

Siemen's 'Applying Digitalization to our Business' Successfully Combines In-Person Training, eLearning

Siemens AG – Global Learning Campus

Best Learning Program Supporting

a Change Transformation Business Strategy

November 2019



Company Background



Company-at-a-Glance	Siemens AG
Headquarters	Munich and Berlin, Germany
Year Founded	1847
Revenue	€83 million
Employees	370,000
Global Scale	Worldwide
Customers/Output, etc. (Key customers and services offered)	B2B customers
Industry	Electronics and Electrical Engineering
Stock Symbol	Siemens
Website	www.siemens.com

Budget and Timeframe

Budget and Timeframe	€1,235,000 central budget for development and coordination and program management; €4 million internal charging to business (learning investors) and individual participants Timeframe: April 2017-February 2019 (and ongoing)
Overall budget	€5,235,000 total budget
Number of (HR, Learning, Talent) employees involved with the implementation?	Program management and team: 10
Number of Operations or Subject Matter Expert employees involved with the implementation?	Operations: five; subject matter experts: 10
Number of contractors involved with implementation	Approximately 50 technology experts and business coaches worldwide
Timeframe to implement	November 2017 (start of rollout) to February 2018 (and continuing)
Start date of the program	November 2017, execution of first regular training program (whereas two pilots already took place earlier in 2017)

Business Conditions and Business Needs

The topic of digitalization has been a constant focus of the business community for quite a while now, and at Siemens as well. Most people have heard about the risks of digital disruption and the need for transformation in the digital world. But what it exactly takes to apply digitalization to one's own business remains a bit unclear and quite a few Siemens employees had and might still have struggles figuring it out and lack a fundamental understanding of how digital technologies, such as cloud computing or artificial intelligence, work and how they could be turned into profitable business. As Siemens is advancing the digital transformation, ensuring a successful future, the company's course has been set for a long-term reorientation. With the claim of "Make digitalization work," Siemens defined the digital transformation as a company priority in making the training "Applying digitalization to our business" a part of the Company Priorities 2018, which were announced at the Siemens Business conference in 2017. The Siemens CEO emphasized the importance of education and training employees on the topics around digitalization and backed by the Siemens board members; this marked the

start of the qualification and mobilization initiative to make digitalization work for the company.

As a result, the goal of the training “Applying digitalization to our business” is no less than to enable Siemens employees to see the bigger picture of what is possible with new digital technologies, learn about the potential digital business in their already existing business endeavors and how they can develop the best solution for their customers with help of Siemens’ key technologies.

Overview

The main goal of the Training “Applying Digitalization to our Business” was, and still is, to give a strong and sustainable impulse on digitalization for the company. As a result, the two pillars of the training were designed to combine technologies and business learning and create a holistic understanding of how employees can apply digitalization to their business. The training is all about giving a tangible and graspable approach to digitalization, creating a common language to speak about digitalization and getting one level behind the buzzwords of digitalization. To implement the digital strategy and steer the changes in the business in the right direction, this combined learning about key technologies and their potential for new customer solution and business models is a vital conceptual part of the training. The training participants can find inspiration in ways to develop, implement and scale new solutions by co-creating them with their customers and how to create real added value and implement it in suitable business models. By this, the participants can approach their competitors and help advance the digital transformation within their area of responsibility.

With the target group being defined as employees in customer-oriented function, such as specialists and managers, the approach was a mix of a top-down as well as a bottom up approach. Consequently, the target group was divided into executive management and regional management, as well as the broader organization. The goal for the executive management was to train the top 200 Siemens managers. The goal for the regional management and key stakeholders was to train 3,000 employees of this target group. As for the broader organization, the goal was to train 20,000 employees. Because of the mix of top-down and bottom-up approach, the top and regional management was trained in a two-day in-person training. The broader organization was approached via a comprehensive eLearning course. Due to the goal of providing a perceptible impulse for the whole organization, these quantifiable goals have been set for the timeframe of one year, which was then the Siemens fiscal year 2018, (Oct. 1, 2017-Sept. 30, 2018).

These goals were achieved by end of September 2018 with 3,146 participants having successfully completed the in-person training plus further 17,187 employees having

successfully passed the e-learning quiz and getting their certificate, resulting in a total of 20,333 finalizations.

