

EXTRACT FROM ANNUAL REPORT

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This report is an extract from BEC's Annual Report 2021, containing a translation of management's report. Please refer to the annual report in Danish for financial statements and statements from management and the independent auditor.

In case of discrepancies, the Danish version shall prevail.

BEC group consists of the parent company BEC Financial Technologies a.m.b.a. (hereinafter BEC) and BEC Ejendomsselskab A/S.

# FROM 'EDB-CENTRAL'

OLD-SCHOOL DANISH FOR DATA PROCESSING

# TO FINTECH PROVIDER

In April, we changed our legal name from 'Bankernes EDB Central' to 'BEC Financial Technologies'. After 51 years under the name 'Bankernes EDB Central', today we are a completely different company in a new era and in an international environment with lots of complex, exciting fintech. So our name has to reflect that, too.

# MANAGEMENT'S REPORT





# A SIMPLER BEC

Extensive changes and a new strategic direction characterized BEC Financial Technologies in 2021.

- We are organized to be a simpler company which enables us to be more flexible on focusing our efforts where our customers need them.
- We have created simpler, more dynamic decision-making forums together with our customers.
- We have made tough strategic choices and in 2022 we are reducing our investments in new banking solutions, while ramping up our investments in a strong technological platform today as well as tomorrow:

We will deliver solid operations in a time of high demands from growing customers, and we will move even further away from developing our own IT solutions to integrate with new partners and new technologies. BEC is well on its way to transforming itself into a modern software and delivery company. In 2021, we delivered more development hours than ever before, and that growth will continue in 2022.

But let's be honest: major changes are not easy. Despite enormous support from customers and employees for a simpler, dynamic BEC, it takes focus and requires resources to build a new organization and new ways of working.

Therefore, I am deeply grateful for a determined group of owners and skilled, dedicated employees, who throughout the year have consistently driven and further developed our IT for Danish banks – in the midst of the many changes.

At BEC, we have a good culture of coding, learning and growing – together. Now we especially need to learn to deliver even more efficiently, and we need to learn to work even more closely with our customers.

This is how we position the BEC community for the future.

JESPER NIELSEN

CEO



### FIVE YEARS' KEY FIGURES (GROUP)

(Million Danish kroner)	2021	2020	2019	2018	2017
INCOME STATEMENT:					
Revenue	2,288	2,010	1,779	1,731	1,611
Gross income	1,612	1,231	1,054	995	801
Earninges before interest, taxes, depreciation and amortization (EBITDA):	601	199	258	280	378
Operating income	21	-86	-1	15	-542
Financials	-6	-12	-5	-2	1
Net income	4	-91	1	1	-380
BALANCE SHEET					
Development Assets	964	952	766	552	412
Fixed assets	1,355	1,350	1,056	860	742
Cash and securities	923	559	1,699	1,680	1,331
Equity	2,488	2,174	3,154	2,802	2,411
Balance	2,922	2,783	3,511	3,325	2,975
CASH FLOW					
Investments in intangible fixed assets	574	422	425	323	382
Investments in tangible fixed assets	14	21	12	14	8
Change in liquid assets	365	-1.140	19	348	371
KEY FIGURES					
Other external costs	874	940	871	884	832
Staff costs	813	871	651	567	401
Development costs	574	422	439	421	455
Gross costs	2,261	2,233	1,946	1,872	1,688
Rate of development	33.0%	41.0%	41.6%	43.9%	51.2%
Solvency ratio	85.2%	78.1%	89.8%	84.3%	81.0%
Full-time employees (year's average)	1,296	1,128	951	849	776

#### **DEFINITION OF MAIN AND KEY FIGURES**

The key figures have been prepared in accordance with Finansforeningen/CFA Society Denmark's recommendations and guidance for 2015. Main and key figures are explained as follows:

Gross costs = Other external costs + staff costs + increase in development assets

Development ratio = Costs of development for own and foreign accounts x 100 / gross costs

Solvency ratio = Equity at year-end x 100 / total assets

## **MEMBERS**

BEC's owners are 19 Danish banks, which are members of both the BEC cooperative society and BEC clients:

















Handelsbanken









Møns**Bank** 











# STANDARD SOLUTIONS FOR BANKS

Through BEC, small and large customers have access to more than 200 strong technology solutions that meet every conceivable need of Danish banks.

