



## SIMATIC IT Value Added Services

A broad concept of Customer Care

# SIMATIC IT

Answers for industry.

**SIEMENS**

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# 1 The importance of Support and Services for optimized plant availability

Manufacturing Execution Systems (MES) are becoming ever more critical in manufacturing operations, not least because they enable the implementation of corporate strategies based on quality, efficiency, cost containment ... Which is why manufacturers typically require these systems to be maximally available and up to date.

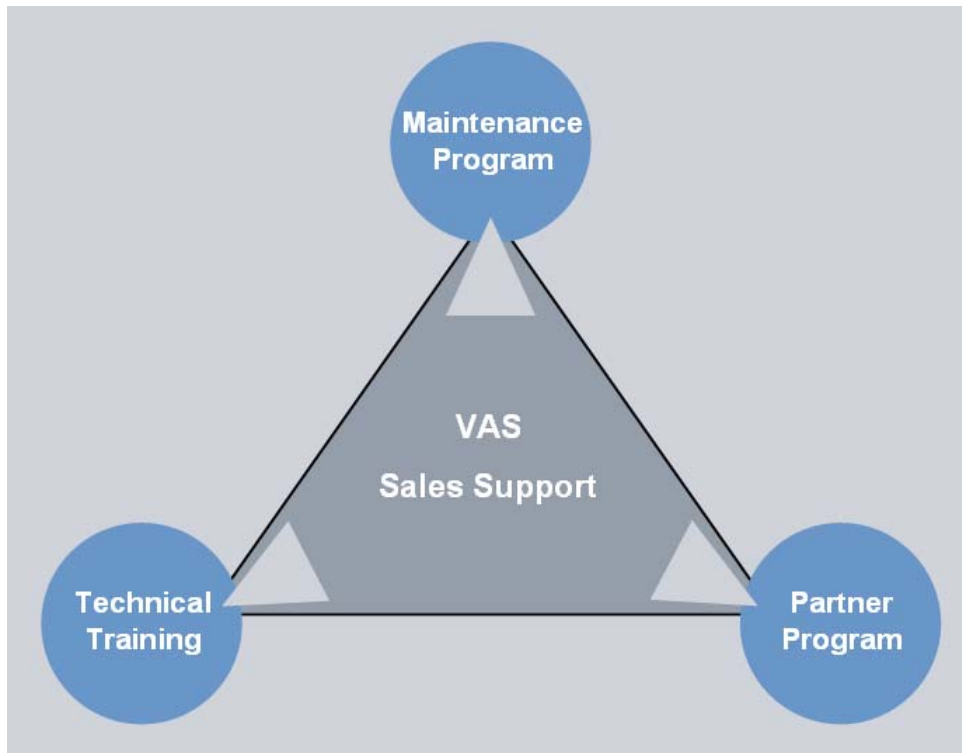
In order to meet the global market requirements with more demanding production and business goals, manufacturers are stepping up investments in plant IT infrastructures. As such, also MES installations and hence their maintenance are becoming more and more mission critical. This has generated, as a side effect, an increasing importance of plant IT solutions such as MES, but also and more particularly of their availability and reliability.

SIMATIC IT, the Siemens MES solution, provides the right answer to today's industry challenges, and enables a higher level of market and manufacturing responsiveness through increased production performance, real-time cross plant and plant centric visibility and controlled brand value.

By completing this wide range of functionality with a renewed and extended set of services and support, Siemens is strongly committed to customer care, for the whole product and project life cycle, from the analysis of the economical investment to the implementation phase and the post installation assistance.

SIMATIC IT Value Added Services (VAS) offers significant and measurable benefits to customers through an innovative Maintenance concept, a new Partner Program and Technical Training.

## SIMATIC IT Value Added Services



## **2 A comprehensive Maintenance Program for your MES Installation**

Manufacturers often underestimate the importance of updating software versions, taking into consideration maintenance of applications, or preventive actions to avoid compromising the plant availability.

