SIEMENS
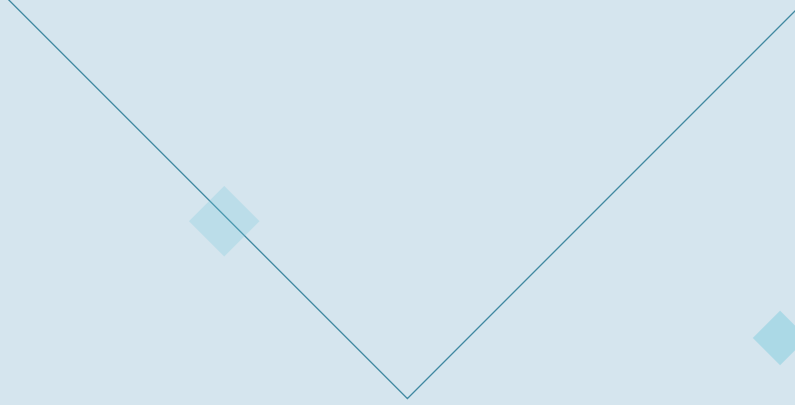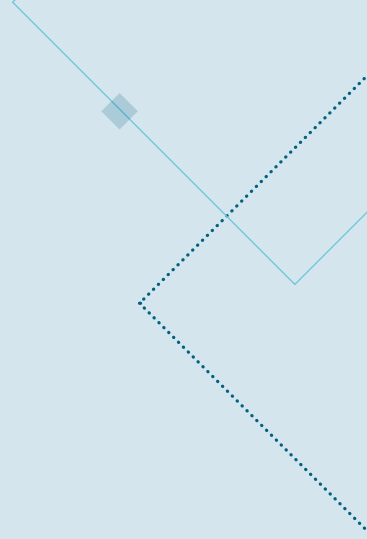*Ingenuity for life*

SUCCESSFUL DIGITAL TRANSFORMATION

How Change Management helps you to hold course

We live in times in which digitalization is radically changing the business landscape across industries. To remain competitive, businesses around the world are increasingly investing in digital transformation.

The failure rates of digital transformations remain high. These failures largely stem from the unique challenges associated with digital transformation, including shifting from the current culture to a more digital, entrepreneurial one, dealing with a lack of digital talent, working in cross-functional teams where silos have been the norm, meeting accelerated timelines due to higher customer expectations, and accepting evolving target states instead of fixed goals. What most business leaders underestimate is that digital transformation is not just about technology: Above all, it is about people. That makes it complex – thus requiring a new approach for managing the change.

From our experience with digitalization topics, we have identified three key imperatives in successful digital transformations. These imperatives have shaped our Integrated Change Management methodology:

1 **Instituting an integrated approach across facts** – i.e., tangible elements such as technology, processes and **social interactions** – i.e., intangible elements such as culture and teams throughout the transformation journey and across the entire company

2 **Living agile by proactively updating change measures to meet both current needs and overall objectives effectively**

3 **Adapting "classic" Change Management levers such as communication, leadership, team setup, training, etc. for digitalization needs**

This paper analyzes real cases to provide a deeper, more practical understanding of how digital transformation can be a success story with the help of Integrated Change Management. At the end of the paper, you will find insights as well as key recommendations to start your own digital transformation journey with confidence.

Change Management
is a top 3 concern among
executives when entering
digital transformation
projects.

Digital transformation?
It's all about the people!

TOP FIVE CHALLENGES FOR
DIGITAL TRANSFORMATIONS

We live in times in which digitalization is radically changing the business landscape across industries. Companies worldwide are facing the challenge of managing the fast and repetitive adaptation of their organizations to suit the volatile circumstances of the digital age. Sooner or later, your business may also be faced with a disruption.