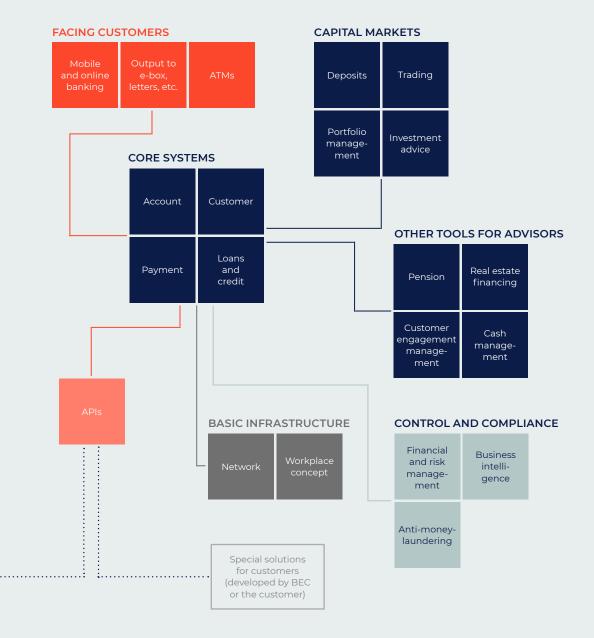
BEC provides all the technology that Danish banks need.

BEC's customers are able to structure their technology platform using over 200 different business services, including core systems, mobile and online banking, ATMs, capital markets platform, workplace concept and consulting tools for the bank's employees, business intelligence and tools for financial and risk management.

Special solutions

for fintechs and

other third parties



#### STRATEGY:

# MORE CODE, LESS POWERPOINT

In 2021, BEC announced extensive strategic changes to simplify BEC, speed time-to-market and accelerate the transition towards open IT platforms.

## SHARPER STRATEGY AND NEW CUSTOMER PROMISES

BEC has sharpened our strategic direction based on four promises to our customers:

- BEC enables growth, efficiency and compliance through financial technology.
- BEC delivers value through collaboration with customers and other fintech companies.
- BEC builds open, scalable and efficient architecture for customers and partners.
- BEC delivers robust, secure and stable solutions.

#### SIMPLER GOVERNANCE TOGETHER WITH CUSTOMERS

A new, simpler decision governance together with banks will ensure more effective, impactful partnerships for IT development. The changes have resulted in faster decision-making processes and greater transparency in how we prioritize and deliver BEC's solutions to the banks.

#### **NEW, MORE EFFICIENT WAYS OF WORKING**

A major change in BEC's culture and organization will increase the quality and speed of our deliveries to our customers.

More employees need to focus on customer deliverables, and fewer need to spend time on meetings, reporting and coordination: We call it: "More code - less PowerPoint".

At the same time, BEC has simplified our organization from nine to five divisions. At the heart of the new organization are two tightly integrated divisions that focus on deliveries to our customers.



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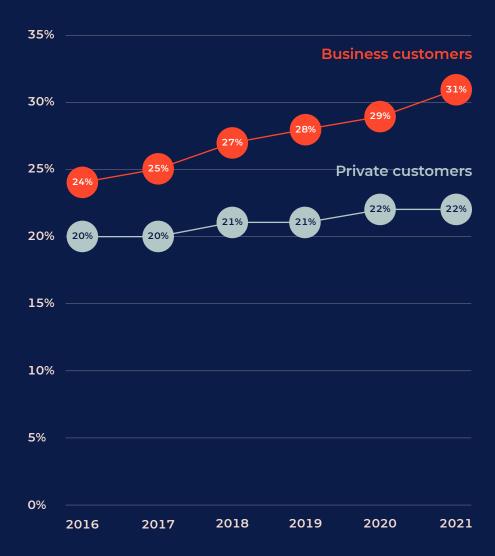
It is very inspiring and motivating to be part of leading the current transformation in BEC, and seeing how it positively influences our customers' services and businesses.

Cecilie Abildgaard Nielsen
Development manager

# 25 MILLION ACTIVE BANK CUSTOMERS

# 6 7 MILLION ACTIVE BANK ACCOUNTS

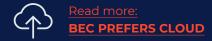
## BEC BANKS SERVICE A LARGE PART OF THE DANISH SOCIETY



Share of customers using a BEC bank as their primary bank (measured by NemKonti)

#### **OPERATIONAL STRATEGY:**

# EFFICIENT, STABLE OPERATION WITH MANY DIFFERENT TECHNOLOGIES



Increasing volume and new technology should streamline BEC's joint IT operations on behalf of small and large banks. BEC must, at the same time, ensure the stable and compliant operation of new and old technologies.

BEC is a large-scale business that supports the growth of small and large customers with common, cost-effective IT operations. BEC continuously reduces operating costs by optimizing IT consumption by optimizing capacity, costs and resource consumption through stronger processes and systems.

