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optimize!
softing

2017 European Production Analytics Enabling Technology Leadership Award

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2017 BEST
PRACTICES
AWARD

EUROPEAN PRODUCTION ANALYTICS
ENABLING TECHNOLOGY LEADERSHIP AWARD

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Background and Company Performance

Industry Challenges

The wave of digitization brings along with it the power to measure, monitor, and monetize previously hidden industrial data—ushering in Industry 4.0. Through building robust hardware and supporting advanced data processing prowess, virtual software simulation models, intelligent algorithms, and real-time data communication capabilities, digitization technology is prepared to engulf and transform businesses and industries worldwide. Today, the Industry 4.0 concept and the effect of the Internet of Things (IoT), and artificial intelligence (AI) significantly influences process oriented industries around the world. Furthermore, the concept of advanced machine learning and deep learning finds relevance in industrial applications.

Notably, the Industrial Internet of Things (IIoT) is transforming how businesses work by enabling real-time insight into operations. Through creating hard, actionable analytics from an ocean of data, IIoT helps drive clear business results. Nevertheless, the way organizations utilize this information—including when and where they utilize it—will decide the measure of significant worth that they can bring to the business. Notably, one of the challenging ways organizations are gaining more insight and value from IIoT data is the architecting for analytics at the “edges” of their environments.¹

With exponentially growing threats to data security, organizations are looking for foolproof methods of safeguarding their critical data. Data encryption was the most common form of data protection since time immemorial — today, companies choose Open Platform Communication (OPC) Unified Architecture (UA) as their interoperability standard to respond to the security challenge and ensure the secure data exchange in the industrial automation space. OPC UA ensures the seamless flow of information among devices from multiple vendors.

Finally, the enormous amount of data that comes from devices, meters, and sensors poses a significant challenge. At present, only a small percentage of an organization’s data is ever analyzed. The greatest reason for this low data usage is the fact that data resides in siloed, disparate systems making it tough to collect and interpret manually. The consequent lack of data understanding and its inaccurate usage can lead to strategic decisions that result in inefficiencies, sub-optimal productivity, higher costs, and increased exposure to service level misses, penalties, and risks. Therefore, Frost & Sullivan believes analyzing data and applying insights can help manufacturers make data-driven business decisions, drive innovation, and identify new business opportunities.

Technology Leverage and Customer Impact of Softing

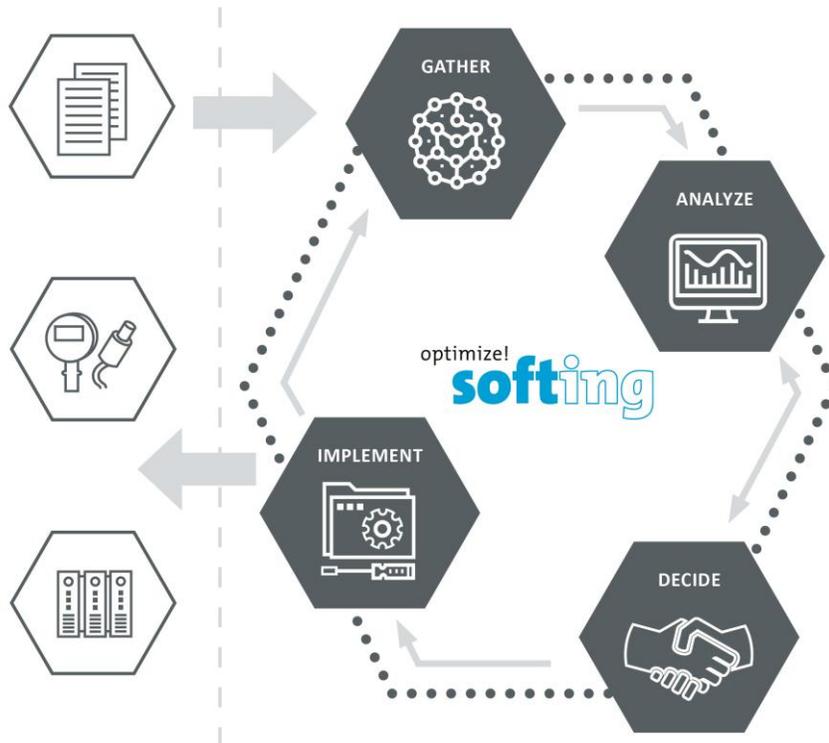
Creating New Standards in Industrial Data Intelligence

Headquartered in Haar, near Munich, in Germany, Softing provides the ultimate performance in the data gathering solutions market. Leveraging over 35 years of experience in the industrial sector, Softing offers best-in-class improvements and

¹ *Intelligence at the Edge-Outlook on Edge Computing*, (Frost & Sullivan, June 2017)

implementation for digital exchange processes in industrial applications.

