. This results from inconsistent engineering processes and the ever increasing complexity caused by the growing trend to project based business. During installation the complex combination of manual processes usually required for mechanical assembly and wiring account for over 70 % of the time spent on the assembly process!

The biggest time factors in classic panel building

24 % project planning

28 % circuit diagram construction

Plan

Install

Operate

49 % wiring

23 % mechanical assembly

6 % documentation

More productivity in the workplace
Standardisation and automation

Standardisation, automation and integrated solutions offer considerable optimisation potential, especially where inconsistent engineering processes and time-consuming manual processes take place. At Weidmüller we have worked intensively on these topics, to provide you with better alternatives.

The result: a portfolio of complete workplace solutions, with which each work step perfectly combines with the next, enabling processes to be up to 80 % faster whilst delivering 100 % planning reliability.

Optimisation potential from Weidmüller

80 %
Faster and safer processes
We are continually developing innovations that streamline time-consuming work processes such as mechanical assembly and wiring to increase productivity. For example with tools, markers and printers optimally adapted for the application.

100 %
Premium quality
For over 40 years, Weidmüller has stood for machines, markers, printers and tools that meet the highest requirements. Certifications and approvals according to all relevant standards speak for themselves – German-made premium products that you can rely on.

100 %
Planning reliability
Maximal project consistency. With Weidmüller, you can rely on a partner with many years of experience in cable preparation, processing and systemised marking that you can trust at all times. By reducing potential sources of error with complete data consistency, we streamline time-consuming work processes and increase your productivity.

One-stop shop
Guaranteed availability
Thanks to our worldwide network, our complete solutions for your workplace are available to you anywhere and at any time. You can depend on this and on our proven logistical processes, no matter where you are.

Integrated solutions from Weidmüller

Inventory
The markers of our MultiCard system are compatible with components such as terminal blocks, cables, wires and devices from all suppliers. MultiCard markers are available in nearly 700 versions and can be individually printed. This reduces the number of marker variants that must be kept in stock.

Sub-assembly
Our comprehensive range supports you in all phases of assembly preparation, such as with the required cabinet infrastructure components as well as cutting and perforation tools for the mechanical preparation of your panel components.