The SIMATIC IT Maintenance Program helps customers prevent unforeseen or unplanned costs for system interventions, composing a maintenance program based on both standard and optional services, with the right balance between predictive, preventive and reactive measures, and based on the newest technologies.

Effectively deployed, this approach becomes essential for the customers when facing problem analysis and solving (RAM unavailable, memory loss, broken networks, unreachable PCs, CPU overloaded, memory leaks, unreadable B2MML, old hardware...). Though reactive maintenance is appropriate and effective for systems that handle non-critical stages of manufacturing and in relatively straightforward production processes, manufacturers who rely exclusively on reactive measures often face an increase of operational expenses: unplanned downtimes tend to be more frequent and longer, require more time for an in-depth crisis analysis, and ultimately they are more costly.

In most manufacturing operations, however, a blend of predictive, preventive and reactive activities would be appropriate, productive and cost efficient.

The renewed and extended SIMATIC IT Maintenance Program also includes the possibility to take predictive measures, enabling double cost reductions by eliminating unnecessary services and their costs, and by reducing downtime related profit loss. Identifying industry specific Key Performance Indicators and risk parameters could be the first step towards those economic and quality benefits. Supported by SIMATIC IT, manufacturers increase cost-effectiveness by planned plant monitoring at given points in time (preventive) or continuously (predictive).

This is accomplished through the use of Agent Technology, which anticipates and provides warnings of performance threats and helps prevent production slow-downs or complete breakdowns.

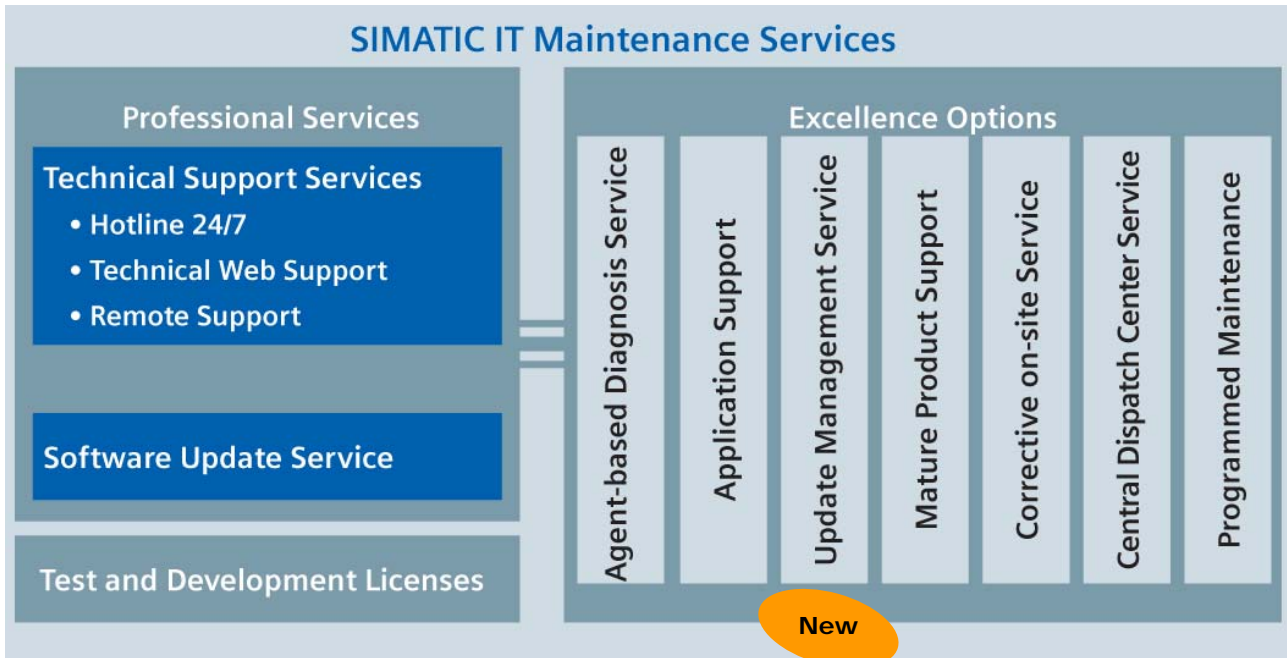
In order to maximize the benefits of these value added SIMATIC IT services, manufacturers have at their disposal the Technical Support Service (TSS), a team of highly skilled support engineers working closely together with R&D and Delivery Services.