The worldwide digital transformation market is estimated to grow by 20% annually to USD 2 trillion by 2022, from the current size of USD 1.2 trillion[2], driven by the prospect of significant benefits in customer experience, time-to-market, product quality and operational reliability. However, the failure rates of digital transformation initiatives lie in the range of 60% to 85%. It is perfectly understandable that business leaders are quite uncertain when it comes to digital transformation in general, and about Change Management in particular.

60% to **85%**
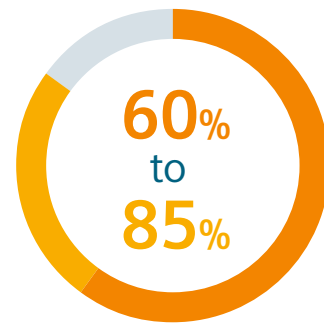
of digital transformations fail!

For more insights on digital transformation, have a look at our whitepaper "IoT – Turning the Internet of Things into reality."[1]

The top challenges we often hear from business leaders about digital transformations are

CULTURE

There is a lack of openness to digitalization, sometimes even pushback from traditional entities. It takes time for both leadership and employees to adopt the necessary information-sharing mentality and cope with continuously changing conditions.

DIGITAL TALENT

It is difficult to attract the right talent to execute the transformation or fill in new roles. New and existing employees need to grow together and work toward the same goals across the entire organization.

CROSS-FUNCTIONALITY

The impact of digitalization across interconnected business processes is not fully understood. Breaking down silos and linking formerly independent functions often leads to turmoil.

SPEED

There is a need to progress quickly in an environment that lacks complete clarity. Encouraging people to speed up and make their own decisions can subject them to stress.

EVOLVING TARGET STATE

Unlike traditional transformations, the target state continuously evolves due to changes in technologies, processes and roles. The flexibility required for this approach with its "fail fast, fail often" mentality contradicts the common 100% quality approach of many traditional organizations.

Does this sound familiar to you? A lot of business leaders we spoke with see the need for launching a digital transformation soon in order to prevent being outperformed by their competitors. However, they do not know how to prepare their organizations and employees for what is to come. Therefore, it is not surprising that 46%[3] of interviewed C-level leaders report that Change Management is among their top three concerns when initiating digital transformation projects. They acknowledge that the only way to remain competitive is to create a wholehearted acceptance of digitalization within an organization. Because ultimately, people build up your business, not machines.
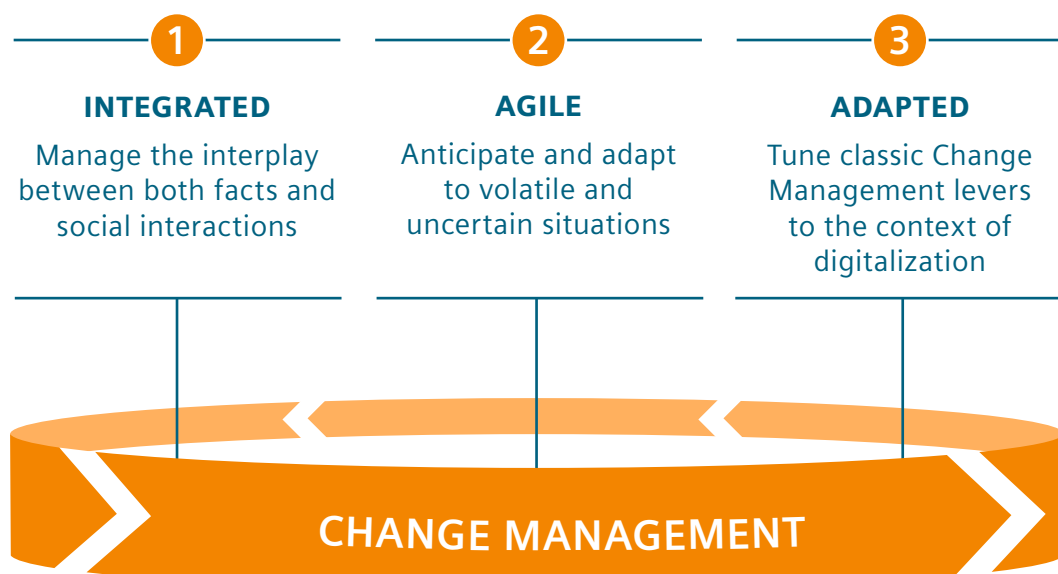
INTEGRATED CHANGE MANAGEMENT