The rollout continued to fulfill ongoing demand and resulted in 3,559 (as of Feb. 13, 2019) participants of the in-person training and 28,167 eLearning finalizations (as of Feb. 11, 2019). Moreover, more than 126,000 colleagues have started the eLearning course. Even the onsite participants colleagues recruit themselves in 22 countries with a variety of 68 nationalities trained; the online participants are spread all over Siemens globally. The combination of a hands-on experience of the technologies mixed together with the intensive consideration of business potentials give the participants a unique value. The participants feedback the training with a net promoter score of 80 and a recommendation rate of 4.3 on a scale from 1 to 5.

Summarizing the overall achievements, the program intended to achieve the following “soft goals”:

- A tangible and graspable approach to digitalization
- A common language to speak about digitalization
- To know what Siemens is talking about (at least) one level behind the big buzz words

But furthermore, as described in the beginning of this chapter the intention was to enable the customer-oriented functions and therefore contribute to “make digitalization work”: i.e., contribute to Siemens’ digital transformation as well as addressing the business potentials of digitalization.

Design of the Program

The training course was especially developed to strengthen and grow Siemens expertise in digitalizing and understanding how this will change business models and the whole organization. The participants are learning about five key technologies and will understand why it is important to initiate, implement and scale those businesses.

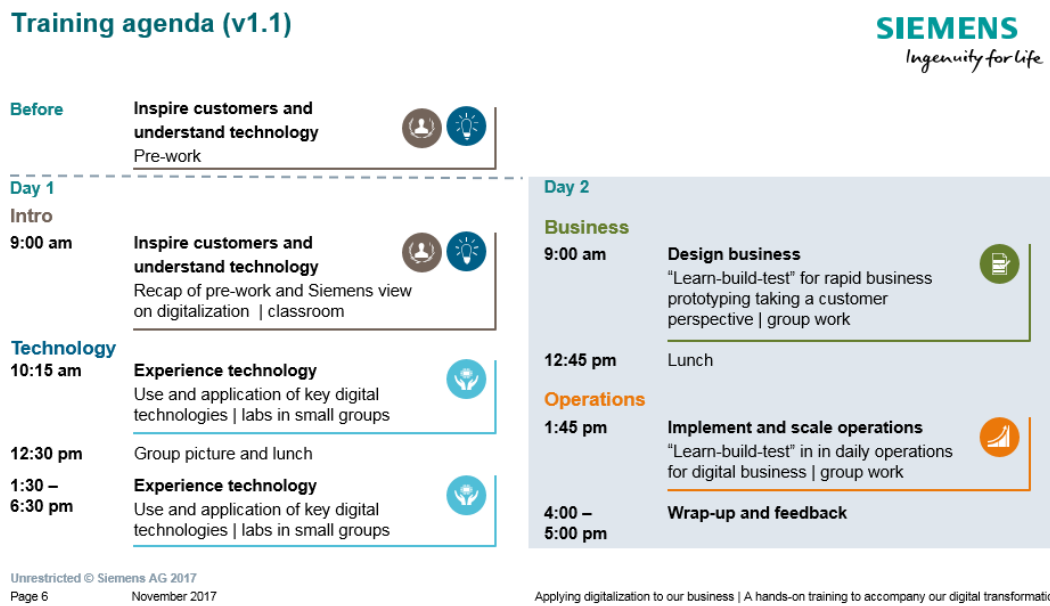
The rough concept of the training, in-person and eLearning alike, is the following. On day one, or part one in the eLearning, the participants receive a keynote about Siemens’ view on digitalization to then start out in five breakout sessions to experience technology. The five technology sessions are all tied together through one use case to illustrate the intertwined nature of these technologies. On day two, the participants in the in-person training work in three groups, each together with a business coach, to design business and figure out how to implement and scale digital business. In the eLearning, each participant is filling out the same worksheets as used in the in-person training.

In more detail, the learning path is split into five modules. The first module concerns learning about inspiring customers and making sure everyone is speaking the same language when it comes to digitalization and bringing across a consistent story when connecting with customers.

The second module is designed to understand the technology. Here, the participants learn, with the help of one continuous use case, the fundamentals of Connectivity and Industrial IoT, Smart Data Analytics, Artificial Intelligence, Cloud technologies and Cybersecurity. The third module consists of experiencing the technology in action. Therefore, again with the help of the use case, the participants get to connect a device to the Siemens open IoT platform MindSphere, analyze the real-time data of this device with programs such as Knime, find patterns and learn about what makes good data, to then program a cloud application and finally learn about Cybersecurity by experiencing a simulated hack of the device.