Jointly with selected partners, Siemens offers a global service and maintenance network with a unique level of skills, expertise and know-how: spot-on for multi-site manufacturers, who need centralized yet global support services providing round-the-clock monitoring, analysis and real-time solutions.

Siemens believes that its maintenance offering contributes significantly to the top line performance and the bottom line productivity of the plant.

## 2.1 SIMATIC IT Maintenance offering

The SIMATIC IT Maintenance Program adds strategic value to its cross-industry software products and industry specific solutions with a high value mix of standard (Professional Services) and optional services (Excellence Options).



### Professional Services

#### Technical Support Service:

##### - Hotline 24/7:

Exhaustive hotline technical assistance is offered for SIMATIC IT products as well as for interaction with 3rd party products or applications, and IT infrastructure.

##### - Technical Web Support:

The user has access, through the Internet, to a set of continuously updated technical documentation about SIMATIC IT software. This includes general information, a support database and tips, such as Hot Fixes and Release Notes, Product Documentation and Frequently Asked Questions.

##### - Remote Support:

Upon specific request of the customer and after verification of the IT infrastructure, a complete diagnosis and troubleshooting service can be provided by the TSS team, supported also by means of secure remote access.

#### Software Update Service (SUS):

This service provides the new versions of SIMATIC IT software including new functions and Service Packs when released. The updates are automatically delivered to the customer.

### Excellence Options

#### Agent-based Diagnosis Service:

This service can predict potentially critical conditions in the system (e.g. lack of memory with as a result data loss) and initiate measures in order to prevent them from happening, thus securing the continuity of the operations or the well functioning of the system. Agents are based on a non-invasive innovative technology.

### **Application Support:**

A complete assistance to customer specific applications, built on top of the SIMATIC IT standard products, focused to minimize risks and maximize the performance of the SIMATIC IT solution.

### **Update Management Service:**

This service offers the possibility to distribute and install updates and enhancements after a monitoring activity of the customer's software configuration, and the level of update of Product, Libraries and their applications. This tool is extremely meaningful to achieve a standard alignment of the same version of Product and Libraries in all plants involved in the project.

New

### **Mature Product Support:**

A customer can choose for support and maintenance on phased-out product versions.

### **Corrective on-site Service:**

This service offers the on-site assistance of an engineering team with project specific knowledge.

### **Central Dispatch Center Service:**

A support provided for other Siemens Products (e.g: SIMATIC BATCH, SIMATIC PCS7) and for application software implemented on top of SIMATIC IT by 3<sup>rd</sup> parties.

### **Programmed Maintenance:**

With this service, the customer can plan a certain number of days of intervention for system maintenance, with periodic checks of the application software and related IT infrastructure. This will avoid potential issues from occurring in the future, due to e.g. consumption of system resources.

### **Test and Development Licenses:**

Additional licenses with a validity of one year, to be used only for test or development purposes and for products already installed at the customers site. This service can only be purchased if the customer has a SIMATIC IT Maintenance Agreement.

## **2.2 Why opting for the SIMATIC IT Maintenance Program?**

Integrating predictive, preventive and reactive maintenance is the right balanced approach to obtain synergistic strengths through a complete coverage of the customers' MES installation, offering at the same time tangible and intangible benefits.