Starting a digital transformation journey without a dedicated focus on Change Management is like leaving the safe harbor with no knowledge of how to sail through turbulent waters. Only when a mast cracks and the waves get rough do you notice that you forgot to manage the complex interplays.

To reach your desired destination with a sailboat, you need the basic equipment as visualized on the left. **Facts** such as technology and processes as well as **social interactions** influenced for example by culture and teams serve as the sails. **Transformation management** acts as the boat's hull to provide the platform and a reliable structure for sailing the transformation in the right direction.

However, to master the challenges of a tough environment with troubled waters, skilled skippers adhere to three imperatives: Align both sails to benefit from the joint forces that quickly drive a boat forward, use a robust, yet flexible boat hull to hold course, and adapt the tools available on board to react to changing conditions.

Keeping the essence of these analogies and our experience with digitalization projects in mind, we created our Integrated Change Management approach to help you navigate your digital transformation journey:

1	**2**	**3**
INTEGRATED	**AGILE**	**ADAPTED**
Manage the interplay between both facts and social interactions	Anticipate and adapt to volatile and uncertain situations	Tune classic Change Management levers to the context of digitalization

CHANGE MANAGEMENT

SOCIAL
INTERACTIONS

3

FACTS

1

DIGITAL WORLD

2

TRANSFORMATION
MANAGEMENT

FACTS _____ Digital Strategy, Business Model, Technologies, Product & Services, Partnerships, Organization, Processes, Roles & Skills, Tools, IT Systems

SOCIAL INTERACTIONS _____ Leadership, Teams, Culture, Communication, Training, Role Transitioning, Learning Organization

TRANSFORMATION MANAGEMENT _____ Transformation Goals & North Star

KEY IMPERATIVES FOR CHANGE MANAGEMENT

From our experience in digitalization topics, we have identified the three following key imperatives for Change Management in successful digital transformations:

1 INSTITUTE AN **INTEGRATED** APPROACH TO CHANGE MANAGEMENT by incorporating tangible facts with the intangible social interactions throughout the digital transformation journey – from conception to implementation

2 LIVE AN **AGILE** CHANGE MANAGEMENT APPROACH given the context of technology and people challenges that lead to evolving target states. Humans often behave and react in unpredictable ways. Hence, Change Management must anticipate and adapt to changing situations to remain effective. Agile means being flexible at all times to address current needs without compromising the vision

3 **ADAPT** CLASSIC CHANGE MANAGEMENT LEVERS TO THE CONTEXT OF DIGITALIZATION. The set of levers for Change Management – comprised of leadership, teams, culture, change story, communication, training, role transitioning and learning organization – remain the same but should be tuned to the requirements of digitalization

The following cases give you
a deeper insight into how we
applied aspects of our Integrated
Change Management approach
aligned with its three imperatives.

INSTITUTE AN INTEGRATED APPROACH TO CHANGE MANAGEMENT

CASE

A large industrial goods conglomerate developed and unveiled a digital transformation plan to its employees. However, post announcement, the company ran into several roadblocks during implementation. Operational staff were either confused or did not fully believe in the vision, some departments started making changes in silos without considering the effects across the organization, talent was not available to fill in new roles, and approvals from labor unions were hard to come by, to name just a few challenges. This led to major implementation delays, leading in turn to higher investment costs with later realization of benefits, thus significantly reducing the expected return on investment. In short, the conglomerate did not sufficiently consider the "people" side of the undertaking.

