Project model

kamstrup

Delivery of system solutions

Preface

"It is a great pleasure to introduce you to the Kamstrup project model.

To Kamstrup, nothing is perfect and there will always be new and better ways to do things as the world changes, as new technology is introduced and as customer preferences evolve.

At Kamstrup, we always strive to deliver solutions of high quality, create high value for our customers and ensure that we fulfil expectations and deliver to our commitment. Therefore, the foundation is to have a – at all times – solid best practice where all learning has been taken into account.

At Kamstrup, we live our values and we share a culture that commends delivered quality. We are all committed to ensure continuous learning and improvements. We constantly seek to learn from our customers, partners, experts and colleagues and naturally from our mistakes. We want to make sure that we share these insights, within the Kamstrup organisation, and this is documented in the Kamstrup project model.

The Kamstrup project model has existed for many years, though it has evolved throughout the years as we learn and improve.

With the present delivery models of Kamstrup, we are able to fulfil all levels of requirements from customers. The Kamstrup project model is the method we use today and everyone who works with delivering solutions at Kamstrup is obligated to follow the Kamstrup project model. To ensure continuous learning and optimization of how we do what we do for our customers when delivering high-quality solutions, it is also an obligation of everyone working with delivery models to contribute to the development of the Kamstrup model to ensure that the Kamstrup project model at all times ranks as "world class" when we deliver high-quality solutions to our customers.

I wish you the best of luck with the delivery of high-quality solutions to our customers."

Stilling, May 2021

CEO Kim Lehmann

A foundation for delivering value

The project model is created to ensure uniform and professional ways of executing projects. It provides the basis for delivering the value that customers expect from their Kamstrup solutions.

The project model suits all delivery types, regardless of their size and complexity. The execution of the delivery is based on a stage-gate model where the execution contains a series of successive phases.

However, in the remaining roll-out phase of a project, an iterative model is used during which the phases are repeated or occur in parallel. Everyone who works with delivering systems at Kamstrup must follow this way of executing.

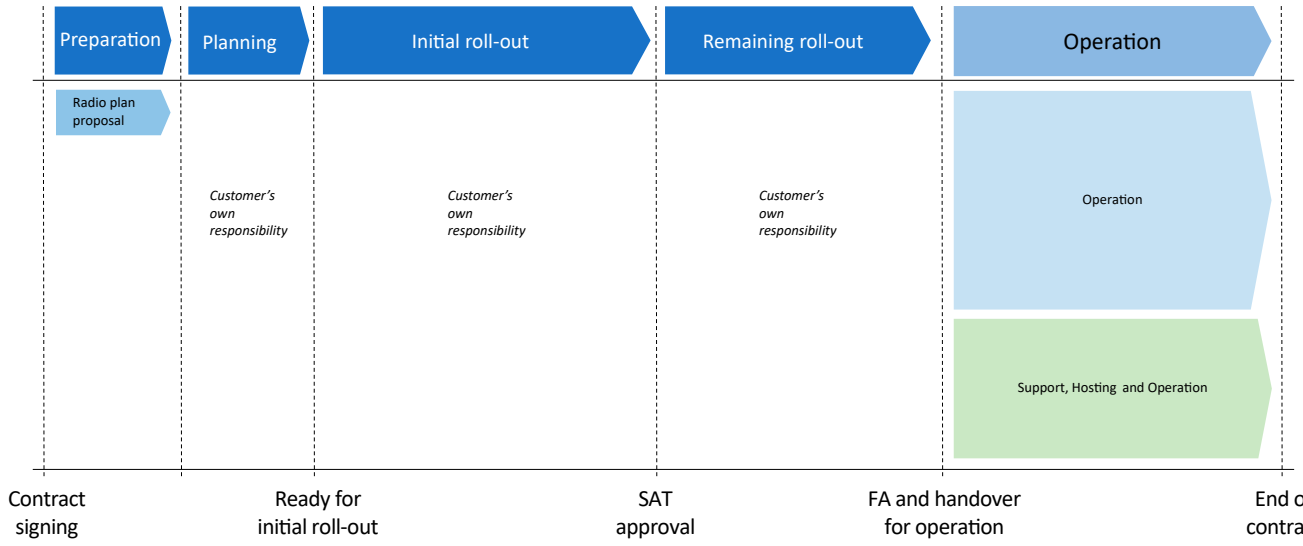
When everyone at Kamstrup uses the same documents, it ensures both uniform project management and the exchange of knowledge and experience, all of which contribute to the ongoing development and optimisation of Kamstrup's project implementation.