After learning about the Siemens-wide position and experiencing the five key technologies, the participants get to design business from their customers perspective, under the motto of "build, test, learn," as a fourth module of the training. The participants learn how to use a co-creation approach and value proposition design to create value together with customers considering the entire value chain.

The fifth and last module then revolves around how to implement and scale the newly found business potentials. The participants discuss what hinders change in their respective organization, what processes, tools and competencies they need to implement digital business. As a final roundup, every participant writes down an action item which he or she will follow up on after the training. After the in-person training or the eLearning, the participants can continue their discussion in the Siemens social network.

Figure 1: Training Agenda


All illustrations provided by Siemens AG

The setup of the two-day in-person training was that the Modules 1-3 inspire customers, understand technology and experience technology, and were held on day one. Modules 4 and 5, design business and implement and scale, where held on day two. For the first day, the group split up in five subgroups, rotating through breakout rooms, each covering one key technology.

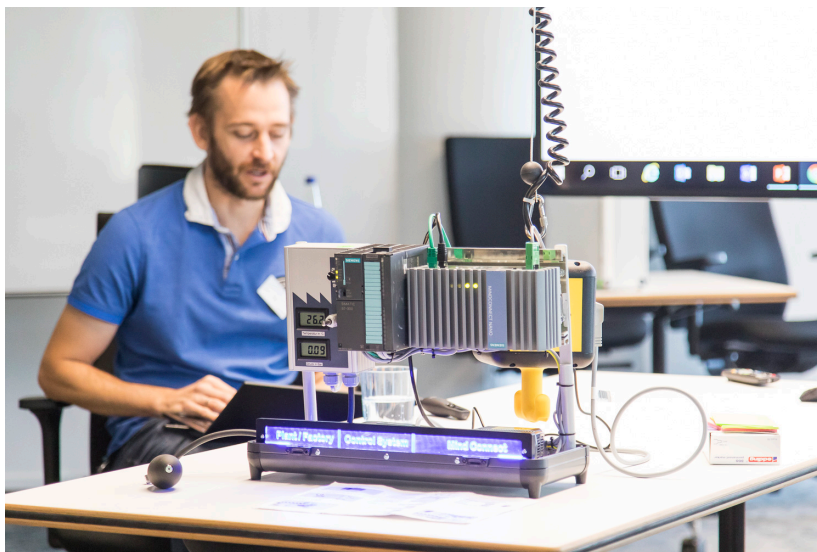
Figure 2: A Connectivity Technology Expert Explains How MindSphere Works


Figure 3: An AI Technology Expert in Action



Figure 4: Cybersecurity Expert Asks for SQL Injection Scrabble, Talks with Participant



Figure 5: Business Potentials and Identifying Customer's Pain Points



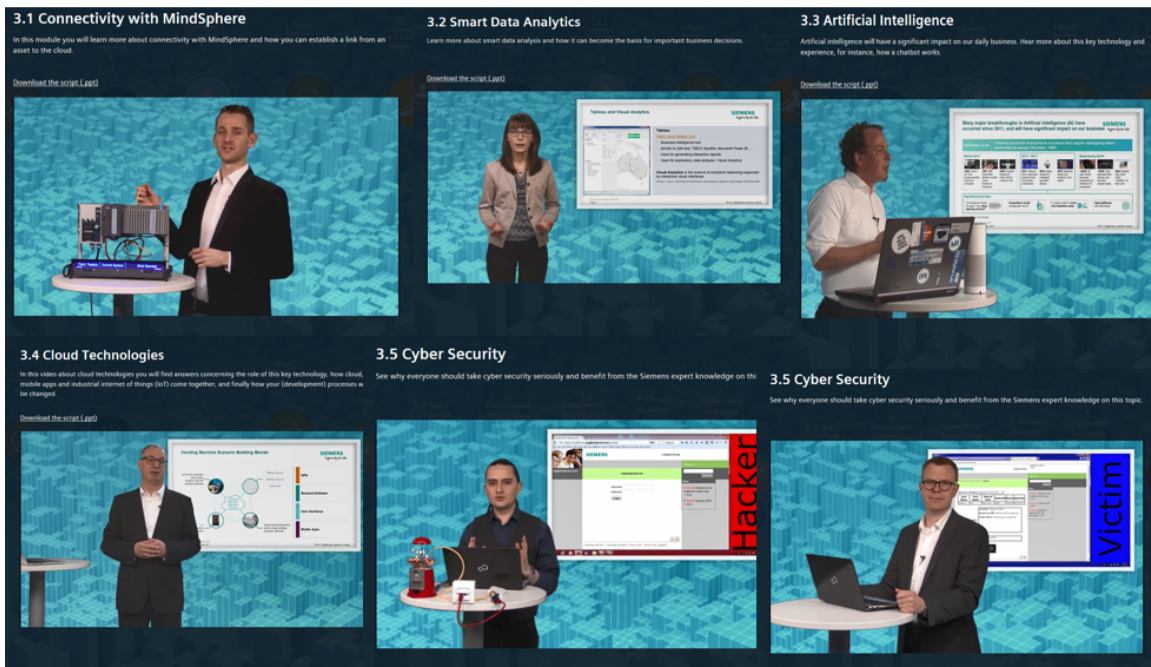
On the second day, the group was split into three groups working on business modeling, implementation ideas and scalability, always coming back together as a whole group to exchange the different discussion each subgroup had (for the on-site workshop). The target group was divided into the company's top 200 managers attending the two days of in-person training, followed by 3,000 leaders covering more than 60 nationalities in customer-oriented functions. These people are acting as ambassadors, inspiring their teams to join in on the learning.