IF YOU LEAD PEOPLE IN THE FIRST PLACE, YOU DO NOT HAVE TO MANAGE PROBLEMS LATER

In its next wave of digital transformation, the conglomerate took a different approach. It learned from its earlier experience and met transformation expectations.

WHAT IT DID DIFFERENTLY WAS

1 **Establish a cross-functional Executive Action Team (EAT) composed of business/product leaders, key influencers and company role models including both leaders and key operational staff. This team was involved from concept development to implementation, which ensured**

◆ Buy-in from operational staff

◆ Effective integration across functions/ department

◆ Deeper involvement of company leadership throughout

2 **Consider Change Management right from the start of the transformation beginning with concept development. It was an integral part of all the business and technology considerations, resulting in**

◆ Transparency on all operational constraints for technology, process and people

◆ Clarity on the impact across technology, process and people. Hence, leadership was better prepared with analyses to answer queries from operational staff

◆ Concept phase deliverables for not just technology and process, but also for people – with transparency on future roles and a roadmap for development, resulting in less anxiety at the operational level

2

LIVE AN AGILE CHANGE MANAGEMENT APPROACH

CASE

A cement manufacturer drove major digitalization initiatives across its organization with significant investments. One such initiative included partially automating operations by using sensors, data analytics applications and remote commands managed in the cloud. These initiatives would result in changing the roles of existing operators from manually controlling cement manufacturing to primarily performance monitoring and maintenance.

However, during a 2-day pilot phase workshop in one of the factories to communicate the complete digital vision and concept, the limitations of cloud-based operations became prominent due to volume of data, available bandwidth and required latency.

The change team was comprised of personnel with a good blend of experience in manufacturing, technology and business, so it quickly comprehended the situation and extended the workshop to a third day to develop alternative solutions with factory personnel. Also, they included new participants from the innovation department and technology suppliers, who attended via video conferencing. The management accepted the change of plans since they were already trained in making agile responses to new circumstances by continuously prioritizing new demands instead of adhering to classic business KPIs. As an outcome, edge-based solutions were developed by the workshop participants which could be easily implemented and were more effective. The change team also made necessary adjustments in the overall concept to include this alternative.

» Agility in adapting to new circumstances in new situations beats rigid plans. It is not the strongest who survives, but the one who adapts the fastest to new environments. «

according to Charles Darwin

KEY SUCCESSFUL PRACTICES BY THE CHANGE TEAM IN THIS CASE WERE

1 **Adapted digital roadmap based on technology changes by**

◆ Having a flexible concept in the first place and a process to update

◆ Updating concept based on new information

2 **Adapted the change measures immediately when needed by**

◆ Prolonging the workshop by an additional day given the new developments

◆ Identifying and adding right participants and using digital technology to participate, since travel was not possible on such short notice

◆ Accepting a way of measuring success outside of business KPIs that focus on scope, costs and delivery time, and also considering agile ones that measure the flexibility of the development process

3 **Adapted technology design plans immediately based on feedback by**

◆ Changing cloud-based operations to edge applications

The above practices demonstrate the agile approach to Change Management. An agile approach corresponds to developing flexible strategies and plans, and continuously adapting them while already implementing them. This contrasts with a traditional approach that would involve setting fixed goals, detailed upfront planning and rigorous implementation towards a fixed target state.

The evolving nature of digital transformations renders classic Change Management approaches ineffective. The change in digital transformations follows an iterative journey.