Softing develops a spectrum of customer-specific software and hardware products for a variety of applications, e.g., technology and data integration, communication components, network monitoring, and diagnostics. With a broad portfolio of data gathering solutions, software, network diagnostics, and plant asset management, service, and support, Softing provides customers with a competitive edge through maximizing performance and enhancing the flexibility, efficiency, and reliability of their operations.



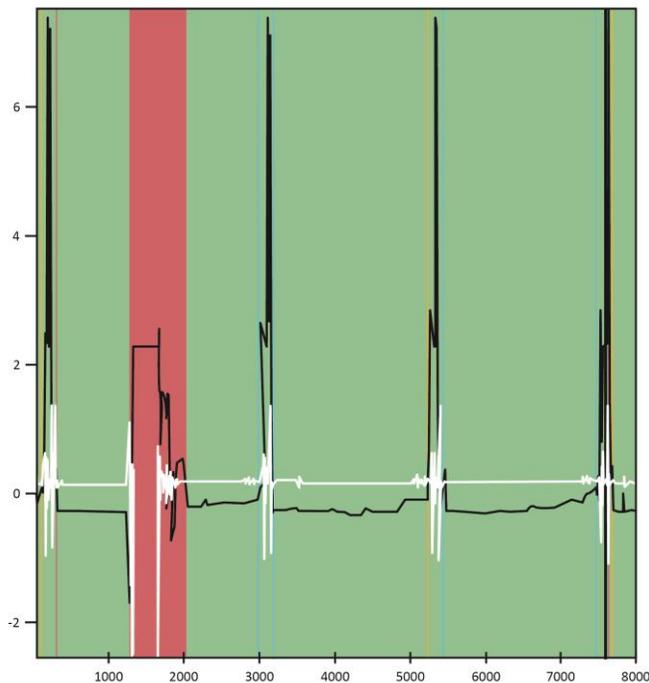
Softing's industrial data analytics approach is based on the Cross-Industry Standard Process for Data Mining (CRISP-DM) process model, the industry standard for data mining and analytics projects. CRISP-DM divides into six phases: business understanding, data understanding, data preparation, modeling, evaluation, and deployment.

Softing provides two kinds of approaches for data analytics:

- The one-off approach, where a problem is analyzed and then solved by a production modification, i.e., revamped engineering.
- The permanent approach, i.e., realizing a solution by means of a dataTHINK streaming analytics implementation (e.g. anomaly detection).

As Softing pays special attention to secure and reliable data exchange, the company implements OPC UA functionality into customer-specific products and applications through using the industry-leading Softing OPC UA data exchange solutions. As a result, the OPC UA implementation becomes ready-to-use in the fastest possible way. Furthermore, there is no need for assigning scarce development resources to understand complex OPC UA specifications or establish in-depth OPC UA knowledge.

dataTHINK Superior Operation



Softing recently introduced its dataTHINK analytics solution for real-time data-based production optimization — allowing for on-site streamed production insight. Users benefit from dataTHINK as it solidly eliminates unsolved disruptions and reduces scrap while optimizing plant performance and contributing to increased revenue and cost efficiency. dataTHINK software uses current machine learning procedures like anomaly detection and time series analyses to detect outliers and prevent unexpected situations efficiently. It is easy-to-install and based on open standards, e.g. OPC UA.

dataTHINK allows companies to respond quickly to market challenges and use resources more efficiently to enhance business performance and gain competitive advantages. Softing’s user-friendly and flexible solution supports end-users within their established processes. Also, the first self-serving features have been made available and Softing will continue to develop their dataTHINK solution to become the number one autonomous production analytics software. Furthermore, Softing runs joint workshops or conducts a proof of concept for companies that need data-based production optimization support.

Industry Focus and Customer Value

Softing’s focus on product quality and leading performance relies on two building blocks: industry focus and continuous process development. Softing proves its industry focus by the company’s efforts of being well-informed regarding actual industry trends. Softing also positions itself as the market expert and maintains close relationships with customers to understand what is important to them and what the current market expectations are. The company runs customized training and workshops that allow customers to share feedback and best practices specific to their markets. Softing’s industry focus ensures product relevance and brings added value to company’s customers.

Industrial customers expect strategic, proactive support to maximize their performance. Thus, Softing focuses on delivering unique value while building awareness of its solutions. The company commands a leadership position from its strategic mix of application depth, consultative approach, and proactive efforts to bring best-in-class solutions to its clients. Furthermore, Softing concentrates on developing global and local cooperation with customers for further development of the company’s competence and market presence with a broad focus on creating relevance for customers’ needs and strong global exposure.