What type of delivery?

Kamstrup offers three types of deliveries: Do-It-Yourself, Do-It-Assisted and Do-It-Together.

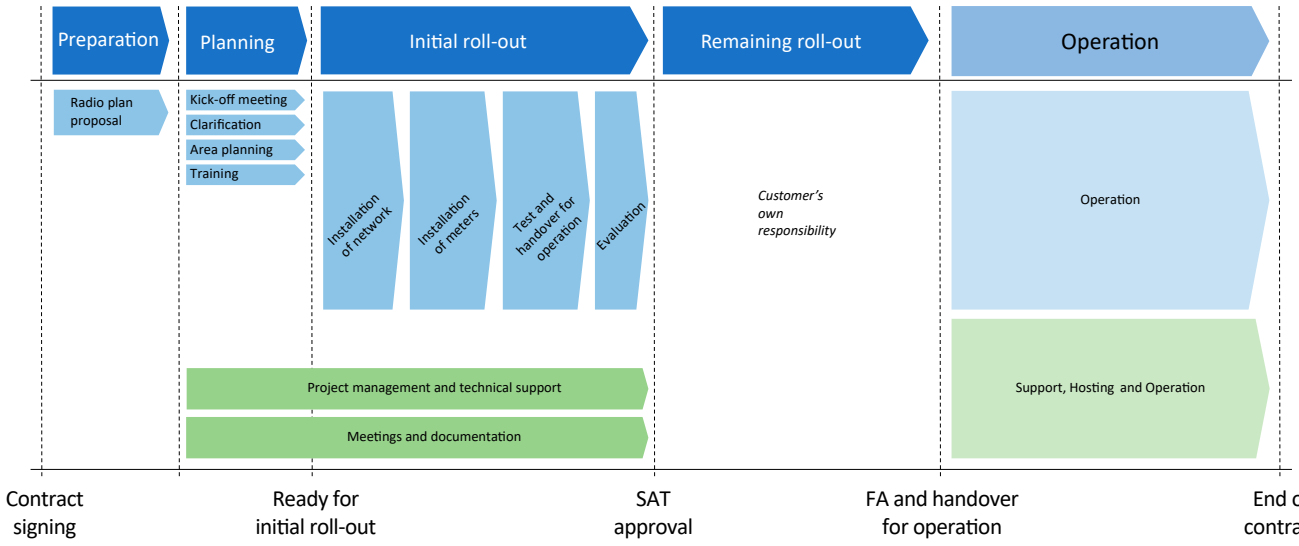
Do-It-Yourself (DIY)

A delivery model for customers who want to and can handle the implementation themselves. The customer has full ownership of the implementation and handles the entire roll-out himself. Kamstrup puts the necessary knowledge at the customer's disposal and is only involved by arrangement and as required.



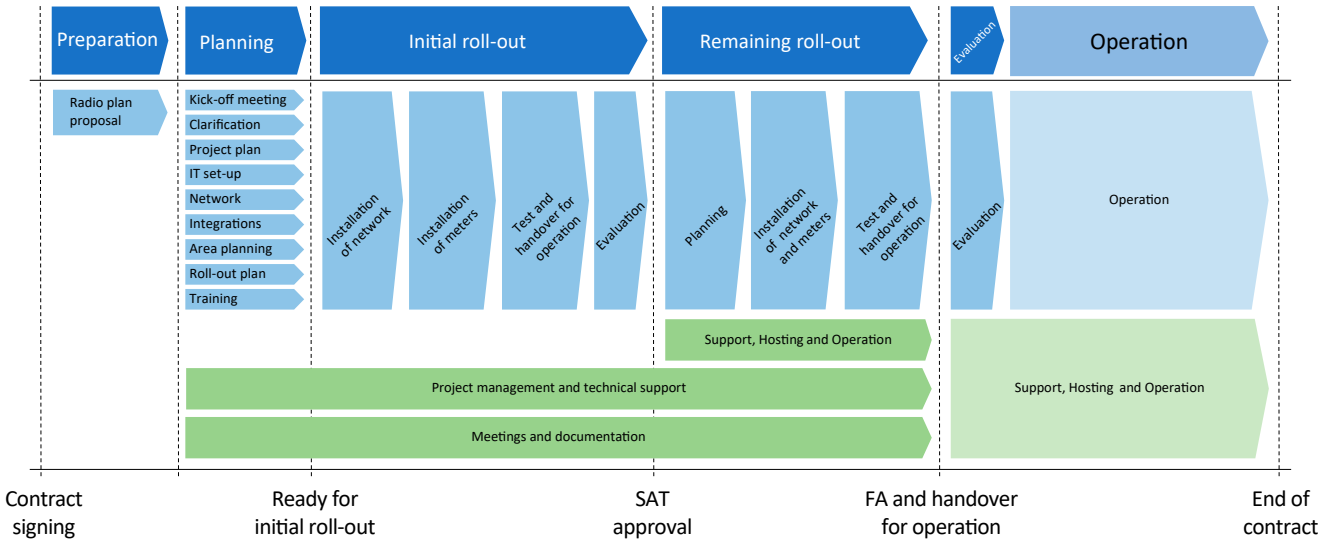
Do-It-Assisted (DIA)