TRANSFORMATION CHARACTERISTICS
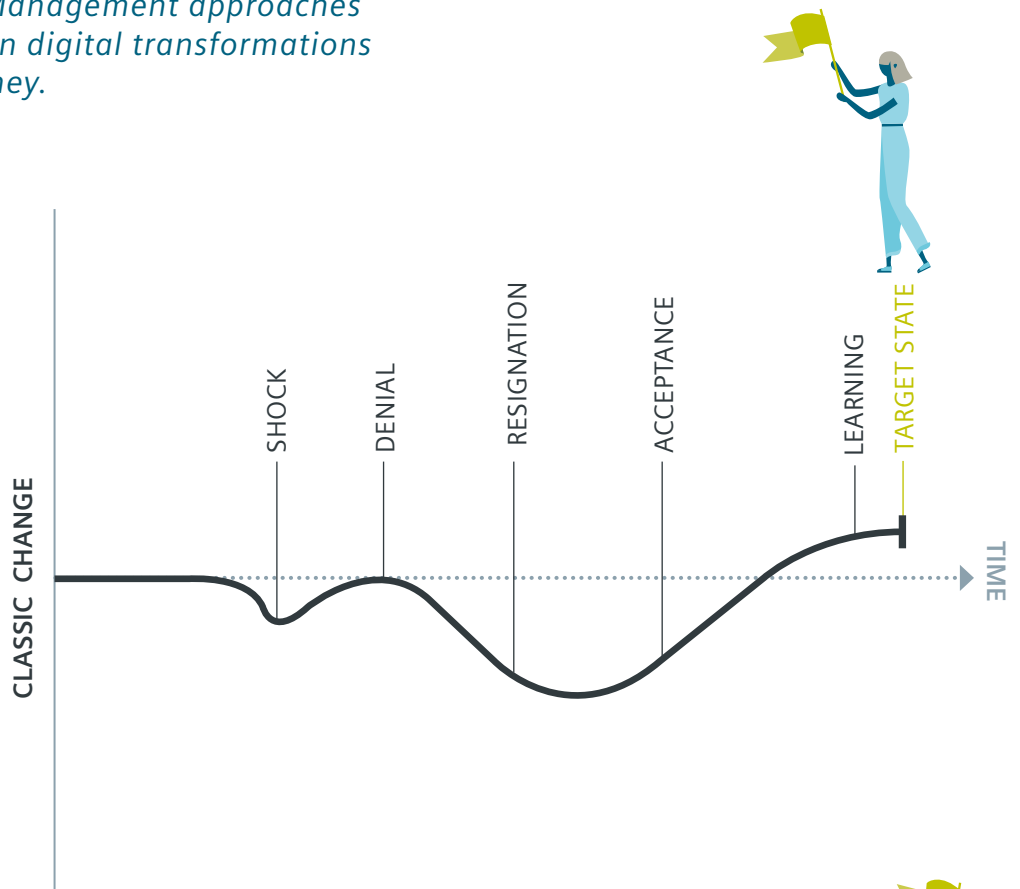
Fixed target state
Clearly outlined target state such as in a carve-out, merger, restructuring, etc. with planned and certain milestones

Top-down push of vision
Vision defined by senior leadership with negligible awareness or participation from operational staff