Purchasing
The constant availability of all article and order numbers also applies to our E-shop and speeds up purchasing and reordering.
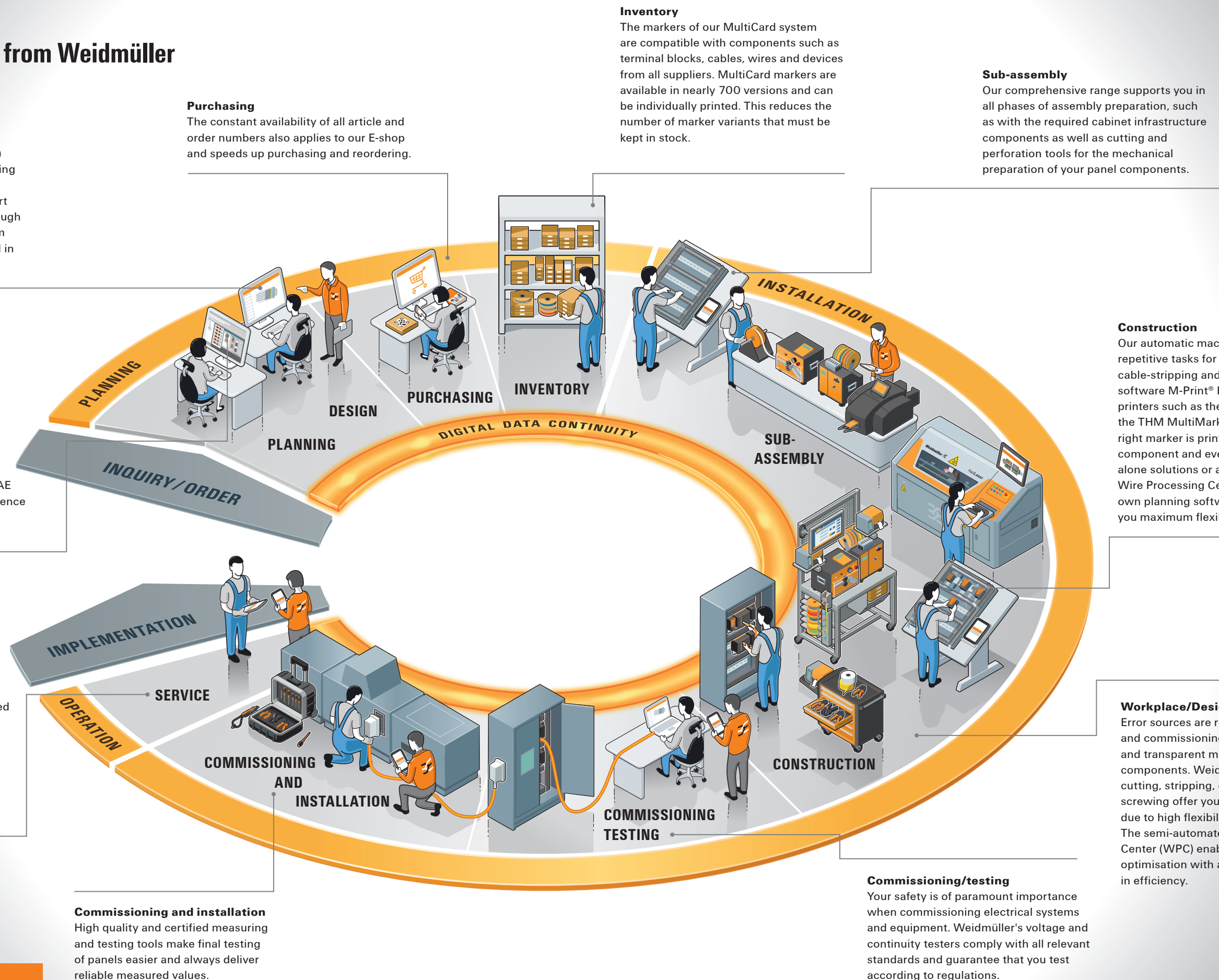
Design
The Weidmüller Configurator (WMC) supports you in planning and designing your panel, for example with pre-assembled terminal strips. You import data sets from your CAE system through an interface and simply transfer them back after they have been processed in the WMC.

Planning
The marking software M-Print® PRO simplifies the planning and labeling of markers. With the M-Print® PRO eCAD interface, you connect your CAE system with the software and experience intelligent automated component marking.

Construction
Our automatic machines carry out repetitive tasks for you, such as cutting, cable-stripping and crimping. The labeling software M-Print® PRO directly controls printers such as the PrintJet ADVANCED or the THM MultiMark and ensures that the right marker is printed for every component and every cable. As stand-alone solutions or as a semi-automated Wire Processing Center (WPC), with its own planning software – our systems offer you maximum flexibility for your processes.

Service
Both during and after the commissioning of your panels, you benefit from our perfectly coordinated portfolio. Seamless marking of all panel components and digital data consistency simplify and accelerate maintenance work. In this way you reduce downtimes and increase the efficiency of the entire application.

Workplace/Design
Error sources are reduced in installation and commissioning thanks to the clear and transparent marking of all cables and components. Weidmüller's tools for cutting, stripping, crimping, testing and screwing offer you outstanding efficiency due to high flexibility in form and function. The semi-automated Wire Processing Center (WPC) enables individual process optimisation with a considerable increase in efficiency.

Commissioning and installation
High quality and certified measuring and testing tools make final testing of panels easier and always deliver reliable measured values.

Commissioning/testing
Your safety is of paramount importance when commissioning electrical systems and equipment. Weidmüller's voltage and continuity testers comply with all relevant standards and guarantee that you test according to regulations.