In addition, it requires large, up-to-date technological muscles to operate and develop a solid, cost-effective IT platform with over 200 different business services, 2.3 million active bank customers, 6.7 million active bank accounts and billions of database calls every day.

And it takes far-sighted technological transformation to act at a time where data volumes and the need for analytics are exploding, cyber threats are increasing, regulatory requirements are growing, and operations need to flexibly support agile development with short time-to-market.

#### **INFRASTRUCTURE AND OPERATIONAL STRATEGY**

In the area of operations, delivering efficient, secure, stable and robust IT operations to our customers is central to BEC's strategy.

This requires sustained focus at a time of constantly increasing consumption of BEC's IT solutions in the banks.

In 2021, BEC therefore decided to move more developmental power from banking solutions to our underlying infrastructure, platforms and operating processes, first and foremost to achieve an even more stable IT processing platform. In the long term, better management of our IT platform will also free up more capacity for development and create calm and predictability with regard to BEC's development projects. Finally, we focus on reducing technical debt by implementing new systems that are easier to handle and replace older, more time-consuming systems. This will also help free up more resources for developmental projects.

BEC is also focusing strongly on adapting market-conforming solutions and processes that should contribute to faster development, higher scalability and more stable platforms. This is done not least through hybrid sourcing – where parts of the operation are purchased from other suppliers – and increasingly as part of overall cloud solutions. This allows BEC to integrate globally recognized standard technologies from Microsoft, IBM, Salesforce and SAS Institute, for example, into a single Danish banking platform. In addition, BEC continues to be a co-owner of and close partner with JN Data, which handles a large part of BEC's IT operations.

#### **OPERATIONAL STABILITY:**

# SOLID IT ENGINE FOR DANISH BANKS

BEC's customers expect stable, secure and cost-effective IT operations. Care is essential so that BEC's technological transformation does not affect operational stability.

Uptime, safety and speed are fundamental factors for BEC's customers to operate and develop their businesses. It is therefore a core task for BEC to maintain this solid operation – while replacing and renewing its main technologies over a number of years, towards a new, open architecture.

Overall, BEC delivered stable, safe and cost-effective operations during 2021. The availability of the most important IT solutions encountered by banks and banking customers has once again been very high.

However, the figures are also based on significant operating events that have affected BEC's customers in other ways.

#### MAINFRAME CAPACITY CHALLENGES

The year began with an unusually high resource demand on BEC's mainframe, which among other things resulted in long response times for mobile and online banking, especially at the turn of the month. The reason was several coinciding factors, including unusual patterns of consumption due to the number of Danes staying at home due to COVID-19 and high response times for NemID authorizations.

In order to meet similar capacity challenges and ensure stable operations, we added more capacity and replaced BEC's mainframe with a new, more powerful generation. This increased efficiency by 15–20 percent, after which, despite continued growth in resource consumption, there have been no mainframe capacity problems.



#### **CAPACITY CHALLENGES FOR BUSINESS INTELLIGENCE**

The banks' demands for analytical power in BEC's business intelligence environment is growing by around 30 percent per year. This led to capacity problems in the fourth quarter, which led to delays in data deliveries and affected important business processes in the banks. In December, a task force reduced capacity consumption and ensured stable operation across peak loads at the turn of the year.

The capacity on BEC's existing business intelligence platform will be expanded in the summer of 2022, and BEC will continuously monitor whether there is a need for a further increase in capacity. BEC is also working on developing a new, cloud-based business intelligence platform, where capacity can easily be scaled up.

#### **HIGH AVAILABILITY DESPITE OUTAGES**

Operating outages are always highly detrimental for the banks' customers and employees. Some types of operating outages can be measured in a technical availability statistic, which can be seen on page 16.

Availability of BEC's most important systems was high again in 2021: Mobile and online banking had a total availability of 99.87 and 99.86 percent, respectively (service target 99.50 percent). The central system "account" had a total availability of 100 percent (service target 99.80 percent).

However, such statistics do not measure the user experience of IT solutions that may be affected by problems, even though they are technically available. Technical availability is thus only one of several indicators of the quality of BEC's operation.

Another indicator is the number of significant operational incidents (major incidents). Two examples of important services that may be affected by operational problems without necessarily being completely inaccessible are BEC's workplace concept and I\*Net – the banks' user interface with many other BEC IT solutions. They were affected by major incidents a total of 15 times in 2021.

In 2022, BEC's goal is to halve the occurrence of major incidents and reduce the time it takes us to resolve an operational event.

# 264.478

# calls answered by BEC's mobile and online banking support in 2021.

The number of calls increased by 21 percent from 2020, partly because BEC has helped the banks' customers get off to a good start since November 2021 by switching from NemID to MitID. In November and December, more than 40 percent of the calls were about MitID.