The advantages of the in-person training were that participants get to focus on the subject with being two days in the training, had the direct opportunity to discuss with technology experts and business coaches, get a real experience with hands-on use and insights, learn from other participants and build new networks, and get valuable feedback from the technology experts and business coaches, as well as get a kick start in of digital transfer to their own business.

The eLearning can be accessed through the company's learning ecosystem, "Learning World," or was distributed via a campaign for certain countries or units. In the eLearning, the learner can navigate through a dynamic learning path.

Figure 6: ADB e-Learning Path, Containing All Five Modules and a Quiz


As already mentioned, the eLearning also contains all five modules of the training. As for the parts of inspire customers and experience technologies, the learner gets to watch videos with the experts explaining and showcasing the technologies. For the parts which are equivalent to the second day of the in-person training, the learner can browse through animated slide casts.

Figure 7: Expert Videos on the Five Key Technologies from the eLearning








With six in-depth learning hours and the innovative eLearning covering the same content as the classroom training, the participants receive a certificate upon passing a quiz. Also,

the content remains available to everybody at any time, making it a perfect library to refresh upon the topics covered. The eLearning is free of charge, taking the aspiration of making digitalization work and involving as many employees as possible with taking up several campaign and communication activities in the languages English, German, Chinese, Spanish, Czech and French and therefore, providing a global reach until the end of Q1 FY19. As of February 2019, the objective of 20,000 eLearning alumni was exceeded with more than 28,000 employees passing the final quiz successfully, and in total approximately 126,000 having started their learning journey.

The advantages of the eLearning are the basically unlimited flexibility, the self-paced learning mode where every learner can learn on demand, the multimedia formats with videos and animated slide casts and the high reachability throughout the whole company, while saving time and money for travel.

Figure 8: Comparison of In-person Training and eLearning

Virtual course follows basic structure and content of ADB training – serving as a proper substitute **SIEMENS**
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Realization in-person training			Realization in e-learning	
Format	Duration	Content modules of ADB	Format	Duration
			▶ Introduction video by Dr. Neuhauser	6 min
Prework*: Slidecast	30 min	 Inspire customers	• Slidecast	30 min
Prework*: Technology lectures	43 min	 Understand technology	• 5 animated videos	53 min (5x2 min, 1x18 min, 1x14 min, 1x11 min)
Recap of prework	75 min		• 3 videos (3 technology lectures)	
Experience lab in small groups: 5 key digital technologies	420 min	 Experience technology	• Slidecast (Case Study Vendix)	164 min (3 min Case; 47 min, 41 m., 32 m., 21 m., 20 m.)
			• Videos of experience stations (5 technologies)	
Group work: Rapid business prototyping	225 min	 Design business	• Slidecast on theory	75 min (30 min theory, 45 min hands on)
Group work: Operations for digital business	135 min	 Implement and scale business	• Slidecast	20 min
Wrap up & Feedback	60 min		 Online Quiz and certificate (20 questions)	20 min
Total duration: 988 min (~16,5 h)			Total duration: 358 min (~6 h)	

* Use of e-learning modules
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The bottom line of the design is to make the learning available for every employee, create a network of people having the same knowledge, being able to understand the technologies behind the buzzwords and speak the same language when it comes to digitalization within Siemens. With this approach, it is much easier for the employees to connect to each other, regardless of the own position. As a result, the in-person trainings focusing on specialist and managers boosted the impact and the global rollout of the eLearning version enhanced the momentum by multiplying the number of participants.