PLANNING

INQUIRY/ORDER

IMPLEMENTATION

OPERATION

INSTALLATION

DIGITAL DATA CONTINUITY

DESIGN
PURCHASING
INVENTORY
PLANNING
SUB-ASSEMBLY
CONSTRUCTION
SERVICE
COMMISSIONING AND INSTALLATION
COMMISSIONING TESTING
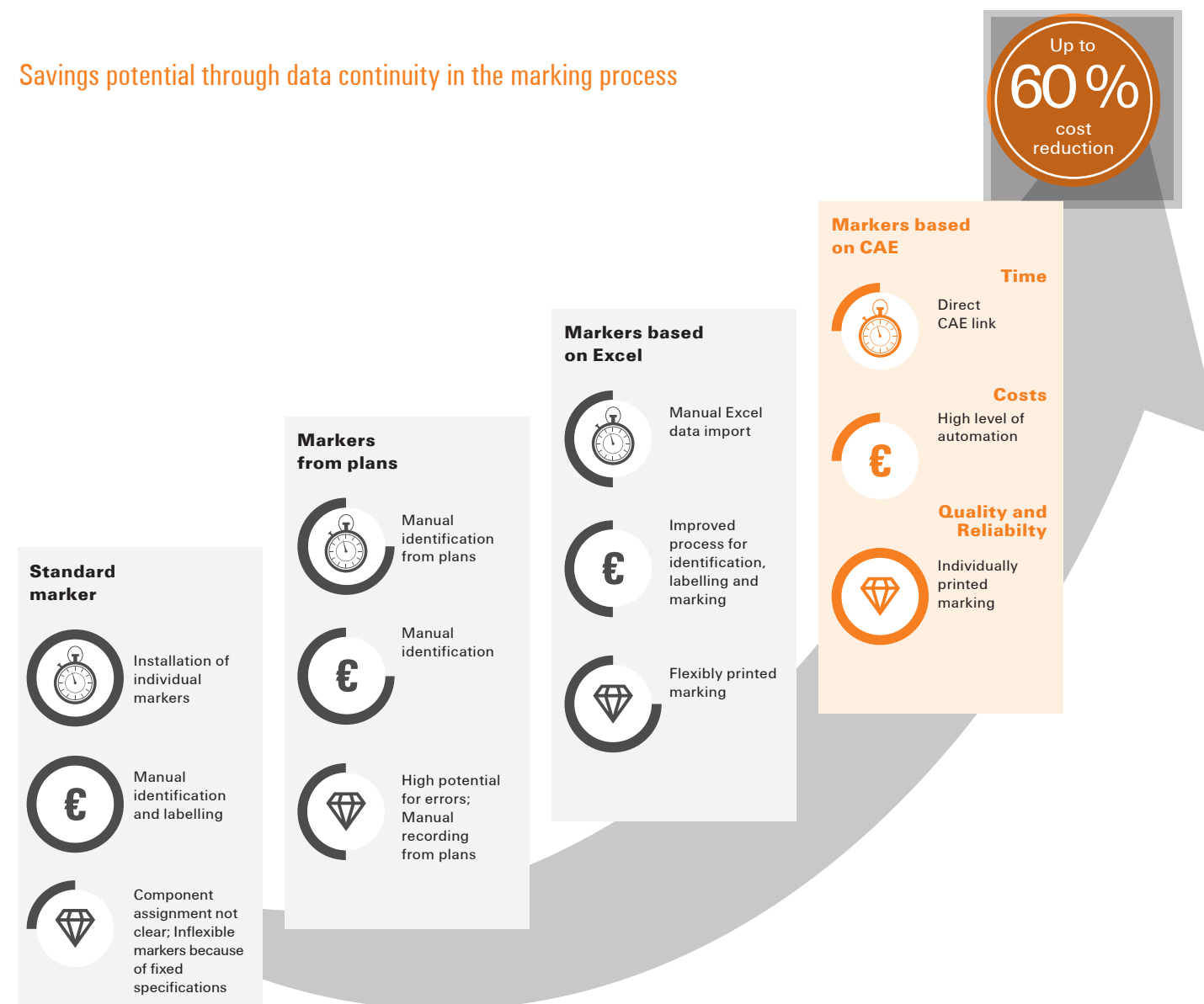
Find out more online:
workplace-solutions.