### **OPERATIONAL IMPROVEMENTS**

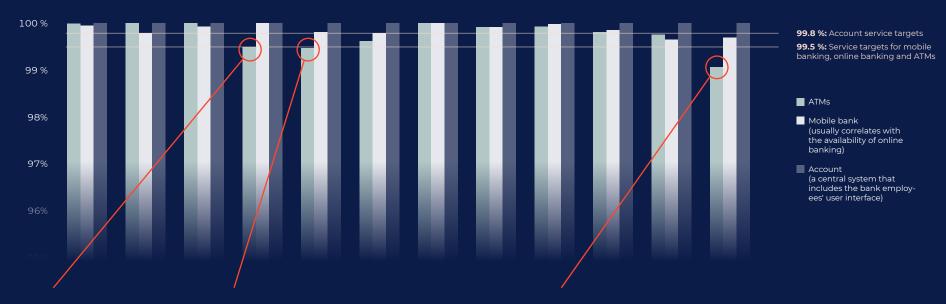
In 2021, BEC strengthened the operational processes in a number of areas:

- A new, internal IT Operations Board coordinates and prioritizes longterm planning and development of BEC's operational platforms.
- The collaboration with major subsuppliers has been optimized so that we ensure better control of system changes that can affect BEC and thorough follow-up on operational events.
- We have replaced our IT service management system. The new solution from ServiceNow is more efficient and user-friendly, supporting all essential operational processes, and providing new options for optimizing and streamlining BEC's customer service and operational stability.
- BEC has increased its **preparedness during peak periods** such as Black Friday, Christmas and the end of the year.
- All **operational events affecting the banks' customers** are now automatically handled as major incidents together with BEC's dedicated incident management team.
- The risk analysis for any change in BEC's systems has been significantly tightened, resulting in only 4 of 56 major incidents in 2021 being attributable to system changes at BEC itself.
- Extra resources have been allocated to operational incident follow-up, which ensures much more thorough root cause analysis of all major incidents.



#### HIGH AVAILABILITY - WITH A FOCUS ON IMPROVEMENT

The 2021 availability of three selected systems that are particularly important for many of BEC's bank customers and their employees. Availability is one indicator of the quality of BEC's operations, but is not the only factor.



#### APRIL: ATMS

On Tuesday, April 13, from 3:34 a.m. to 6:40 a.m. all ATMs were out of service. The reason was insufficient documentation of the process for replacing a certificate, leading to a subcontractor not being informed about the replacement. The error was corrected by performing a fallback on the certificate. On Wednesday, April 14, the certificate was replaced without further problems and the process was subsequently clarified.

#### MAY: ONLINE BANKING, MOBILE BANKING AND ATMS

On Sunday, May 9, from 6:00 a.m. to 7:14 a.m. mobile banking, online banking and ATMs were out of service. The reason was a manual error following a planned contingency test by an operations supplier. The daily flow, which ensures the correct start-up of the posting day, had not been activated. The supplier has subsequently clarified the procedures for start-up after emergency preparedness tests.

On Thursday, May 20, from 9:20 a.m. to 10:45 a.m., all ATMs were out of order. From 10:45 a.m. to 12:05 p.m., ATMs gradually returned online. The reason was a defective power supply to a subcontractor's central network component. The supplier subsequently checked all power supplies in its network.

#### DECEMBER: ONLINE BANKING, MOBILE BANKING AND ATMS

On Monday, December 13, from 4:49 p.m. to 7:16 p.m., more than half of all card transactions were rejected at ATMs, and there was no access to online and mobile banking. A daily synchronization job at BEC had mistakenly removed a number of system users' access rights. The error was caused by the job running at the same time as a planned mainframe restart. In the future, the synchronization job will not run simultaneously with planned service windows on the mainframe, nor will automatic deletion be initiated.

On Tuesday, December 21, from 12:00 p.m. to 6:15 p.m., about half of the users who attempted to use ATMs were rejected on the first attempt, while second attempts were typically successful. The problem occurred while resolving another error on a subcontractor's network. The cause of the incident is under ongoing investigation.

On Tuesday, December 28, from 12:36 p.m. to 1:10 p.m., around half of all credit cards and Dankorts from other data centers were rejected at BEC's ATMs. The error was due to a lost connection between BEC and Nets. The connection was re-established by restarting it. The cause of the incident is under ongoing investigation.



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I enjoy being part of a team where we utilize our expertise in app development to deliver innovative, user-friendly mobile banking to our customers.