Delivery of the Program

The training “Applying digitalization to our business” was developed by a cross-functional team consisting of colleagues from the Siemens internal R&D department Corporate Technology from the Siemens internal development department Corporate Development, Corporate Communications and the Leadership Excellence department, as well as colleagues from different divisions and the HR department with the Global Learning Campus as the project lead. The development phases’ duration, including pilots running in China and Middle East, was from March-June 2017.

The design of the training was matched to the group size and was set as a workshop design for a high number of participants. The rollout preparation and a global train-the-trainer event in Munich took place from July to September 2017. From the October 2017, the classroom trainings started, accompanied by the announcement of the start of the training within the corporate top management meeting, the Siemens Business Conference. To meet demands and enable every employee around the world to get access to the training, just as the on-site rollout started, the development on an according eLearning started as well in 2017. The rollout of the eLearning version of “Applying digitalization to our business” then started in March 2018. Regarding the eLearning the aspiration was to offer the same content an on-site participant gets. By not cutting back on content in the eLearning, it becomes a library where every learner can learn in a self-paced manner, wherever, whenever he or she wants according to their specific learning needs.

The process of the delivery for in-person participants was then either via a local campaign from a regional Global Learning Campus team or via a self-booking tool for open enrolments. The eLearning version is delivered also either through local campaigns or self-driven by everyone who is interested in the topic and equipped with intranet access.











Change Management Efforts

One challenge was the global set up and delivery, which the Global Learning Campus team was able to rise to successfully by collaborating and exchanging intensively with each other. Basically, the shared vision and strong spirit to make digitalization work for the company and to enable colleagues with a comprehensive learning experience drove the team and made the rollout a success story. As a result, the global and cross-functional team, supported by the top management, was able to create a learning experience that ties into Siemens’ business strategy.

Figure 9: Global Team of Learning Campus

**Contact persons –
Global Learning Campus**



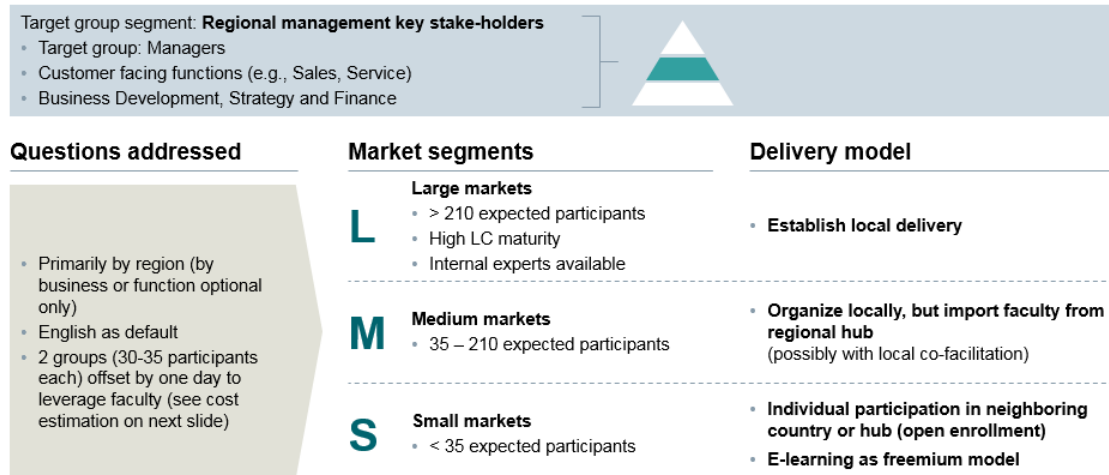
 Matthias Reuter Global Coordination, CRM	 Lisa Lang Americas Hub	 Bas Puts EMEA Hub	 Wan Bing (as of 1.11.) Asia Pacific Hub
 Alexander Kuhl Global Program Manager	 Casper Moerck CRM Americas	 Rudy Claes CRM EMEA	 Ming Shuai Song CRM Asia Pacific
Sven Lehmann e-Learning	 Sabrina Sauer Global Rollout	 Julie Holyland EMEA Rollout	Julia Baier Global Rollout

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Applying digitalization to our business | A hands-on training to accompany our digital transformation

Another, but rather minor challenge, was in the required logistics for the in-person-trainings, such as:

- Ramping up a sufficient number of trainer resources
- Coordinating trainer staffing
- Shipping specific technological training material worldwide

