



# Heading towards the attractive, green railway of the future

Banedanmark creates the conditions for hundreds of thousands of Danes to take the train every day to get to work, on holiday or to visit each other - and also creates the conditions for many thousands of tonnes of freight to be transported on the railway.

We are building a brand-new, attractive, green railway for modern electric trains while keeping the old railway running. We do this by maintaining and upgrading existing line sections at the same time that we are, for example, building a brand-new rail corridor to Europe, rolling out new signalling systems and electrifying the railway.

With the attractive, green railway of the future, trains can be faster, more frequent, and smarter, all for the benefit of customers. Congestion can be reduced. Both the climate and environment will benefit from electric trains. As we proceed, we are making considerations for nature and improving biodiversity along the train lines.

# The five most important challenges as we move towards an attractive, green railway

- 1 There is an old infrastructure backlog which negatively impacts punctuality.
- We will have to complete many complicated projects simultaneously.
- 3 We will need to recruit and retain employees, suppliers and consultants with competences that are widely sought after.
- There will need to be new integrated workflows with Sund & Bælt and Danish State Railways S-bane concerning projects, renewal works and maintenance.
- 5 There will need to be made adaptations to address future climate challenges.

# A strong and cooperative Banedanmark

We are an organisation that operates in complex value chains which also include the world around us. This means that every day we are faced with a series of dilemmas where the interdependencies are clearly evident. Therefore, there is a need for strong cross-disciplinary collaboration both internally and externally which constantly illuminates the many choices and complexities from all angles. This is the way to ensure strong solutions and good results.

The green railway of the future will only become a reality if we at Banedanmark cooperate effectively on our core deliverables of punctuality, asset management and projects, and if we have a sustainable foundation with a focus on safety, the environment and ensuring an attractive workplace. In other words:

We operate together. E.g., when projects and maintenance works need to be scheduled into the timetable and match traffic operations together with the railway companies. And as the railway becomes increasingly digitalised, we will only succeed if operational IT and administrative IT in Banedanmark work closely together.

**We develop together.** E.g., when we internally find employees to train external employees to work on the railway of the future. Or when we at Banedanmark work in an integrated manner between the system managers in Infrastructure and Construction Design to create the best projects.

**We own together.** E.g., when we use Asset Management across the organisation to prioritise correctly so that we get the best possible and safest railway for the money we spend. Or when we work together with new owners of Danish infrastructure such as, e.g., Sund & Bælt or Danish State Railways S-bane to find new forms of collaboration.

**We work together.** E.g. when, with respect for each other's skills, we find the right safety solutions in a risk-based approach across Banedanmark. Or when we work with difficult issues and always maintain a good tone and are curious about each other's perspectives – e.g., in connection with visual management boards where external parties can also participate.

At Banedanmark, we succeed together!





With a focus on effective cross-disciplinary collaboration both internally and externally:

We develop and operate an attractive, green and safe railway with low costs



## Core deliverables

## **Punctuality**

We ensure that the trains run as punctually as possible both now and in the future.

We provide precise and targeted traffic information.

We provide robust timetables with room to accommodate the many construction projects.

## **Asset Management**

We extend the life of our physical and digital infrastructure and reduce maintenance costs without compromising on safety.

We reduce errors and incidents that affect our customers and reduce recovery time when they occur.

We adapt our work with the infrastructure to a new climate reality and to new collaborations with Sund & Bælt and Danish State Railways S-bane.

## **Projects**

We improve our projects through professionalism, digitalisation, standardisation and collaboration.

Our projects are delivered on schedule and at the agreed upon price and quality - without residual work or deferred functionality.

We manage the Signalling Programme and the Electrification Programme to reach their goals so that the trains of the future can roll into Aarhus H and Aalborg St. in 2026.



# Sustainability

#### Safety

We have a safety culture where we master our roles and responsibilities and develop and comply with our safety-supporting processes for the benefit of passengers, contractors and our employees.

#### **Environment**

We take the environment into account as much as possible, including CO2 reductions and biodiversity, when we work on projects and operate and maintain the infrastructure.

## Attractive workplace

We work systematically and purposefully with diversity and good management so that Banedanmark can welcome everyone who can and wants to work on creating an attractive railway.

#### Core deliverable:

# **Punctuality**

Punctuality is a cross-disciplinary delivery. The Traffic unit maintains the timetabling and traffic operation while the Infrastructure and Construction units ensure that errors are rectified and the projects are carried out in such a way that the highest possible punctuality can be attained. In addition, there is ongoing cooperation with the railway operators to ensure that Banedanmark's planning is coordinated with their operational plans and provides the best conditions for a good traffic operation on which we work closely together in our daily commercial service.