One-time change effort
Change effort along pre-defined predictable one-way journey towards target state
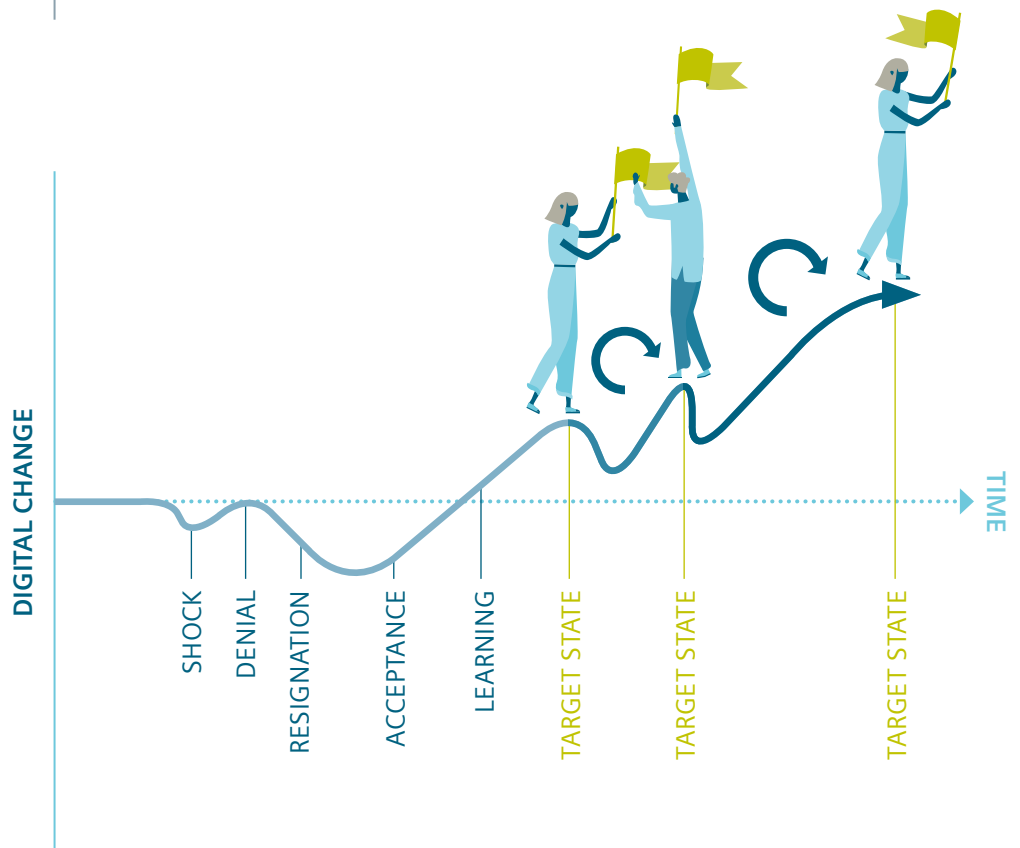
Evolving target state
Changing technologies, processes, business models and roles lead to a continuously evolving target state

Enterprise-wide impact
Changes in technologies, processes, business models and roles have an effect across multiple functions

Continuous change effort
Continuous adaptation required due to changing technologies, processes, business models and roles

CLASSIC CHANGE — TIME

SHOCK · DENIAL · RESIGNATION · ACCEPTANCE · LEARNING · TARGET STATE

DIGITAL CHANGE — TIME

SHOCK · DENIAL · RESIGNATION · ACCEPTANCE · LEARNING · TARGET STATE · TARGET STATE · TARGET STATE

3

ADAPT CLASSIC CHANGE MANAGEMENT LEVERS TO THE CONTEXT OF DIGITALIZATION

The following three cases illustrate potential adaptations to the set of classic change levers based on real events. Each case is a unique event and shows how responsible change leaders react differently but effectively using the adapted levers.

CASE

Several attempts by a leading European utilities provider to launch software products failed. Coming from an electrical hardware manufacturing world where 100% quality is a must-have prior to release, taking a more future-proof 80/20 approach to launching digital products was not in the organization's DNA.

In an innovative initiative headed by the Chief Digital Officer (CDO), a new unit was created with a different branding and location to separate a group of willing, open-minded venture and software developers from the traditional organization. The venture developers were a blend of juniors (~five years of work experience) and experienced professionals.

Selected software developers from this unit were also sent to a different location for training by external partners. The training mode was agile, in which a developer and a trainer sat side-by-side in front of a computer for live coaching on software development. Although there was feedback on the relative performance of the developers, the CDO backed all of them strongly during the training.

Post training, the developers came back with new approaches to training and scaled up their knowledge across the entire unit. For example, the sales reps were trained differently in a 2-day workshop, where the reps were given demonstrations by software developers, followed by the reps providing live demonstrations to potential customers. The entire training process was recorded and served as further guidance for improvement for the reps.

Some of the software developers were also given additional administrative roles in the unit. Within 12 weeks of program launch, the new software-based service was launched successfully – a first for the "traditional" utility company.