Simplified engineering and comprehensive documentation
Planning reliability through data consistency

52 % of the working time in planning is required for project planning and circuit design. Interruptions in data flow from manual alterations increase the risk of errors being introduced. This can have significant consequences on the required production time. Weidmüller's software solutions provide a comprehensive solution to this problem. They offer valuable support to increase efficiency and productivity. Not only do they save considerable time and money, they also provide digital data continuity with the benefit of simple data handling via CAE interfaces.

Eliminating manual work steps reduces the risk of errors. Access to existing templates is guaranteed at all times during production. In this way, the necessary documents can be generated automatically - on the basis of the design which is the foundation for the entire process. This simplifies the engineering phase and the complete documentation of the individual production steps - from planning through to commissioning of the fully and clearly marked panel.

Savings potential through data continuity in the marking process

Up to 60 % cost reduction

Standard marker
- Installation of individual markers
- Manual identification and labelling
- Component assignment not clear; Inflexible markers because of fixed specifications

Markers from plans
- Manual identification from plans
- Manual identification
- High potential for errors; Manual recording from plans

Markers based on Excel
- Manual Excel data import
- Improved process for identification, labelling and marking
- Flexibly printed marking

Markers based on CAE

Time
- Direct CAE link

Costs
- High level of automation

Quality and Reliabilty
- Individually printed marking

Digital data continuity from Weidmüller

Planning

Using M-Print® PRO, planning software WPC tool and Weidmüller Configurator (WMC), data is gathered digitally from the beginning of the process and made available for all subsequent steps. All software tools have CAE interfaces to make data available quickly and easily in the most common engineering environments. The plausibility check of the Weidmüller software prevents errors in planning that cost a lot of time and money during installation.

ZUKEN
ePLAN
WS CAD ELECTRICAL ENGINEERING

CAE   EXCEL   WMC

WPC Tool   M-Print® PRO

Installing

By accessing the data created during the planning phase, the error rate is significantly reduced, as no information is lost between the individual work steps and manual processing is not required.