### **Risk profile & low risk rate**

- Continuous remote monitoring of risky and critical parameters
- Expert team with deep knowledge and technical capability for faster and better solutions to customers' issues
- Lower the risk of missing updated SIMATIC IT products

### **Cost reduction**

- Optimize IT investments
- Maximize ROI, Contain TCO
- Avoid repair costs resulting from unplanned events
- Reduce production breakdowns costs
- Maintain products and applications at the highest level of performance
- Be supported by a centralized maintenance program
- No regression test cost

### **Time saving**

- Reduce time spent on problem analysis and problem solving
- Provide immediate reactive measures as well as on-site corrective actions
- Reduce time for installation and upgrades setup

### **On the IT Personnel side**

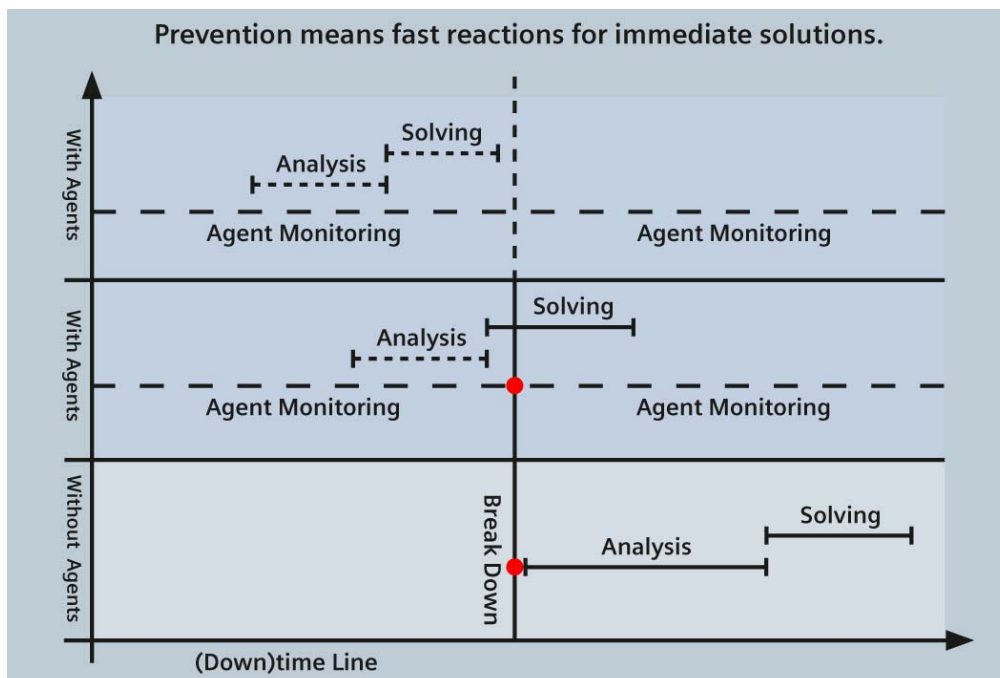
- Exchange and share technical information on a daily base with the SIMATIC IT TSS web community
- Remote help for sites with limited or no IT resources

## 2.3 Agents-based Diagnosis Service: The Predictive support for optimized plant availability

In view of the increasing importance of MES for manufacturers to achieve corporate and plant productivity and efficiency goals, Siemens is extending its maintenance offering with SIMATIC IT Agents-based Diagnosis Service.

The use of this technology lets manufacturers anticipate potential critical events within their plant and IT infrastructure and speed up their analysis and solution. This predictive approach provides customers with a number of clear benefits in terms of plant availability, as it fully eliminates the need for interruptions of the production and avoids breakdowns while solving a problem or determining its cause. This results in time and cost savings, not only in terms of plant availability, but also in terms of IT services. Customers making use of this technology will also see a substantial added value to their IT services in terms of flexibility, productivity, costs and overall quality.

The use of the Agents strongly supports manufacturers in optimizing their production using new solutions, and to shift their approach in managing issues -- from a reactive approach towards predictive and preventive actions.



### 2.3.1 How do Agents work?

The SIMATIC IT agents are based on an innovative non-invasive software technology that can predict potential critical conditions, and initiate measures, as authorized by the customer, to prevent them from occurring.