KEY SUCCESSFUL PRACTICES BY THE CDO IN THIS CASE WERE

1 **Instituted a culture for the digital age by**

- ◆ Selecting the team of venture and software developers based on parameters that included openness

- ◆ Locating the team in a different building and holding the training in a distant location to preserve the culture and remain untouched by corporate routines

2 **Led and built the right teams by**

- ◆ Backing all the software developers in the training phase and thus generating a great success story on a new approach on their return

- ◆ Having a right mix of juniority and experience for the team of venture developers – junior venture developers brought the drive and passion for technology, while experienced ones brought the necessary expertise. In this case, in fact, a junior venture developer with around five years of work experience was elected the Managing Director because of his unparalleled contribution to the unit

- ◆ Giving some of the software developers additional administrative roles in the unit since they became role models and experts in agile methods

3 **Leveraged agile training methods such as eXtreme Programming (XP) by**

- ◆ Having a developer and a trainer sit side-by-side in front of a computer for live coaching on software development for quick results

- ◆ Moving away from theoretical passive training to interactive feedback-based live sessions involving all key stakeholders such as customers and partners

CASE

A large industrial supplier was developing its Internet of Things (IoT) operating system. Given its global footprint of functions, the project had 50+ teams spread across 10+ sites worldwide. The Change Management team was set up right at conception and had a flat hierarchy of 10 project managers representing each of the 10 functions, a project COO and a project CEO.

EMPOWER PEOPLE TO MAKE QUICK DECISIONS

Rules for delegation of authority were defined for the functional personnel to make quick decisions or escalate to the project COO/CEO, who provided an integrated view across functions on top of coaching the project managers. The team used a digital communication tool for rapid communication across functions and to disseminate information deep within the organization.

Due to the volatile nature of the project where "plans created at 8:00 am were obsolete by 8:30 am," the flat hierarchy with quick decision making was critical to the successful launch of the operating system. Post launch, many of the change team members were given managerial responsibilities in the new department that owned the operating system.

To establish a culture of self-development for newly required skills, a program that covered the total cost for an online master's degree in computer science was launched for every employee, from software developers to functional and managerial staff. Incentives were introduced including a 5-digit cash bonus, a guaranteed 15% raise and a stock grant on successful completion of the course.

KEY SUCCESSFUL PRACTICES BY THE PROJECT CEO/COO IN THIS CASE WERE

1 Led and built the right teams by

- Organizing teams in a flat hierarchy for fast information flow to facilitate decisions
- Having more experienced personnel to manage cross-functional topics
- Empowering personnel closer to the information with the authority to make decisions
- Analyzing and empathizing with personnel in case of suboptimal decision making

2 Leveraged instant communication by

- Using modern digital tools – Yammer, WhatsApp, James, Poll Everywhere for messaging; Circuit, Zoom for virtual conferencing, etc. – for interaction at a team or one-to-one level

3 Established a learning organization by

- Setting the right incentives to foster curiosity for seminal topics and tools

CASE

A leading energy equipment supplier had automated the gas turbine part design process by leveraging big data and AI. The AI algorithm would identify design improvements for the components to further increase the efficiency and life of the turbine. This would expedite the existing process – which was largely manually driven by engineers – to significantly improve time-to-market and reduce costs. However, given the company's quality obsession, the engineers weren't quite sure of the algorithm's effectiveness. They perceived the automated process to be an 80/20 approach with lower quality compared to the existing lengthy, human-driven process. Additionally, they feared job losses due to autonomous operations. This led to significant resistance in implementing the initiative.

COACHES MULTIPLY YOUR CHANCES OF SUCCESS

Subsequently, the company adopted a new approach. A 3-day workshop was conducted in which "coaches" – selected engineers who were role models to the rest and showed openness to change – were shown the company-wide digital strategy and how it was critical to remaining relevant in the market. Also, they were shown new job roles that would emerge post transformation with a roadmap for their development. The discussions were interactive and their preference for future job roles was sought. Since these roles would upgrade the engineers' productivity and skills, they were an attractive proposition.