WPC   Printers

Operating

Thanks to digital data continuity, you receive a clearly marked panel. In addition, the comprehensive documentation speeds up commissioning and maintenance work, since each production step can be traced and configurations can also be reproduced easily when required. A decisive advantage in the demanding project business.
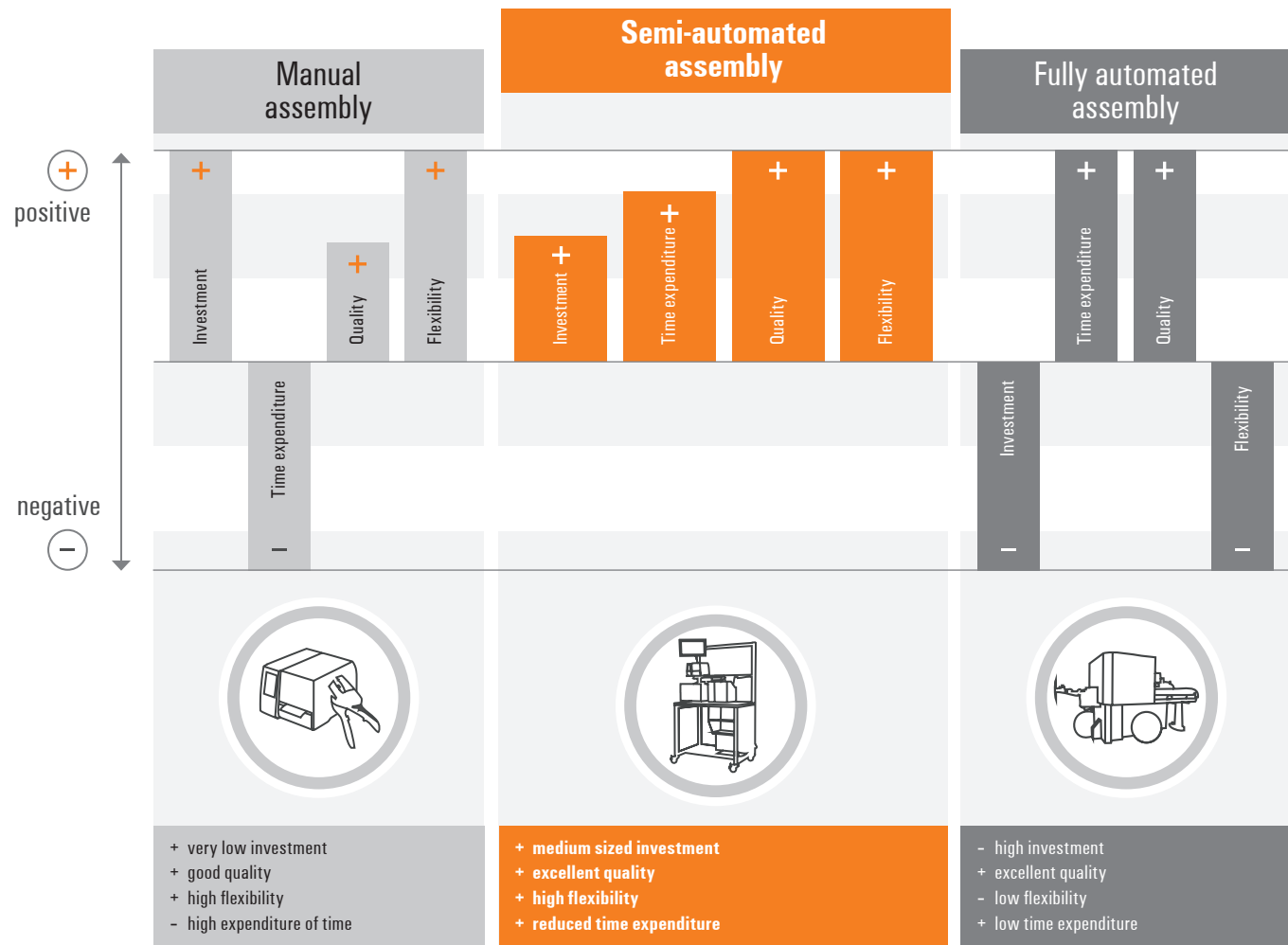
Continuously marked panel
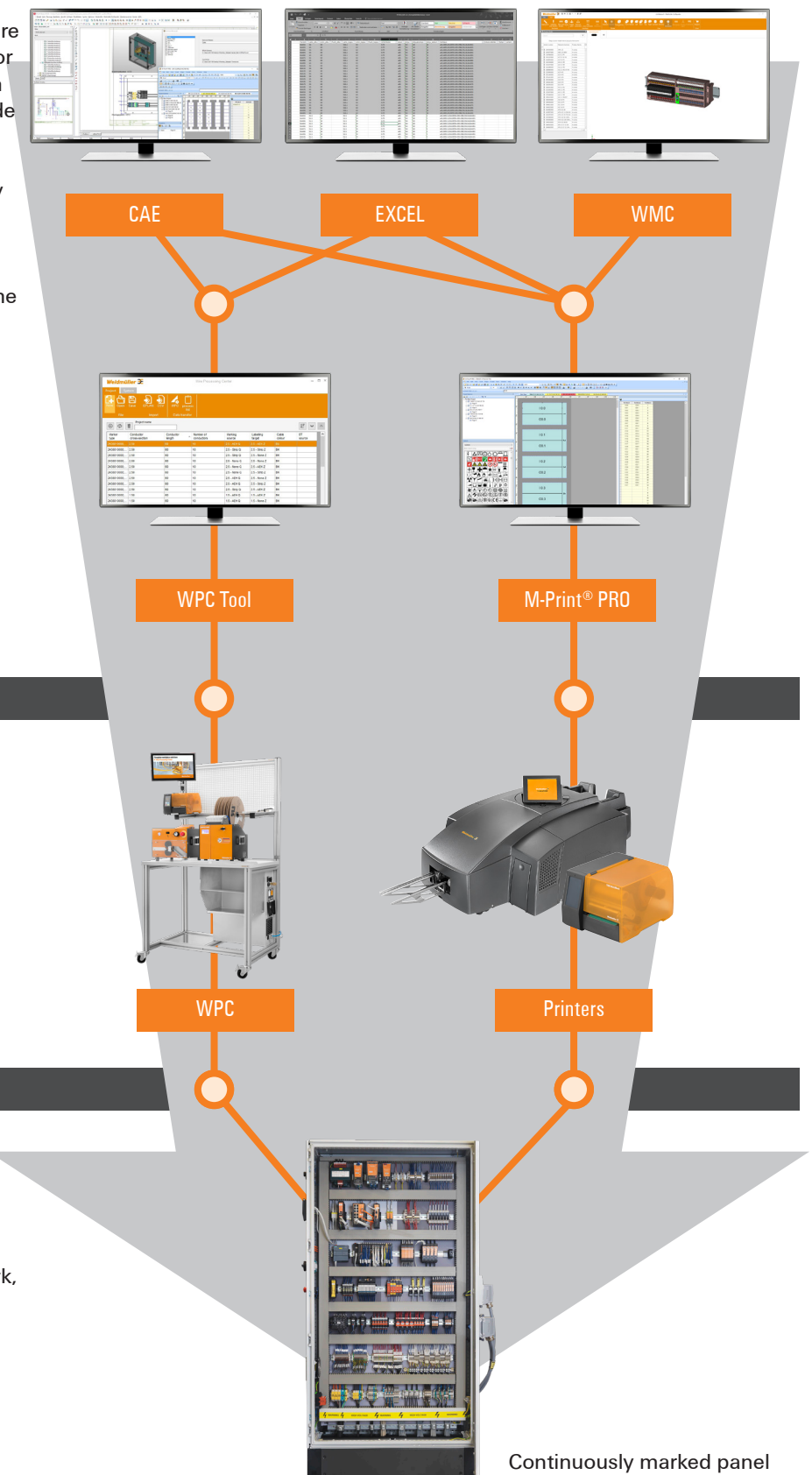
Automation in cable assembly
Minimise errors, increase efficiency by up to 80 %