A delivery model for customers who want a strong start. Kamstrup and the customer work closely together to prepare the full implementation. Kamstrup is jointly responsible with the customer for the first roll-out area after which the customer takes over.



Do-It-Together (DIT)

A delivery model for customers who want to delegate the responsibility of the project, minimize risks and ensure predictability. Kamstrup has the responsibility throughout the project period. In a DIT delivery, the performance is guaranteed and project management is provided. A Do-It-Together project starts when the contract is signed and ends when the last meter is installed in a stable network and can be handed over for operation.



When choosing the preferred delivery model, there are three overall parameters to consider: resources, finances and time. Regardless of the type of delivery chosen, it is only fully deployed when the customer's expectations and success criteria have all been met.

The organisation behind a project

In the Do-It-Assisted and Do-It-Together deliveries, projects are organised according to the same model in which the roles and responsibilities are clearly defined. Tasks are always allocated to a specific person who is responsible for their completion.

Project manager

After handover, the project manager is responsible for the project and is the customer's primary contact throughout the delivery process. The project manager holds the managerial responsibility in the project group and must ensure that all tasks are carried out in accordance with the contract.

All follow-up actions are executed on the basis of the following six points, which are the focal points of Kamstrup's project management:

- Progress status
- Management of the project
- Planning and controlling of costs and hours on the project
- Quality
- Risks
- Project evaluation

Project engineering

The engineering manager holds the technical responsibility for the project concerning the establishment of the network and is responsible for ensuring that the customer's master data is received in the required format. The engineering manager is also responsible for training technicians in building networks, for planning of the network in smaller geographical areas and for checking the quality of the installed metering points on an ongoing basis.

When the installation is completed, the engineering manager must analyse the installed area(s) to ensure the stability of the network via stability readings.

Project IT

The project IT manager is responsible for handling the data structure for reading the meters. The project IT manager is also responsible for the complete IT setup, data security and system training.

In addition, the project IT manager is responsible for the integration between the customer's IT systems and Kamstrup's IT systems.

Roll-out project manager *

The roll-out project manager is responsible for the management and coordination of the meter installation roll-out. The roll-out project manager is thus only involved in a project if Kamstrup is responsible for the meter installation.

As part of the roll-out, the manager plans the installation in both the initial and remaining roll-out phases. In addition, the installation is coordinated with both the service technician and customer to ensure an effective installation with minimal clean-up.

Throughout the installation, the roll-out project manager reports to and works closely together with the project manager.

Service Hosting – Deployment Technician

The deployment technician is responsible for establishing the IT environment as well as the software deployment if integration is part of the project.

This may be done either on a server installed at the customer's location with associated infrastructure or on a server installed at Kamstrup with VPN access for the customer.

Throughout the project, the deployment technician works closely together with the project IT manager.

* *If the installation service is included.*

The planning phase

DIT deliveries

After the contract has been signed, the project manager has the overall responsibility for the project. The first task is to define the project plan and timing.

The project process is agreed upon at a start-up meeting at the customer's location or on a web meeting, an external kick-off. The decisions that are made are supported by a number of planning documents, which are prepared in cooperation between the customer and Kamstrup.

The planning phase also involves determining delivery and payment plans, an overall time schedule and a budget. The roll-out areas are defined in cooperation with the customer.

Meters and network components for the first area are ordered so that they are at the customer's location at the agreed start-up date.

DIA deliveries

In DIA deliveries, the customer and Kamstrup work closely together to ensure a good and controlled start from where the customer takes over the delivery.