Figure 10: Delivery Setup Resulting in Different Logistical Scenarios
GLC program rollout logic for “Applying Digitalization to our Business” provides different delivery models by country


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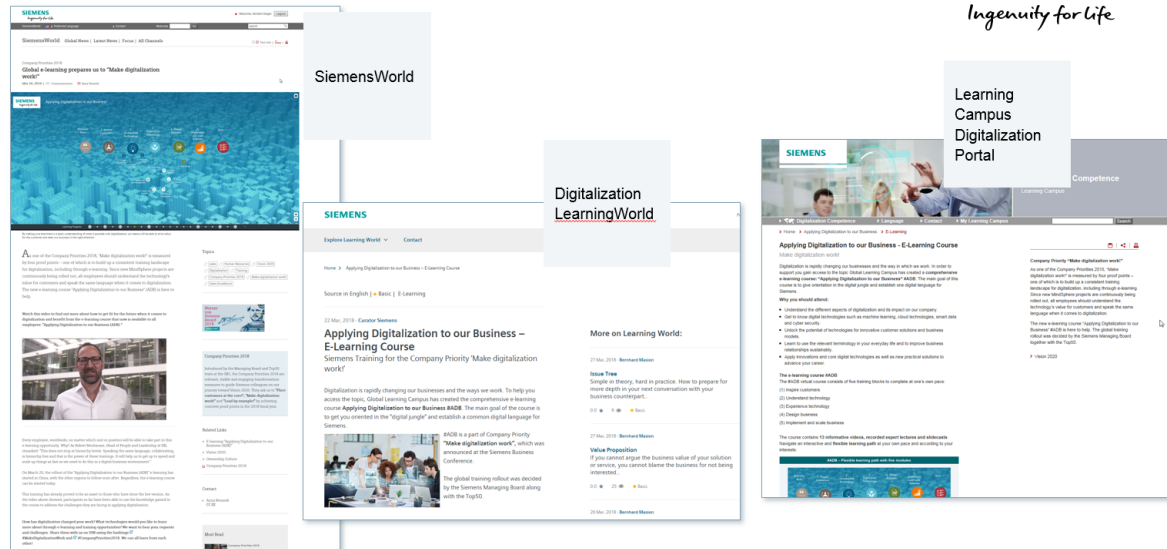
Applying digitalization to our business | A hands-on training to accompany our digital transformation

To achieve a best possible acceptance and buy-in of the program the rollout started, as already described with the “Top 200 sessions” for the upper management, the rollout of the in-person-trainings addressed the next management levels and specialists, mainly in the regions. This set the ground for delivering the eLearning accompanied by appropriate communication activities and rollout campaigns. The upper and regional management were involved in these campaigns and acted as ambassadors for the program.

Furthermore, the program was accompanied by communication activities aligned with Corporate Communication within the Siemens-internal communication channels; this led to a high attention and positive recognition of the program.

Figure 11: Delivery Setup Resulting in Different Logistical Scenarios

Communication regarding ADB e-learning



SiemensWorld

Digitalization LearningWorld

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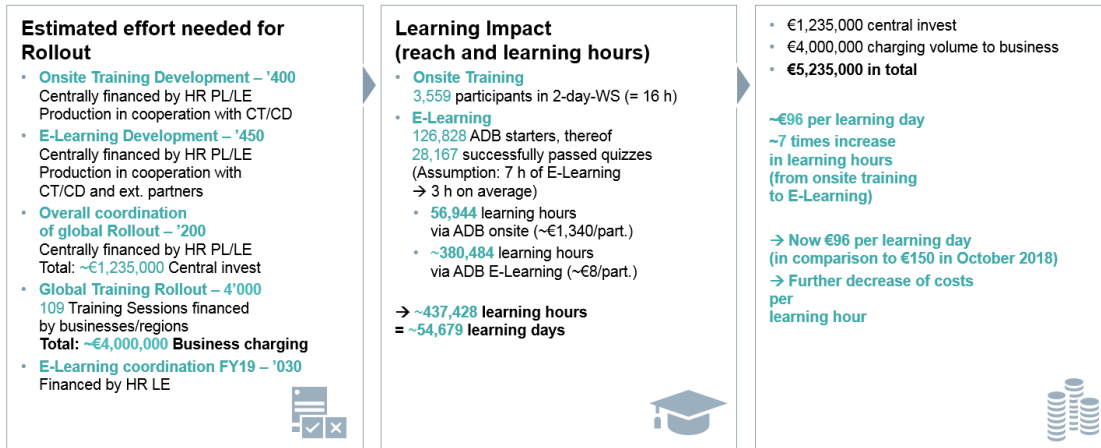
Learning Campus Digitalization Portal