On the specific computers on which they are installed the agents are continuously screening defined parameters and correlating them with the entire IT infrastructure and/or with the applications and their behavior patterns.

This monitoring activity is perfectly transparent and has no impact on the application.

The agents are installed at the customer site to monitor hardware, operating systems and software (Network, Database, SQL, Products, Libraries, 3rd party products and applications)

When an issue is detected that has been identified as a potential problem causer, the Agents send an alarm through a Virtual Private Network (VPN) to the Technical Support Service (TSS), where alarms are displayed in real time, to allow immediate action. After receiving these incoming messages, the TSS identifies the problems this issue may cause within the MES environment, and solves these before they even occur without interruption to the plant productivity.

### 2.3.2 The benefits of the Agent monitoring activity

Though the use of the Agent technology is essential to achieve optimum plant performance, the manufacturers to maximize all the typical benefits will be those who combine this service with the professional support offered by the TSS. They will benefit from:

- Detection of potential critical conditions before they happen
- Complete and continuous monitoring of the MES plant system
- A real-time support to solve issues that could occur in the MES environment
- Direct and meaningful delivery of ready-to-use solutions in the MES systems
- Significant reduction of own involvement in troubleshooting issues
- High availability of the production system
- Optimization of system reliability and efficiency
- Increase of plant utilization time
- Reduce the time of problem analysis
- Reduce the time of problem solving

## 2.4 Update Management Service: The answer for an efficient manufacturing IT installation

New

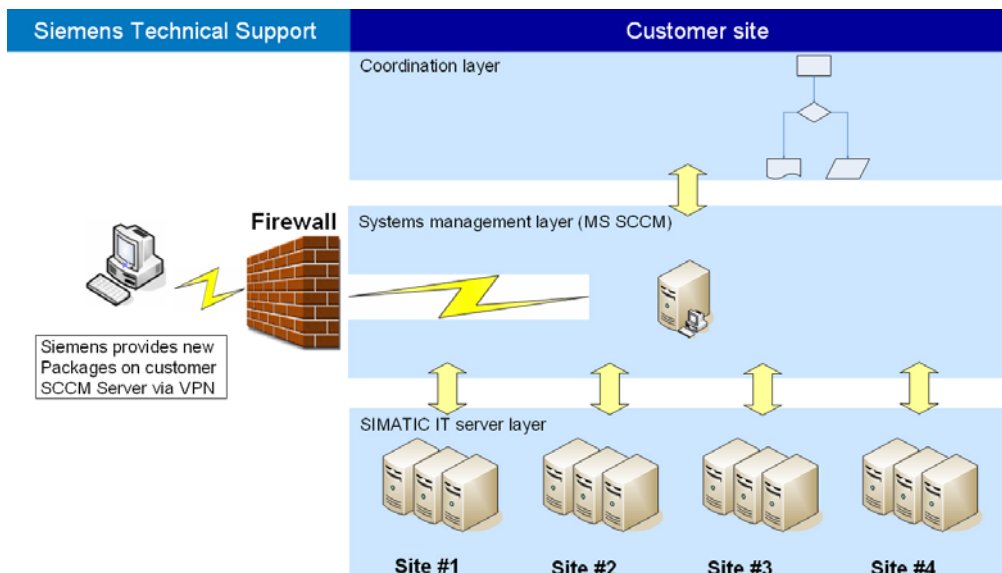
This service offers the possibility to:

- monitor the SIMATIC IT software configuration and the level of update of the software product, libraries and the related applications;
- distribute and install updates and enhancements;
- store the historic record of previously performed update activities.

The monitoring activity is managed centrally by the TSS, which corresponds and exchanges information with a SIMATIC IT Software Management Tool (SMT) server installed at the customer plant. The tool provides the TSS with the detailed information on the customer's software and hardware configuration.

Hot fixes and/or application updates are made available on a central repository created on the SMT server. The TSS will notify the customer of the availability after which the customer can decide when to schedule the system update, according to the different production loads. The update activity is performed by the TSS team, remotely and automatically, without interrupting the plant operations.