In classic panel building, 72 % of the working time in the installation phase is required for wiring and mechanical assembly. In an environment in which the fast-moving project business is increasing and cost and deadline pressure is growing steadily, consistent optimisation and streamlining of processes is the necessary consequence. Participants in the study "Panel building 4.0" see the highest potential for improvement and savings in the installation

phase in solutions aimed at standardisation and the pre-assembly of cables. The Weidmüller Wire Processing Center (WPC) addresses exactly these issues. Software-controlled, semi-automated cable assembly considerably accelerates production processes and at the same time ensures the highest quality standards. The WPC thus provides you with utmost flexibility, reliability and an efficiency increase of up to 80 %.

Comparison of solutions for cable assembly

	Manual assembly			Semi-automated assembly				Fully automated assembly		
positive (+)	Investment +	Quality +	Flexibility +	Investment +	Time expenditure +	Quality +	Flexibility +	Time expenditure +	Quality +	
negative (−)	Time expenditure −							Investment −		Flexibility −

+ very low investment	+ medium sized investment	– high investment
+ good quality	+ excellent quality	+ excellent quality
+ high flexibility	+ high flexibility	– low flexibility
– high expenditure of time	+ reduced time expenditure	+ low time expenditure

Semi-automated Wire Processing Center (WPC)
Easy. Flexible. Efficient.

The WPC combines proven components into a modular assembly system consisting of cable processing machines and industrial printers. The various components have a modular setup and communicate with each other through the implemented interfaces via the WPC software. The included planning software WPC Tool ensures optimal data consistency. In this way CAE data from the planning phase can be easily transferred to the WPC and used for cable assembly. Visualised on the touch screen, the software-controlled processing of individual wire orders significantly improves process reliability.

The WPC is characterised by its flexibility. In the system approach, individual components can be removed from the process sequence, e.g. for subsequent marking, or they can be used in their individual functions in stand-alone mode. Even short term changes, which frequently occur in the project business, can be easily integrated. Thanks to intuitive operation and accelerated processing, additional production capacity can be made available, thus increasing overall output.