Lasse Andersen
Business analyst

#### **DEVELOPMENT:**

# AMBITIOUS IT DEVELOPMENT TOGETHER WITH CUSTOMERS AND TECHNOLOGY PARTNERS

BEC's tech and banking experts work closely with banks and market-leading technology suppliers on ambitious IT solutions and sustained modernization of BEC banks' common IT platform.

Extensive investments in complex technological transformation characterize BEC. Banking and IT specialists with many different kinds of expertise collaborate closely on IT development comprising both ambitious technology-development programs and a year-long, comprehensive modernization of our technological foundation.

BEC's banks are united in jointly developing IT solutions through BEC, but also very much in integrating third-party solutions into BEC's platform in the many scenarios where developing in-house solutions does not make sense.

Among other things, we are implementing international cloud solutions from market-leading suppliers such as Salesforce, Microsoft and SAS Institute into Danish banks. Instead of developing everything from scratch, this allows BEC's customers to acquire innovative technology that is under constant development by development communities with specialists from technology companies, banks and other companies from all over the world.

#### HISTORICALLY HIGH LEVEL OF ACTIVITY

BEC chiefly develops joint IT for all BEC banks. However, we also solve single tasks for individual customers.

- In 2021, the number of IT development hours for the BEC community grew more than ever before, thanks to more efficient IT development, where we maintained investments at a historically high level.
   The joint development investments are still driven mainly by legislative and sectoral requirements and the long-term modernization of BEC's technological foundation.
- IT development for individual customers was also at an unchanged high level of activity, driven by mergers among the banks.





In my job I act as an internal partner to colleagues at BEC and help them apply a standardized way of transitioning solutions into production, in order to provide resilient, secure and stable operations to customers.

**Joanna Karczewska**Process manager

**bec** contents



BEC expects an uninterrupted high level of activity in 2022, with regard to both common IT solutions and customerspecific development tasks, divided into three main categories:

- Competitiveness: Strategic IT investments that strengthen the competitiveness of BEC banks by providing IT solutions of greater relevance to their customers, and offer greater efficiency.
- Compliance: Technology that helps BEC's customers perform important social tasks.
- Technological platform: Modernization of BEC's underlying technologies to ensure greater efficiency, faster development and operations that will be even more stable and secure in the future.

# IT DEVELOPMENT IN CLOSE COLLABORATION WITH OUR CUSTOMERS

BEC's powerful development traction is due to a number of customers also being co-owners/members. Members agree that as much IT as possible should be shared and are working closely with BEC to develop the community's banking platform.

BEC is based on a deep understanding of the reality of both small and large banks. We therefore have strong collaboration forums in which our customers are closely involved in joint development of IT adapted to the size and needs of each individual customer.

# SYSTEMATIC IMPLEMENTATION ENSURES OPTIMAL IMPACT IN BANKS

BEC's team of implementation consultants helps the banks to make the most of BEC's solutions. The team works according to a fixed model, aligned with the banks' expectations, taking into account the complexity of each individual implementation. The goal is to provide banks with an overview of what new functions are on the way, how they will affect banks' processes and what the banks need to do themselves in order to achieve the desired effects.



# CLOSE COLLABORATION WITH THE BANKS

The banks prioritize which common IT solutions BEC is going to develop. BEC's Board establishes the financial framework while four business strategy boards prioritize tasks in each of their areas: Banking, Risk and Finance, Capital Markets and Technology Foundation.



It is exciting and inspiring to be part of prioritizing the development tasks and be able to influence new solutions and represent the smaller banks in collaboration with the other banks and BEC.

**Per Smith**, area director, Business Development, Fynske Bank Member of Business Strategy Board Banking



I'm part of facilitating the operational and strategic dialogue between banks and BEC, and pass on the input about our banking solutions. This provides our customers with a valuable connection to our development organization.

Carsten Jensen, business owner, BEC Member of Business Strategy Board Banking

# TECHNICAL TRANSFORMATION TOWARDS AN OPEN IT ARCHITECTURE

BEC is in the process of an ambitious, strategic transformation towards an open IT architecture. This is a transformation of several years in which BEC banks will invest in new capacities and technologies, while maintaining strong capabilities in ensuring efficient, stable operation of our mainframe.

BEC is in the process of a huge, complex technological transformation that will offer many new developmental opportunities for customers, employees and partners.

Our IT architecture is moving away from a central mainframe platform towards a cloud-based open architecture that increases BEC banks' opportunities for collaboration and partnership at a much stronger competitive level:

- **1. Open banking** provides banks with the option of developing their own solutions on top of the new, open BEC platform.
- **2. Banking as a service** gives banks the opportunity to develop solutions that can be included in other companies' solutions, thus expanding and integrating financial services in other companies' value chains.
- **3. Banking as a platform**, where other companies' services can be integrated with the banks' solutions, thereby strengthening and personalizing customer journeys according to the individual customer's needs.