Our railway is currently going through major changes, which should lead to significantly better punctuality in the future. Upgrades of the lines, additional electrification, ongoing renewal and, not least, the roll-out of the Signalling Programme are needed to future-proof the Danish railway. On the S-bane, where CBTC is fully rolled out, punctuality is now at word class levels.

The large scale of renewal and upgrade projects results in reduced capacity on the line and this makes punctuality even more vulnerable to incidents. It is critical that we help passengers with good traffic information.

That is why we have three overall goals for Punctuality:

- We ensure that the trains run as punctually as possible both now and in the future.
- We provide precise and targeted traffic information.
- We provide robust timetables with room to accommodate the many construction projects.



All of this can only succeed by continuing and developing effective cooperation across Banedanmark and with the railway operators:

- Banedanmark's punctuality forecast model predicts the punctuality targets for the coming years. Therefore, we are strengthening the processing of input parameters.
- Capacity and punctuality are balanced when we prepare timetables.
- In the shared traffic information with railway companies, we follow up on the quality perceived by passengers in order to continue to improve the experience. We are continuing our work with consistent, high-quality traffic information on all channels, whether you are taking the S-bane or the long-distance line and whether you are looking at the screen on the platform or at your phone.
- More technical monitoring and effective coordination across the board must ensure that we can act more proactively as well as faster and better so that we ensure rapid intervention and the restoration of traffic when errors and incidents occur on the infrastructure.

#### Core deliverable:

# **Asset Management**

Optimised commercial service and maintenance is the prerequisite for a robust and resilient railway infrastructure. Therefore, we need to build structures and standards so that we can make decisions based on data-based analyses to ensure an intelligent, controlled maintenance approach and a cross-disciplinary prioritisation of our investments.

We work according to the standards in Asset Management and ITIL (Information Technology Infrastructure Library) to ensure this. This work requires strong professional knowledge and financially transparent models that ensure that the renewal work takes place at the most optimal time.

It is Banedanmark's responsibility to optimise, maintain, operate and renew the railway. But we do not do it all ourselves. We offer much of the work with maintenance of the lines to subcontractors who are specialists in their field. It is crucial that we succeed in completing an organisational and cultural transformation where we go from being the party doing the work to also mastering the roles of the future on the basis of knowledge of the state of the line, contracts and supervision. At the same time, we must deliver this in an integrated collaboration with Sund & Bælt on large parts of the long-distance line and with DSB on the S-bane.

Therefore, we have three overall goals for the railway infrastructure:

- We extend the life of our physical and digital infrastructure and reduce maintenance costs without compromising on safety.
- We reduce errors and incidents that affect our customers and reduce recovery time when they occur.
- We adapt our work with infrastructure to a new climate reality and to new collaborations with Sund & Bælt and Danish State Railways S-bane.



It is crucial that we create greater transparency and a better application of technical rules and norms. It needs to be simpler to maintain the railway and to be a supplier to Banedanmark and we also need to become better able to support Banedanmark's goal of delivering construction projects at the agreed time, price, and quality.

Our approach is a continuous improvement culture, where everyone gets better at spotting problems early, solving them thoroughly and sharing knowledge systematically across areas and divisions. We standardise in relation to all of our management systems.

Banedanmark strategy 15

#### Core deliverable:

# **Projects**

Our projects transform the railway into an attractive, green railway through renewal, upgrading, extension and digitalisation. We are also simultaneously developing Banedanmark through our many business projects. The projects are necessary to solve the problem of an old and worn-down infrastructure. At the same time, they are the prerequisite for more capacity through upgrades, extensions, and digitalisation as well as for succeeding with the green transition through electrification and the manner in which our projects are carried out.

Succeeding in railway projects is a team sport – no one can do it alone. Therefore, effective cross-disciplinary cooperation, both internally and externally, is a core aspect of Banedanmark's projects. This means:

- We have a close dialogue with the railway operators about when and how we work on the line.
- All divisions in Banedanmark are involved in the projects and all divisions are responsible for finding solutions.
- We have a close dialogue with both the consultant, supplier, and contractor industries about how we design and implement our projects.

Our projects are crucial to achieving our goal of an attractive, green railway and the way we carry out our projects is crucial to ensuring that the train product remains an attractive option as this process proceeds.

- We develop our projects through professionalism, digitalisation, standardisation and collaboration.
- Our projects are completed on schedule and at the agreed upon price and quality - without residual work or deferred functionality.
- We manage the Signalling Programme and the Electrification Programme to reach their goals so that the trains of the future can roll into Aarhus H and Aalborg St. in 2026.





# Safety

Railway safety has always been the foundation of Banedan-mark's work and it is a strong basis for the safety culture that must flow through all our work, whether it is on the line, in the office, on the construction site or when we operate traffic.