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Global Learning Campus

Measurable Benefits

With the target group in general being defined as specialists and managers with business responsibility and customer contacts, the goal was to train 3,000 people in the on-site (in-person) training until end of fiscal year 2018. This goal was overachieved with 3,559 (as of Feb. 13, 2019) people having successfully completed the training. The target for the eLearning was to reach 20,000 participants; as of Feb. 11, 2019, a total of 28,167 people have successful passed the eLearning quiz and got their certificate and more than 126,000 colleagues have started the eLearning course. The participants feedback gave the training a net promoter score of 80 and a recommendation rate of 4.3 on a scale from 1 to 5. The combination of a hands-on experience of the technologies mixed together with the intensive consideration of business potentials give the participants a unique value.

Figure 12: Final Achievements of ADB Program – Balancing Budget, Learning Impact
Investment in the “Applying Digitalization to our Business” (ADB) rollout resulted in a quantifiable learning impact


The setup of the program led to a remarkable impact on the organization by providing a learning program implementation with speed and scale.

Balancing the required investments of €5,235,000 with the achieved impact of 437,428 learning hours or 54,679 learning days; this resulted in costs per learning hour of €12 or €96 per learning day, and these costs are further decreasing with every further participation in the eLearning.

Overall

Siemens employees have taken the learning opportunity with enthusiasm, curiosity and an open-minded attitude, creating a strong global community of “Applying digitalization to our Business (ADB)” alumni. The exchange with technology experts and experimenting in a hands-on manner was key to inspire the participants to take actions, connect the dots and share feedback on further learning needs.

Lessons learned from the ADB rollout:

- Strong tailwind through top-down approach
- Close collaboration with internal expert groups (Corporate Development, Corporate Technology)

- Rollout has been aligned with local decision makers (number of on-sites, target group and communication for eLearning)
- Global reach was achieved with the strong collaboration of the global network connecting the local learning units with Global Learning Campus
- Strong support by Corporate Communication with global proof-point communication; overall high communication effort results in high attention for ADB
- eLearning in different languages (English, Chinese, German, Spanish, French etc.) was the base for reaching a large number of participants

Relevant factors for choosing the appropriate rollout strategies:

- PUSH — Factors as typical rollout prerequisites:
 - Governance owner driving/supporting the implementation of topics
 - Cascaded top-down approach for rollout
- PULL — Factors for fostering learning culture:
 - Defined entry point and learning paths to provide orientation
 - Variety of learning measures to enable learner centricity (eLearning, workshop)
 - Learning measures have a different purpose and allow learners to choose
 - Coordination/communication to foster level of attention
 - Social learning/community management to engage peer-to-peer learning