The modernization got off to a good start in 2021, when BEC turned on a number of basic platform components. In the future, several major decisions and exciting development tasks await, as older business solutions need to be replaced by modern standard systems that can be included as components in the new open architecture.

## NEW PLATFORMS ON THE PATH TOWARDS OPEN ARCHITECTURE

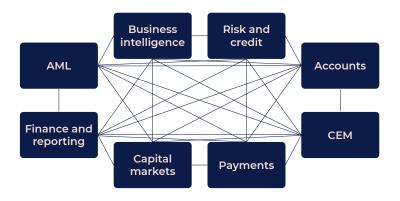
The benefits of the open architecture are harvested along the way through increasingly loosely coupled processes and data. BEC is continuously expanding our APIs and creating new opportunities for connections between services at BEC and services at the facilities of customers and other stakeholders.

Two important components in this transformation are BEC's API management platform and the event streaming platform based on Kafka technology. Both platforms went live in 2021 and were important open architecture milestones.

In a number of core areas, including customs, payments and accounts, important data is now disconnected from the mainframe. This data is thus available for other applications as standardized business events.

These are just the first steps towards a more scalable, flexible architecture and higher data quality. The goal is for BEC to deliver IT solutions to the banks at a lower cost point and with faster time-to-market by integrating the best standard solutions in BEC's IT landscape instead of building everything ourselves.

#### FROM MONOLITHIC WITH COMPLEX INTEGRATIONS ...



#### ... TO OPEN WITH STANDARDIZED INTEGRATIONS





#### MODERN DATA FOUNDATION

In 2021, BEC implemented a completely new reporting solution, AxiomSL, which is an international market-leading platform for regulatory reporting. Our ambition is to migrate all of BEC banks' financial reporting to the Danish Financial Supervisory Authority (DFSA) and the European Banking Authority (EBA) to the new platform, which will reduce both costs and complexity. Read more on page 33.

A new cloud platform is also an important driver in BEC's ambitious modernization of its architecture. In 2021, BEC went from building its own solution to entering into a strategic partnership with JN Data and Accenture, partly to achieve a solution that can be used by a large number of applications more quickly, and partly to reap the benefits from the synergy that exists in collaboration with JN Data. Read more on page 29.



#### CHANGING DEVELOPMENT PLATFORM

BEC works with many different technologies. This gives IT specialists the opportunity to both specialize and try their hand at many products and technologies.

The design, architectural, developmental and operational work takes place in collaboration among teams as well as support functions. The transformation of BEC's architecture is a concrete task with many people involved, who have become even more strongly anchored in one central architecture division with BEC's revised strategy in 2021.

The development platform itself is also evolving towards higher reliability and efficiency by having an ongoing focus on increasing the degree of automation and self-service for BEC's developers, not least with a view to ensuring that the individual developmental areas become more self-reliant in both the development and maintenance of the solutions in the portfolio (DevOps).

Overall, the entire modernization will also ensure access to much larger global development communities and help to retain and attract competent employees.



# UNIFORM PROCESSES ARE CRUCIAL TO AN EFFECTIVE IT COMMUNITY

BEC banks can only get full value from their common IT operations and development if they collaborate on business processes that are as uniform and efficient as possible.

Uniform, common processes and technologies across banks are a cornerstone of BEC's strategy.

All too often, different BEC banks have different processes and IT adjustments to support identical tasks. Variation that does not contribute clear value for customers is lethal to efficient development processes, as it complicates IT solutions and leads to increased costs.

No business area in a bank dreams of having to set aside resources to change customary working procedures in order to achieve a long-term goal of uniform IT with the neighboring bank. Therefore, such individual variance often leads to difficult discussions when BEC and the banks need to agree on how IT solutions should look. Thus, BEC does not always manage to have optimally streamlined and cost-effective new IT solutions.

However, the pressure for cost-effective technology in all banks is increasing. On behalf of the member banks, BEC's Board of Directors has therefore decided that in every development task, BEC must set even stricter requirements for uniform processes and IT solutions.

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In my job I help implement new cloud-based platforms for data, business intelligence and analytics that give banks more agile and scalable solutions for them to make the right decisions.

Balasubrahmanya Jonnavittula Platform systems engineer



### REFERENCE BANK TO STREAMLINE IT SOLUTIONS

With the "reference bank" concept, BEC and the banks collaborate on creating processes and IT solutions that are as uniform as possible for the existing business processes in most banks. The reference bank is the starting point for all common IT development at BEC.