Intuitive operation and software-controlled processing via the touchscreen

High degree of flexibility with consistently high quality through use of semi-automated machines
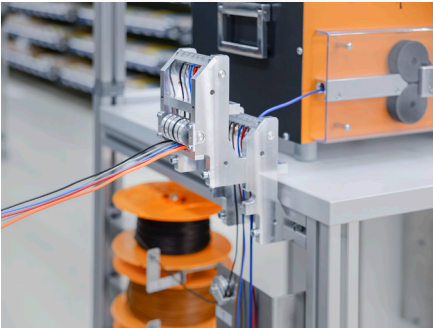
Different cable feeds for cable reels and cartons

Improved ergonomics and efficiency in the workplace
Valuable time savings through standardisation

The participants in the study "Panel building 4.0" see a high potential for improvement and savings in standardisation and workplace standardisation in panel building. In a classic panel building project 72 % of the working time in installation is required for mechanical assembly and wiring. What if you could achieve a 10 % increase in efficiency through standardisation? This is possible with the Weidmüller panel building tool chest, which was specially developed according to 5S and lean principles.

Average time savings per day with Weidmüller tool chest

15 min/day

15 min/day

5 min/day

5 min/day

10 % efficiency increase

Ø Total time savings 40 min/day

| "Standard" Tools | "Specialised" Tools | Workplace cleaning | Daily tool inspection | Ø Total time savings |

Weidmüller tool chest with variable inserts
Standardisation in the workplace

With the Weidmüller tool chest, every item, whether standard or rarely used specialised tool, receives its designated position. Tools in frequent use are positioned within easy reach, functional groups are also placed together. Thanks to the standardised structure and tool positioning, the time required to find, remove, clean and inspect the tools is greatly reduced when compared to non-optimised workplaces.

An additional advantage of the foam recesses is the ability to quickly identify when a tool is missing at the end of a working day. Labelling with MultiCard markers and QR codes offer additional support: they link you to the online catalogue where you can find additional information. The tool chest can be configured according to your individual requirements and optionally equipped with automatic machines and printers. Create an intelligent mobile production island tailored exactly to your individual needs, with the accustomed Weidmüller quality.

The Weidmüller tool chest offers intelligently combined equipment of the highest quality

Modular foam inserts enable drawers to be organised according to individual requirements

If a tool is missing, the recesses and MultiCard markers make it easy to identify

Bühler Group
Workplace solutions from Weidmüller help to increase process efficiency at this global technology group

The Bühler group utilizes the interplay between innovation and efficiency to generate a competitive advantage with high-quality, long lasting products. The Swiss machine building company specialises in industrial technologies for the food industry and advanced materials for the automotive sector. The tools, automatic machines and marking systems from Weidmüller play a huge role within their production process; particularly when it comes to the smooth planning of production and maintenance processes.

Reducing complexity and increasing efficiency
Modern machines and production plants are becoming increasingly complex. As a result, it is all the more important to keep the accompanying processes as streamlined as possible in order to prevent production disruptions and sources of errors. Another important point is the precise implementation of individual process steps, whereby the components involved need to function and interact with one another perfectly. For Bühler, efficient production is not an end in itself, but rather a key factor in maintaining their competitive advantage. "Every single day we work on making our processes more streamlined while also reducing the complexity", explains Samuel Hauri, Group Leader of Engraving & Confectionaries at Bühler. "The workplace solutions from Weidmüller have played a major role in allowing us to succeed, time and time again in this regard. A good example of this is the marking systems," Hauri continues. During the selection process, the company attached a great deal of importance to an easy-to-use application that would in turn lead to savings in terms of the time requirements. The M-Print® PRO marking software from Weidmüller is based on the logic of well-known office systems, which was a clear deciding factor for the company. "So far, we have very few, if any, downtimes to report," says Samuel Hauri. "The contact partners at Weidmüller

are available at all times to help with any issues that might arise, and always provide us with competent advice. This personalised support fits perfectly into our own processes."