Outlook

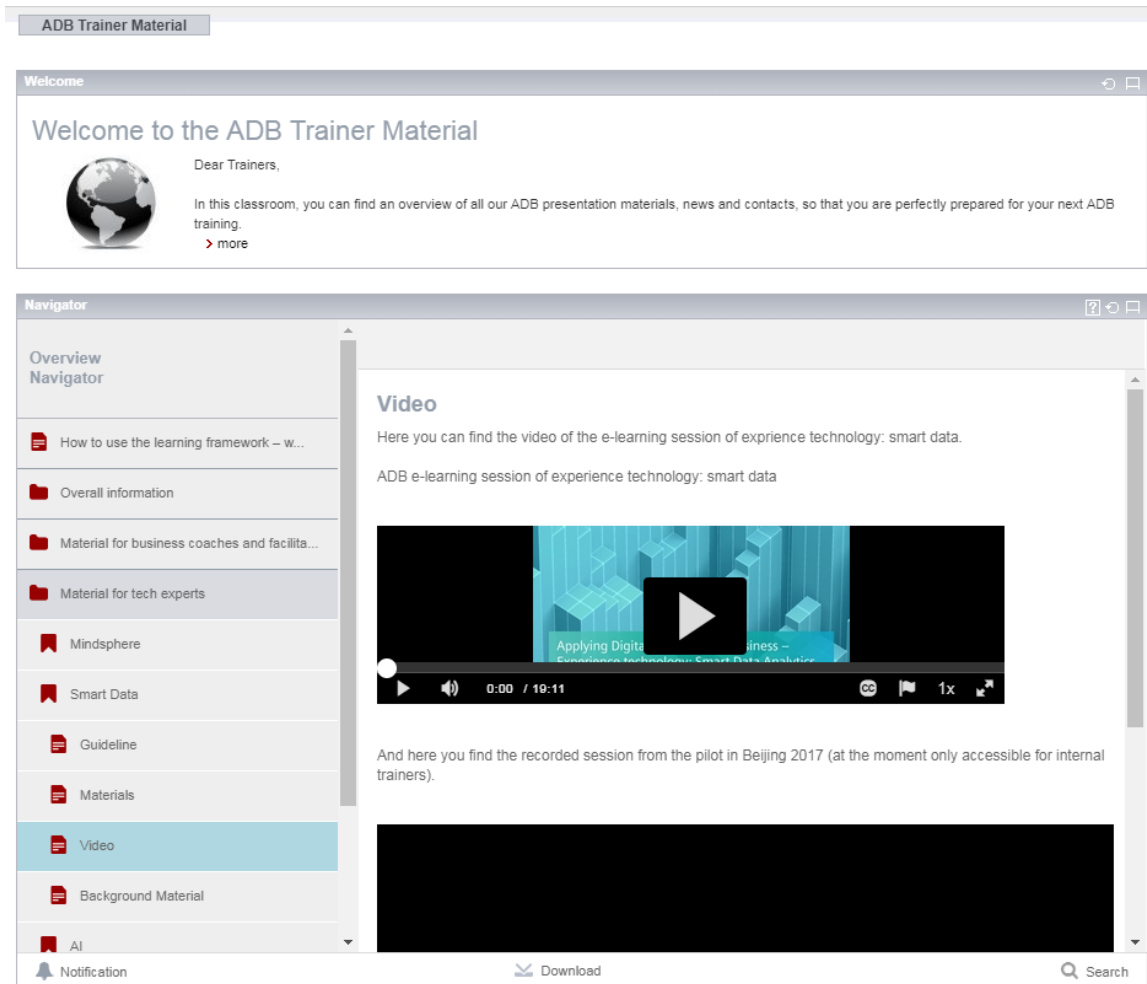
As one outcome of the rollout experiences and the participants feedback there are four new trainings in development or already open for participants which progress topics discussed in the ADB training. The four trainings are:

- Customer-value co-creation (with an elaborated approach how to do a joint approach with the customer to explore new approaches for collaboration)
- Growing your business with Cybersecurity (making use of Siemens' competitive position for driving the business with Cybersecurity services)
- Agile cosmos (providing orientation and deep-dives on several agile methods which are part of the actual discussions all around the buzzword "agility")
- Digital leadership (to provide an impulse for managers / leaders to adapt their attitude / behavior to the challenges of digitalization in a "VUCA-world")

Annex/Access to Training Material

The access to training material was provided for external trainers via the Learning Framework tool (see screenshot below). By this the access can be provided to external contacts for the purpose of reviewing the setup of the program and the detailed material. Therefore please provide us with the email addresses of those who are to review the training material.

Figure 13: Access to Training Material for External Partners/Contacts



The screenshot displays the 'ADB Trainer Material' web application. At the top, a header bar contains the text 'ADB Trainer Material'. Below this is a 'Welcome' section with a globe icon and the text: 'Welcome to the ADB Trainer Material', 'Dear Trainers,', and 'In this classroom, you can find an overview of all our ADB presentation materials, news and contacts, so that you are perfectly prepared for your next ADB training.' A '> more' link is provided.

The main content area is titled 'Navigator' and features a sidebar menu with the following items: Overview Navigator, How to use the learning framework – w..., Overall information, Material for business coaches and facilita..., Material for tech experts, Mindsphere, Smart Data, Guideline, Materials, Video (highlighted), Background Material, and AI. At the bottom of the sidebar are 'Notification' and 'Download' icons.

The main content area is titled 'Video' and contains the following text: 'Here you can find the video of the e-learning session of experience technology: smart data.' and 'ADB e-learning session of experience technology: smart data'. Below the text is a video player with a play button and a progress bar showing '0:00 / 10:11'. The video title is 'Applying Digital Business – Experience Technology: Smart Data Analysis'. Below the video player, there is a note: 'And here you find the recorded session from the pilot in Beijing 2017 (at the moment only accessible for internal trainers)'. At the bottom of the main content area, there is a 'Search' icon.

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For more information, contact us at success@brandonhall.com.