Additionally, "translators" – personnel who had a mix of experience in design, business, technology, and human resources – were included in the change team. The "translators" were able to bridge the communication gap between the change team and "coaches" to facilitate a common understanding. Once the "coaches" had all their doubts addressed, they went back and communicated their stories to the others. This completely turned around the mood in the engineering teams and many of them proactively contributed to a successful launch of the algorithm.

KEY SUCCESSFUL PRACTICES BY THE CHANGE TEAM IN THIS CASE WERE

1 Built and led the right teams by

◆ Identifying "coaches" who were role models to the engineers and showed openness to change, and "translators" who had a mix of experience in design, business, technology, and human resources; translators were typically junior employees with 6-8 years of experience

◆ Providing transparency, empathizing with and listening to the opinions of operational staff, instead of top-down execution

◆ Communicating benefits to the engineers that would arise out of more productive roles in the future as well as empowering them to choose their future roles

2 Managed transition to new roles by

◆ Providing complete clarity on future roles and a training roadmap for the engineers to fill in those roles

KEY RECOMMENDATIONS

A successful digital transformation journey requires you to not only set the right sails and embrace the safety of a solid boat hull, you also have to steer your organization in the desired direction. Integrated Change Management, both agile and digitally adapted, will ensure you hold the course – even in troubled waters. These are our key recommendations to help you navigate:

1

INSTITUTE AN INTEGRATED APPROACH TO CHANGE MANAGEMENT

Change Management is crucial for creating acceptance. Include Change Management as early as the conceptualization phase of a digital vision instead of waiting until implementation. Don't treat it as a separate workstream operating independently from the other ones. It needs to be an overarching element in your digital transformation. Set up an Executive Action Team to gain commitment from top management, buy-in from operational staff and effective integration across functions and departments. When it comes to technology and process decisions, always consider the effects on existing social interactions.

2

LIVE AN AGILE CHANGE MANAGEMENT APPROACH

Setting up a flexible process for concept and strategy development allows you to continually adapt by incorporating acquired knowledge during the conceptualization and implementation phases. An iterative feedback approach not only gives you insights but allows you to react quickly. You should carry out pilot tests as early as possible for the same reason. Proactively anticipating human reactions and modifying change measures will also help you remain effective. To account for these uncertain and volatile aspects, define agile KPIs and trade off with classic business KPIs.

3

ADAPT CLASSIC CHANGE MANAGEMENT LEVERS TO THE CONTEXT OF DIGITALIZATION

During change, employees look to their leaders for clarity, connection, and accountability. Leadership should, therefore, be proactively involved, transparent, collaborative and empathetic during the entire transformation journey. Set up project teams with flat hierarchies and a good mix of juniority and experience. Personnel closest to information should have the authority to make quick and informed decisions. Encouraging staff members who are open to change to be role models and coach their colleagues will further create buy-in, as will personnel with cross-topic experience functioning as "translators". Live the transformation by using communication and collaboration tools: Be digital in your interactions with existing and new, internal and external stakeholders. Inclusive, hands-on and practical training methods such as live demonstrations with customers and partners will strengthen involvement. With the right policies and incentives, you can institute a culture of continuous improvement.

While these recommendations will go far in charting your course, each journey is unique. Your specific challenges should be met with individual solutions. Let's set sail together for a smooth ride on the high seas of digital transformation.

ABOUT SIEMENS IOT SERVICES

The IoT Services Unit is part of Siemens and was founded April 1st, 2019 with its headquarters in Munich to offer customers end-to-end solutions for their digital transformation. With more than 7,000 employees in 10 countries and 21 offices, the unit offers a global network of employees to implement projects of various scale – from project-based IoT consulting to a fully digitalized organization.

Further information is available online
www.siemens.com/iot-services

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THANK YOU

To all contributors for their time and insights