The system keeps also track of the previous update packages and so supports potential corrective actions to be taken in the next phases.



### **2.4.1 How does the SMT work?**

On the one hand the SMT is based on the system management functionality provided by Microsoft, the System Center Configuration Manager (in short SCCM).

On the other hand, the SMT makes use of the SIMATIC IT cluster functionality. Both redundant and non-redundant SIMATIC IT configurations are managed by the SMT.

The SMT is organized in 3 layers:

- ❖ a SIMATIC IT Server layer where SMT installation agents are responsible for executing the update installations on the targeted machines
- ❖ a System management layer where the SCCM server is running providing the capabilities to create and store the update packages, to advertise packages to clients
- ❖ a Coordination layer where complex installation strategies can be defined and then executed by the SMT installation manager

### **2.4.2 Benefits of the Update Management Service**

Without the Software Management Tool, the update of each plant installation had to be performed separately involving a system shut down to allow the TSS to upload SIMATIC IT Product Hot Fixes and application updates, and involving a production stop at each of the plants involved in the updating phase.

Furthermore, in some particularly critical situations, Siemens had to send experts in order to operate manually on site. The SMT, instead, improves the performances of maintenance activities on SIMATIC IT systems installed at the customer's plant: the tool allows the TSS to largely improve the effectiveness of the support and to reduce response time.

Additionally the customer can streamline maintenance and:

- ❖ reduce the rate of errors;
- ❖ keep the installation continuously up-to-date;
- ❖ reduce the impacts on production;
- ❖ minimize updating efforts.

This tool is also extremely meaningful to let the customer achieve a standard alignment of the same version of Product and Libraries in all plants involved in the project.

This is why complex configurations with a large number of servers distributed across the enterprise, both in local and in remote plants, will benefit most from the use of the SMT.

### **3 SIMATIC IT Partnership: Our successful approach to the MES market**

Much of our customers' satisfaction is due to the exceptional professional skills, industry experience and commitment of our Partners, who use SIMATIC IT to develop, implement and maintain leading MES solutions. SIMATIC IT Partners are high-level consultants dedicated to help their customers in achieving their business goals.

Siemens is fully committed to join competences with strong and experienced partners to deliver solutions based on SIMATIC IT that help customers to improve their overall performances.

Together, the SIMATIC IT Team and the SIMATIC IT Partner Community can grant the key factors for a successful MES implementation in order to respond to any customer requirements.

SIMATIC IT Partner Program is addressed to all companies interested in committing to achieve MES excellence together.

It's a flexible proposal that can meet the needs of partners with specific or broad industry experience with local or global presence, with a complex or simple organization, with or without MES experience. Partners are supported by Siemens to strengthen its technical know-how and MES positioning and to enhance its future potential.

On the basis of the Siemens Solution Partner Program structure, Siemens MES offers two levels of SIMATIC IT partnership according to the different strategic requirements and objectives:

- SIMATIC IT Solution Partner
- SIMATIC IT Solution Partner Specialist

SIMATIC IT Solution Partners are companies with basic MES skills wanting to start with SIMATIC IT and committing to achieve an expert level of SIMATIC IT technical know-how.

SIMATIC IT Solution Partner Specialists are MES experts in selected industries and have a dedicated team in place. They have a specific know-how, account management skills and they want to transform their broad MES expertise into MES leadership based on SIMATIC IT.

Our partner program is designed to protect investments and increase the competitive advantage of Solution Partners Specialist, to help Solution Partners wanting to grow in the MES market and become Specialists.

The quality of our Partners is pre-eminent for the success of the SIMATIC IT story, a profound education being one of the key factors. In order to meet customers' expectation of highly qualified MES system integrators, Siemens MES improved the SIMATIC IT educational services offer with a comprehensive learning program dedicated to partners: the SIMATIC IT e-learning courses.