Conclusion

Manufacturing today faces a period of automation driven by the Internet of Things. This trend leads to the situation where analysis of industrial data becomes crucial to optimize assets and improve reliability, productivity, and overall organizational efficiency. Softing successfully leverages this trend while providing industrial data intelligence solutions that drive operational efficiency with advanced analytics; thus, enabling cost and risk reduction while analyzing all systems and data needed to make optimal operational decisions.

With its commitment to innovation and superior dataTHINK solution, Softing earns Frost & Sullivan's 2017 Europe Enabling Technology Leadership Award for production analytics market.

Significance of Enabling Technology Leadership

Ultimately, growth in any organization depends upon customers purchasing from a company and then making the decision to return time and again. In a sense, then, everything is truly about the customer—and making those customers happy is the cornerstone of any long-term successful growth strategy. To achieve these goals through enabling technology leadership, an organization must be best-in-class in three key areas: understanding demand, nurturing the brand, and differentiating from the competition.



Understanding Enabling Technology Leadership

Product quality (driven by innovative technology) is the foundation of delivering customer value. When complemented by an equally rigorous focus on the customer, companies can begin to differentiate themselves from the competition. From awareness, to consideration, to purchase, to follow-up support, best-practice organizations deliver a unique and

Best Practices Recognition: 10 Steps to Researching, Identifying, and Recognizing Best Practices

Frost & Sullivan analysts follow a 10-step process to evaluate Award candidates and assess their fit with select best practice criteria. The reputation and integrity of the Awards are based on close adherence to this process.

STEP	OBJECTIVE	KEY ACTIVITIES	OUTPUT
1 Monitor, target, and screen	Identify Award recipient candidates from around the globe	<ul style="list-style-type: none"> • Conduct in-depth industry research • Identify emerging sectors • Scan multiple geographies 	Pipeline of candidates who potentially meet all best-practice criteria
2 Perform 360-degree research	Perform comprehensive, 360-degree research on all candidates in the pipeline	<ul style="list-style-type: none"> • Interview thought leaders and industry practitioners • Assess candidates' fit with best-practice criteria • Rank all candidates 	Matrix positioning of all candidates' performance relative to one another
3 Invite thought leadership in best practices	Perform in-depth examination of all candidates	<ul style="list-style-type: none"> • Confirm best-practice criteria • Examine eligibility of all candidates • Identify any information gaps 	Detailed profiles of all ranked candidates
4 Initiate research director review	Conduct an unbiased evaluation of all candidate profiles	<ul style="list-style-type: none"> • Brainstorm ranking options • Invite multiple perspectives on candidates' performance • Update candidate profiles 	Final prioritization of all eligible candidates and companion best-practice positioning paper
5 Assemble panel of industry experts	Present findings to an expert panel of industry thought leaders	<ul style="list-style-type: none"> • Share findings • Strengthen cases for candidate eligibility • Prioritize candidates 	Refined list of prioritized Award candidates
6 Conduct global industry review	Build consensus on Award candidates' eligibility	<ul style="list-style-type: none"> • Hold global team meeting to review all candidates • Pressure-test fit with criteria • Confirm inclusion of all eligible candidates 	Final list of eligible Award candidates, representing success stories worldwide
7 Perform quality check	Develop official Award consideration materials	<ul style="list-style-type: none"> • Perform final performance benchmarking activities • Write nominations • Perform quality review 	High-quality, accurate, and creative presentation of nominees' successes
8 Reconnect with panel of industry experts	Finalize the selection of the best-practice Award recipient	<ul style="list-style-type: none"> • Review analysis with panel • Build consensus • Select recipient 	Decision on which company performs best against all best-practice criteria
9 Communicate recognition	Inform Award recipient of Award recognition	<ul style="list-style-type: none"> • Present Award to the CEO • Inspire the organization for continued success • Celebrate the recipient's performance 	Announcement of Award and plan for how recipient can use the Award to enhance the brand
10 Take strategic action	Upon licensing, company is able to share Award news with stakeholders and customers	<ul style="list-style-type: none"> • Coordinate media outreach • Design a marketing plan • Assess Award's role in future strategic planning 	Widespread awareness of recipient's Award status among investors, media personnel, and employees

About Frost & Sullivan

Frost & Sullivan, the Growth Partnership Company, enables clients to accelerate growth and achieve best-in-class positions in growth, innovation and leadership. The company's Growth Partnership Service provides the CEO and the CEO's Growth Team with disciplined research and best practice models to drive the generation, evaluation and implementation of powerful growth strategies. Frost & Sullivan leverages more than 50 years of experience in partnering with Global 1000 companies, emerging businesses, and the investment community from 45 offices on six continents. To join our Growth Partnership, please visit <http://www.frost.com>.