The Danish railway operates on a foundation of strict safety requirements. Everyone who uses the railway must feel safe. Banedanmark's employees and external contractors must be able to go to work safely every day and passengers and freight operators must also arrive safely at their destinations. With the transformation of the railway into a coherent digital system and the increased threat landscape, cyber security is an absolutely essential factor for us to keep the railway safe. At the same time, our climate is changing and this requires us to continuously adapt the Danish railway so that it can withstand the changes. This can encompass increased surveillance, new traffic rules or renovations that ensure the railway remains safe in the future.

In order to address the changes affecting the railway, we are constantly developing the way we work with safety. This requires a common and strong safety culture, which we develop by having a continuous and innovative focus on safety across Banedanmark. Safety is essential for everyone who works on and with the railway. That is why we talk about safety issues. We know when something is unsafe and how to act in those situations.

That is why we have an overarching goal for safety:

 We have a safety culture where we master our roles and responsibilities and develop and comply with our safety-supporting processes for the benefit of passengers, contractors, and our employees.



## **Environment**

The railway is a sustainable transport mode. We are in the process of making the railway greener through electrification and the more attractive the railway becomes for passengers and goods, the more it contributes to solving the climate crisis. When we operate and develop the railway, we focus on reducing CO2 emissions and reducing noise while simultaneously protecting biodiversity, the environment and nature on and by the railway. The railway runs through the entire country and impacts both cities and the open countryside. Therefore, Banedanmark works actively to ensure biodiversity and to simultaneously maintain a focus on our neighbours along the line so that we take address what we can in terms of, among other things, the noise caused by trains and workers on the track.

Working with nature, the environment and climate is a double-edged sword. When we build the green railway of the future which can accommodate the climate-friendly trains of the future, we are building in and around nature. That is why we work in a structured and targeted manner, not just when we have to but wherever we can, with nature and the environment to ensure that nature gets good conditions for growth when we have finished our work.

At Banedanmark, we have a goal of reducing our carbon footprint by 20-30 percent by 2030. That is why we are working together with the market and other public sector construction project clients on how requirements for CO2 reductions can best be introduced wisely so that we can realise the climate targets.

Banedanmark protects the green kind of transportation by ensuring the green railway of the future while we simultaneously work with biodiversity and climate plans.

That is why we have an overarching goal for the environment:

 We take the environment into account as much as possible, including CO2 reductions and biodiversity, when we work on projects and operate and maintain the infrastructure.

Banedanmark strategy 21



# Attractive workplace

We want to be a workplace where employees thrive and develop and where we have a good psychological and physical working environment. There is room for everyone at Banedanmark and we must bring all of our employees into play so that they can actively develop their various skills and potentials across genders, ages, ethnicities, professional qualifications and more, in order to create a green and attractive railway. It creates more and better solutions when everyone contributes.

Banedanmark has signed on to the Women in Rail charter which aims to ensure equality in the workplace. This is intended to help ensure diversity and an attractive workplace for everyone who wants to and can contribute to creating a green, attractive railway.

Banedanmark is committed to good management. This means that we make demands on our managers at all levels through our management basis. Our managers must be able to motivate employees, take responsibility for both processes and task resolution and ensure highly professional products. They must both be able to implement successful development projects and ensure safe and efficient commercial service. This places high demands on our managers and we focus on developing them through an ambitious management development programme. We use target and visual management boards to maintain a focus on achieving continuous improvements. At the same time, the prerequisite for this is that our leaders must contribute to promoting a sense of psychological security when we stand at the board and have to learn new things together.

Banedanmark prioritises social responsibility and has a focus on ensuring that our contract partners comply with applicable Danish legislation, including international conventions signed on to by Denmark, such as the ILO Convention no. 94.

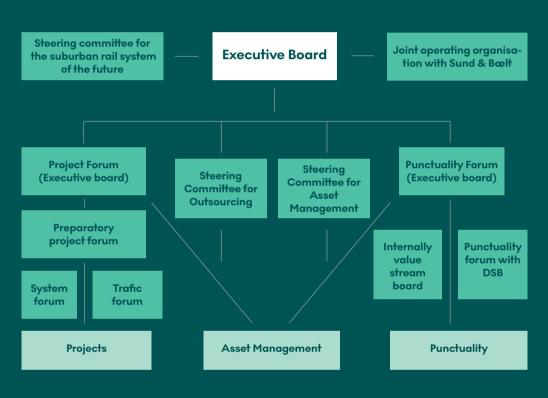
Therefore, CSR considerations are incorporated into all Banedanmark's contracts.

That is why we have an overarching goal to create an attractive workplace:

 We work systematically and purposefully with diversity, inclusion and good governance so that Banedanmark can welcome everyone who can and wants to work on creating an attractive railway.



# Effective cross-disciplinary collaboration





# The organisation that supports the strategy and promotes in-depth specialised expertise





We operate together We develop together We own together We work together



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