For more information about SIMATIC IT Partner Program, please visit:

<https://mes-simaticit.siemens.com/html/partner.html>

## 4 SIMATIC IT Technical Partner Development

Being part of the SIMATIC IT partner program, the Technical Partner Development (TPD) offers a wide range of technical services from presales to product consulting to support of Partner projects in the best possible manner.

These services are provided by a team fully dedicated to the growth of the MES Partners Community, able to grant to Siemens Partners presales consulting, dedicated bidding assessment and technical tutoring. The team consists of high skilled consultants that provide consulting services at expert level:

- Solution Architect can support during the definition of the Functional Design Specification and of the Software Design Specification.
- Senior Consultant can support at Technical Project Management level to tackle problems before they escalate, mentoring critical service requests and monitoring milestone achievement.
- Product Consultant can support the project development and address specific issues in the engineering phase.

Only SIMATIC IT Partners can order these consulting packages that remaining flexible along the project development allow shifting focus when and where it is needed.

Additionally, the TPD is supporting the partner program with following tasks:

- Screening of potential partners and evaluation of MES capabilities
- Definition of a business plan with agreed targets in collaboration with Siemens Sales and the partner
- Monitoring of the mandatory partner certification
- Execution of the mandatory technical feasibility study to minimize project risks

### Services provided by the Technical Partner Development at a glance

#### Partner Program Support

Technical evaluation of potential partners  
Support in the definition of the Business Plan  
Monitoring Partner certification



#### Bidding Assessment for Partner Projects

Mandatory documentation assessment  
Compliance with procedure

#### Partner Consulting

Project quotation support  
Project design support  
Project milestones monitoring  
Consulting 'Quality Survey'

## 5 SIMATIC IT Technical Training

Siemens organizes a complete Training Courses Portfolio, to build a consistent learning path for our customers: from product feature descriptions to a hands-on learning experience.

The SIMATIC IT training program consists of a range of training courses providing deep knowledge of SIMATIC IT Products. To successfully achieve this goal, the training consists of around 20 courses in both theory and practice. Training classes are given by engineers, fully coordinated and linked with other teams such as Research and Development, System Tests, Product Consulting and Industry Managers, in order to be fully aligned on developments and innovations of SIMATIC IT.

Training Courses are held the whole year through in AS MES Training facilities in Europe (Genoa-I, Frankfurt-D) and US (Addison-IL).

On demand, sessions can be held out of the standard calendar and at other locations according to trainers' availability and logistic constraints.

SIMATIC IT training can be also attended on the MES E-Learning platform, a Web-based distance learning infrastructure to learn at your own pace, through remote lessons.

Empowering your MES staff with SIMATIC IT Technical Training can be a critical success factor for your manufacturing enterprise as it ensures:

- Continuous on-site presence of competent staff,
- Efficient MES installation management,
- Advanced capability to recognize of potential issues
- Prompt problem resolution coordination with TSS

For more information about the SIMATIC IT Technical Training, please visit [https://mes-simaticit.siemens.com/html/product\\_services\\_training.html](https://mes-simaticit.siemens.com/html/product_services_training.html)

## 6 Gaining the full benefit from the SIMATIC IT Value Added Services

To win in today's competitive global marketplace, manufactures must be sufficiently agile to adapt quickly, efficiently and profitably to customer demands and market boost.

Among competing manufacturers with similar levels of expertise and product quality, technology could deliver *the extra measure* that assures success.

The SIMATIC IT VAS can be your value-added advantage through the delivery of solutions tailored to your unique business environment in order to

- Optimize every step of your manufacturing life cycle;
- Ensure highest plant availability;
- Minimize system costs;
- Reduce risks;
- Improve productivity;
- Protect your brand.

Combined with Siemens' know-how and expertise to realize those critical benefits, the SIMATIC IT VAS Program is a crucial contributor to a strategic manufacturing solution.

For more information about our programs and to contact us, please visit [https://mes-simaticit.siemens.com/html/products\\_services.html](https://mes-simaticit.siemens.com/html/products_services.html)