In the reference bank, the principle is that the majority of the business processes in Danish banks can be standardized. BEC banks and BEC must therefore find the best processes and the best solutions that can be used by everyone.

In cases where a bank has a need in relation to its size, organization or ability to differentiate itself in the eyes of its customers, the necessary individual solutions can be added. Additions which can be included later on in the reference banking solution, if relevant.

The reference bank has already minimized variation and contributed to lower development costs in projects in real estate financing, onboarding of new customers and default (definition of default).

#### **ONE COMMON REFERENCE BANK**

### Many individual processes and business solutions

- High variance
- Complex

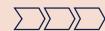
#### Build it once – build it right

- Efficient reference processes and uniform definitions of customer data and products
- More automation
- Faster time-to-market
- Lower total lifetime costs









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My job means that bank advisors can faster and more easily set up and change mortgage loans through a new mortgage platform from BEC.

**Line Kühnel**Software engineer





# BEC PREFERS THE CLOUD

"Cloud first" is BEC's mantra for new technologies. Instead of developing and operating its own IT solutions ourselves, BEC prefers to purchase and integrate new ones such as cloud solutions from market-leading third parties.

For several years, BEC has used and expanded cloud solutions, e.g. for customer engagement management (Salesforce) and office software (Microsoft Office 365).

"Cloud first" is now a basic principle for new technologies for BEC banks: As far as possible, BEC does not want to develop and operate its own IT solutions. Instead, we prefer to purchase and integrate new IT solutions as cloud solutions from market-leading third parties.

In 2021, BEC pressure-tested and revised the next steps in the cloud strategy. After gaining our own experience over a couple of years, BEC has decided to enter into a partnership with JN Data and Accenture to build a BEC cloud platform in Microsoft Azure.

The cloud platform will provide a modern data foundation for the BEC of the future: Our next generation of business intelligence and analytics (called Cubia, built in Microsoft Azure Synapse) and our future financial platform (built in Microsoft D365). On the cloud platform, a modern application platform is also being established for future purchase solutions, integrations and proprietary solutions in the cloud.

## THREE SUCCESS-FUL MIGRATIONS

In 2021, BEC successfully completed IT migrations for Spar Nord, Vestjysk Bank and Salling Bank. The migrations happen when banks merge or buy a large customer group, and want to bring their IT together on one platform. Migrating an entire bank to a new IT platform is a huge task and is usually carried out over a weekend. We always follow a comprehensive schedule, and for months we have meticulously prepared and carried out tests to ensure that everything runs smoothly for customers and employees.

## 65,000 FORMER BANKNORDIK CUSTOMERS MOVED TO SPAR NORD'S IT PLATFORM

On June 19–20, Spar Nord and BEC migrated BankNordik's Danish business to Spar Nord's IT platform.

Five months after Spar Nord took over approximately 65,000 new customers and 100 new employees from BankNordik, they had migrated to Spar Nord's IT platform at BEC. The old mobile and online bank closed on Friday in the afternoon, and on Sunday afternoon, the new customers were able to log into Spar Nord's mobile and online bank for the first time.

Everything was prepared and tested in close collaboration with Spar Nord, leaving only a few outstanding issues that we had to follow up on after the weekend.

## SUCCESSFUL IT MERGER FOR VESTJYSK BANK WITH JYSKE SPAREKASSE

In October, BEC together with Vestjysk Bank merged the IT systems of Den Jyske Sparekasse and Vestjysk Bank, which were now combined at BEC.

135,000 customers were migrated over the weekend of October 8-10, when a large number of employees from the Bank and BEC helped merge the systems.

The bank had already informed customers about the weekend's interruptions, and the number of inquiries was limited. At BEC, we are pleased and proud that everything was successful, without significant surprises.

#### SALLING BANK CONVERTED TO SPAREKASSEN DANMARK'S IT PLAT-FORM

On November 6, BEC completed another major IT conversion as a result of Salling Bank's merger with Sparekassen Danmark. The former Salling Bank moved 25,000 customers from BEC's IT platform to SDC's platform.

Even though the task of converting from BEC's platform does not have the same scope as a conversion onto BEC's platform, it was a long time since a bank last converted from BEC. Therefore, the Salling Bank conversion was also a major task that involved many parts of BEC.



# AN ENORMOUS RELOCATION TASK

Together with Vestjysk Bank, BEC merged IT systems from Den Jyske Sparekasse and Vestjysk Bank in October. The migration included 135,000 customers, and a high number of employees from the bank and BEC were involved in merging the systems.