In the planning phase, Kamstrup supports the customer and provides the list of needed components and deliverables, but it is the customer's own responsibility to place the order.

DIY deliveries

In DIY deliveries, the customer has the full responsibility of both processes and solution. In the planning phase, Kamstrup equips the customer to perform all tasks on his own.

As a part of a DIY delivery, the customer receives a radio plan proposal for the entire area from which the customer is enabled to start the roll-out phases. It is recommended to start an initial roll-out in which the system is tested and learnings can be made. Customers furthermore receive an introduction to the system solution. In a DIY delivery, it is the customer's own responsibility to order components and secure delivery. Kamstrup is only involved by arrangement and as required.

The decisions that are made are supported by a number of planning documents, which are prepared in cooperation between the customer and Kamstrup.

In both DIY and DIA deliveries, customers are able to get pay-as-you-go support in the subsequent phases when requested where inquiries are made through the online support portal ServiceNow.

The initial roll-out phase

DIT and DIA deliveries

During the initial roll-out phase, meters are installed in a limited geographical area. The subsequent evaluation ensures that any faults are corrected before the remaining roll-out.

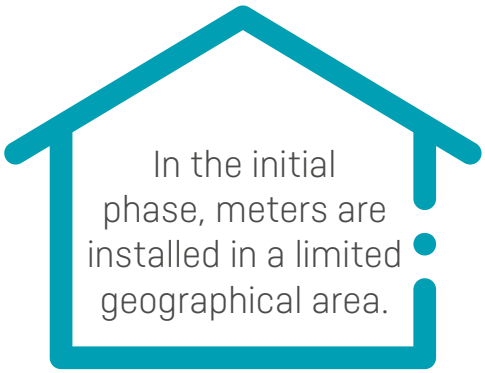
Planning

Before the entire roll-out begins, a limited geographical area is selected as the initial area based on specific criteria, and the progress in the area is planned. The customer supplies Kamstrup with all the necessary information about the area and Project Engineering plans the positioning of the components in the area.

Initial installation

The installation in the initial area tests whether the installation process goes according to plan and whether the physical installations comply with the guidelines.

Before meters are installed in the initial area, the service technicians responsible for the meter and network installation receive training in network construction and installation guidelines. The service technicians receive a certificate of completion of Kamstrup's network training.



Initial commissioning

After the installation has been completed, the installation process is evaluated when Project Engineering commissions the area. Any faults are corrected so that they can be avoided during the remaining roll-out. This process is carried out in cooperation with the customer.

The initial area ends with an evaluation of the initial area with either a Site Acceptance Test (SAT) for DIT deliveries or a joint verification for DIA deliveries, which focuses on optimisation of the roll-out process based on the experience from the initial area. The quality of the installation, cooperation and the process in general is assessed.

Specifically for DIA deliveries

For DIA deliveries, Kamstrup is responsible for the initial roll-out, which ensures a good and controlled project start-up. Kamstrup supports the customer with planning, project management, training and guidance according to the procedures, checklists and templates provided in the project model for deliveries.

When having installed the meters in the limited geographical area, the customer and Kamstrup evaluate the first area jointly, enabling the customer to succeed with the installation in the remaining areas of the project.

Kamstrup verifies the process, but does not guarantee performance since the overall responsibility belongs to the customer.

For support through the remaining roll-out, customers are able to get pay-as-you-go support where inquiries are made through the online support portal ServiceNow.

The remaining roll-out phase

DIT deliveries

During the remaining roll-out phase, meters are installed in the remaining geographical areas. Once an area has been completed, it is handed over for operation.

Planning

After a successful initial phase, the remaining geographical areas are planned in detail. The customer supplies Kamstrup with all information necessary for the planning, which is carried out in cooperation between the customer and Kamstrup. Adjustments are made on the basis of the experience gained from the initial roll-out. If changes are made to the area planning, the project manager will adjust the delivery plan.