Storage, printing process, waste, errors: reduce to the max
Bühler has made extremely good progress on the path to becoming a digital company. In the preliminary processes such as planning and sub-assembly, all data is already sent directly to the machine digitally. A pilot project for a paperless production line is currently under way. A well-structured work station is another component of this approach to Industry 4.0. Work stations at Bühler are regularly optimised in order to eliminate any unnecessary process steps or raw material from the process. "Lots of small improvements in this area help us to remain internationally competitive," Hauri explains. "As soon as we have an integrated digital database, we will be able to implement any change requests from the customer in real-time during production. And this means no more production interruptions. This is why we are working hard to ensure that all CAE data will flow directly into the M-Print® PRO software in future. This will help us to eliminate any further media disruptions, with the motto of 'reduce to the max'." Within this digital process, the M-Print® PRO software helps to ensure planning reliability in the marking production.

The printing process has not only become quicker thanks to the use of the Weidmüller marking system. As the used material comes from the reel and is precisely marked, Bühler has been able to make annual raw material savings of 80 % since it started to use the system. The length of time that the markers can withstand the often demanding industrial environments, has also made a positive impression on Bühler. "The good adhesion of the lettering on the markers

means that the maintenance team can still accurately read the information and identify the component years after installation," enthuses Hauri. The high level of automation used in the marking process and the fact that the software is so easy to use have also made a noticeable contribution to a smoother work process.

Weidmüller solutions run "as if in perpetual motion"
Whenever tools fail, for example due to wear and tear, an interruption to the production process occurs. For this reason, Bühler looks for maximum quality when selecting its tools – and the challenges for suppliers in this area are extremely demanding. These include making sure that the products comply with the usual standards and regulations, allow for safe and easy handling, remain robust and reliable over a long period of time, and in turn help to ensure Bühler's internal process reliability. "Weidmüller meets precisely these criteria in a unique way. We use all of the workplace solutions on a regular basis, with 12 marking systems being used every single day," says Samuel Hauri. "The CRIMPFIX LS always delivers consistent quality over several thousand crimping presses, and this automatic machine also works more quickly than an employee, who would need two different manual tools to carry out the same task. Switching to the automatic

crimping machines therefore meant that both efficiency and quality were increased in equal measure. The automatic machines in particular, work as if they are in perpetual motion." According to the qualified industrial specialist, the workplace solutions from Weidmüller are optimally tailored to the processes found in machine construction. "With its very reliable and quick service, Weidmüller is clearly one of the best suppliers in this segment. And the ergonomically adapted tools also do exactly what they need to do. They help contribute to our employees' satisfaction, which is another important success factor for us."

"The perfect partner for us"
Samuel Hauri is particularly impressed by the holistic approach followed by Weidmüller: "With Weidmüller workplace solutions, you can tell that they come from a supplier who is familiar with panel building. And the components are not only perfectly coordinated with each other, but also with our internal process chain. The reliability, high level of availability and the collaborative partnership – even with our global subsidiaries – also means that all our requests and requirements are covered. When it comes to workplace solutions, Weidmüller is the perfect partner for us."

The CRIMPFIX LS automatic machine ensures greater efficiency and consistently high quality

The reliable testing tools are practical helpers for Bühler employees in their daily work
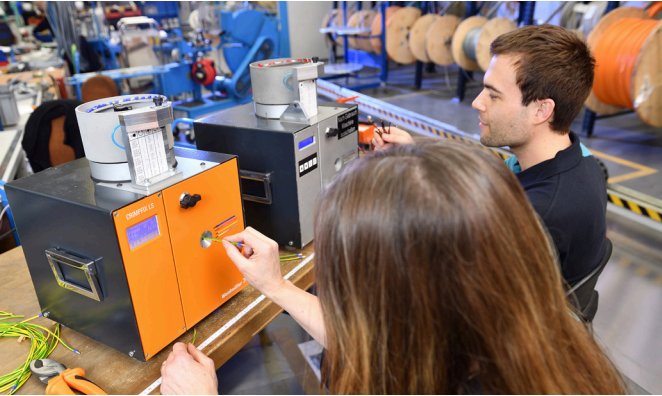

Convinced by Weidmüller's workplace solutions (from left to right): Samuel Hauri, Yanick Josuran, and Joel Wirth from the Bühler Group

Bühler uses the intuitive M-Print® PRO marking software to design individual markings quickly and easily