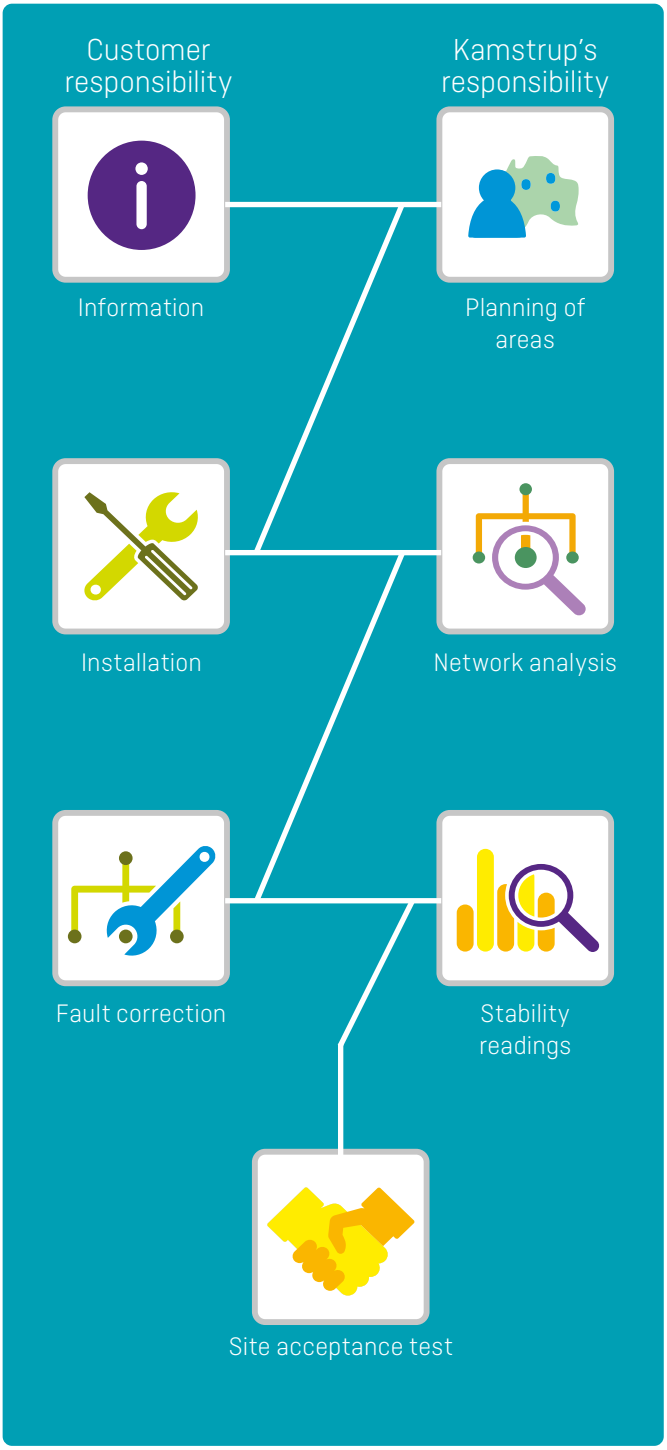
Installation

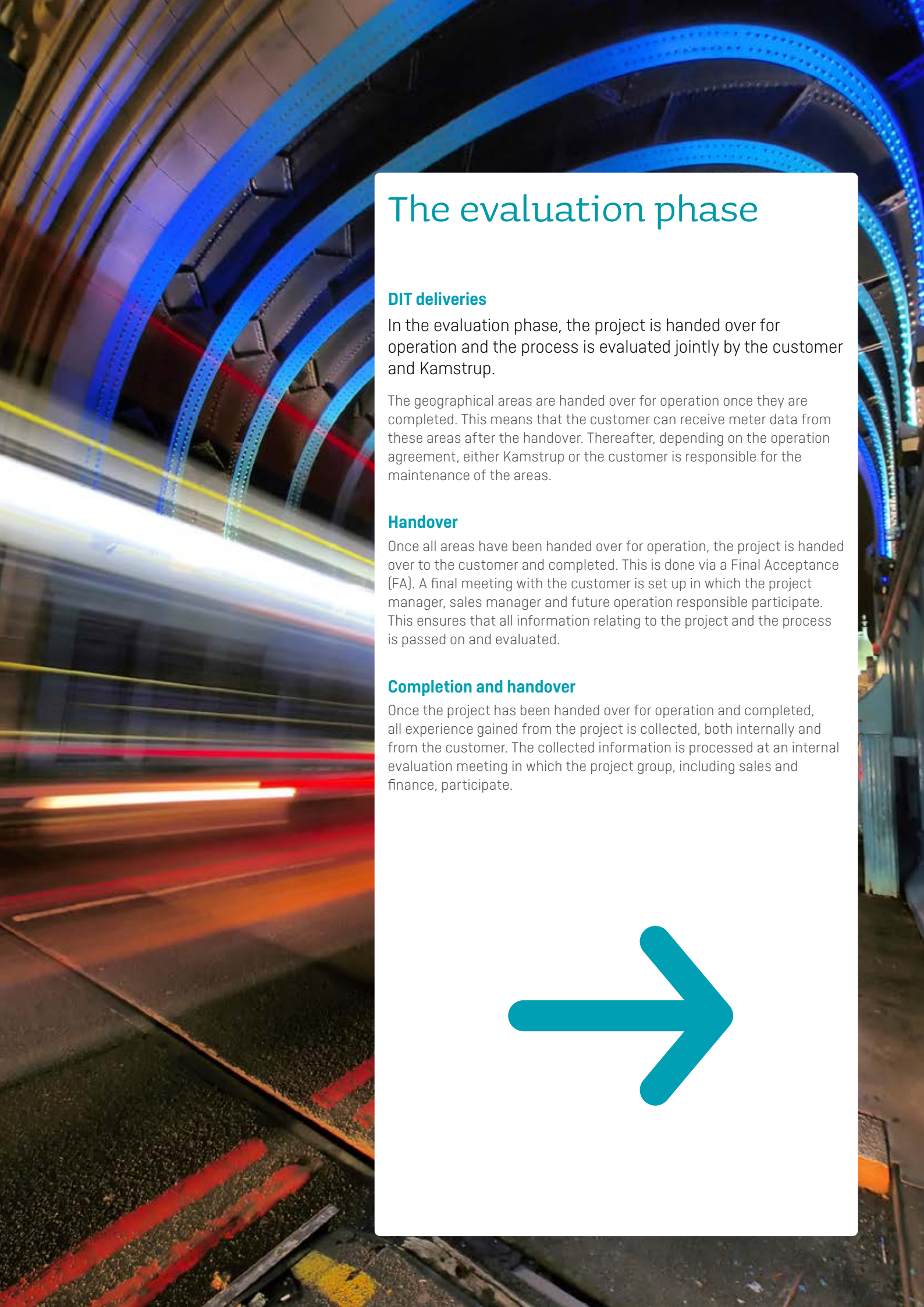
During the installation phase, the meters and network components are installed in accordance with Kamstrup's instructions, and checks are carried out to ensure that everything goes according to plan. Meters are only installed in the agreed areas. The analysis of each area is initiated when all installations in the area have been completed.

Commissioning

When the installation of an agreed area has been completed, the commissioning plan takes effect. The area is analysed and, if necessary, action lists are prepared and submitted to the customer or to the responsible subcontractor. The action lists can contain meters that need to be reinspected for the purpose of improving a signal. Installations that could not be completed are placed on a follow-up list.

Once there is contact with every installed meter in the area, stability readings are made, and the area plus follow-up lists are handed over for operation, which may be handled by the customer himself or by Kamstrup's operations department. Each individual area is completed with a predefined site acceptance test (SAT).





The evaluation phase

DIT deliveries

In the evaluation phase, the project is handed over for operation and the process is evaluated jointly by the customer and Kamstrup.

The geographical areas are handed over for operation once they are completed. This means that the customer can receive meter data from these areas after the handover. Thereafter, depending on the operation agreement, either Kamstrup or the customer is responsible for the maintenance of the areas.

Handover

Once all areas have been handed over for operation, the project is handed over to the customer and completed. This is done via a Final Acceptance (FA). A final meeting with the customer is set up in which the project manager, sales manager and future operation responsible participate. This ensures that all information relating to the project and the process is passed on and evaluated.

Completion and handover

Once the project has been handed over for operation and completed, all experience gained from the project is collected, both internally and from the customer. The collected information is processed at an internal evaluation meeting in which the project group, including sales and finance, participate.

We create progress for others

Kamstrup is a world-leading supplier of intelligent solutions for optimising the consumption of water and energy. We are 100% Danish-owned and one quarter of our employees work with innovation. Our solutions are used by utilities, property managers and building owners all over the world for reliable and cost-effective metering. By anticipating our customers' challenges, we enable them to run a better business and inspire smarter, more responsible solutions for the buildings they administrate or own.

Our solutions range from consumption meters, smart metering systems, hosting and services to analytics and system operations. All products are produced in Denmark with the highest certifications for environmental safety and quality, and we are represented in more than 80 countries worldwide by local offices or distributors.

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