The migration was a huge project at the bank with many colleagues involved. We had great collaboration with BEC in the working groups, and the project management team collaboration was especially formidable.

**Lene Egebart Andersen**Project consultant, Vestjysk Bank



During the migration, Vestjysk Bank and BEC quickly and efficiently solved challenges as they occurred. This mindset contributed to ensuring that together, we were able to deliver a great result in October.

Ragna Hjelmgaard

<u>Customer and Business Transformation, BEC</u>

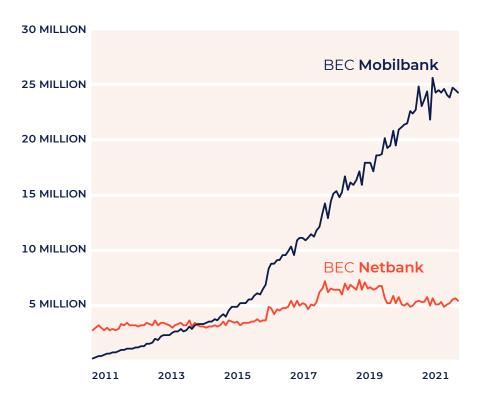
### ACCOUNT OVERVIEW FOR BUSINESS CUSTOMERS ACROSS BANKS

With Spar Nord as the first bank, BEC launched a new account overview for business customers in June, which means that they can see all their accounts in all banks directly in their BEC online bank. In the first half of 2022, that option will be extended to all banks with BEC online banking.

The new account overview for business customers is the first solution that BEC has launched on the basis of a new partnership with the open-banking platform Aiia.

### A BILLION LOGINS

Every month, customers of BEC banks log into BEC Mobilbank over 25 million times. Over 10 years, this has added up to just over 1 billion logins in the app-based BEC Mobilbank, which had already overtaken the browser-based BEC Netbank in 2014.





## STRONGER CAPITAL MARKETS PLATFORM FOR SEVERAL BANKS

A total of 22 BEC banks now use BEC's common capital markets platform, Calypso. Seven banks were added in 2021, after BEC developed the platform significantly to meet new requirements of the Basel IV standards.

In 2021, Spar Nord also fully adopted Calypso and migrated out of its previous capital markets platform. In connection with this, BEC's capital markets platform has been expanded from covering the middle and back office to also supporting the front office with position updates and real-time price updates. Other BEC banks will also be able to use these features in the future.



#### HOUSING PROCESSES THAT SAVE TIME, PROVIDE AN OVERVIEW AND INVOLVE CUSTOMERS

BEC is working on a multiannual development program to streamline banks' real estate financing processes. The result is faster case handling, shorter customer turnaround times, a better overview for consultants and better opportunities for involving customers in the process. In 2021, it became possible to carry out several restructuring cases, handle additional loans and handle Totalkredit's plus products with an average efficiency improvement of 90 minutes per case. In 2021, the tracks were also laid for the next loan processes, including a change of ownership. The program will continue in the coming years.



## NEW REPORTING SOLUTION FOR CAPITAL MARKETS

Danish banks began to be confronted with the requirements of Basel IV head-on in 2021. The requirements include changes in global funding and capital requirements for banks, as well as important changes for reporting to Danish authorities. BEC has implemented a new regulatory reporting solution that uses calculations from Calypso, BEC's upgraded capital markets platform, and a brand new reporting solution from AxiomSL, one of the market leaders in regulatory reporting solutions.



## FURTHER ENHANCED COLLABORATION ON ATMS

The collaboration on shared ATMs under the name "Cash" was expanded in 2021 with integration with the IT supplier SDC, constituting a good step towards more collaboration among IT suppliers to Danish banks.

In 2021, three SDC banks and two BEC banks joined the collaboration, and more are on the way in 2022. By the end of 2021, customers in 16 banks had access to a common, nationwide network of 260 ATMs, which also saves operating costs at the banks. The ATMs and their operations have been taken over by Nokas with BEC as a subcontractor.



A new solution from BEC makes it easy and quick to welcome new customers to BEC's banks. The Onboarding solution, which was built in Salesforce, makes it easier for new customers to upload the documentation and answer the questions the bank needs.

The first version of the solution was completed in the first half of 2021 in cooperation with Nykredit and rolled out to the majority of BEC banks in the second half of 2021.

The solution will also be a user-friendly tool for obtaining documentation from customers in other contexts besides onboarding new customers. Since the beginning of 2022, the solution can, for example, obtain consent from customers to share their tax information with the bank. In 2022, BEC will continue to improve and reuse parts of the solution to obtain documentation and information within the scope of anti-money-laundering efforts.



# ALL BEC MEMBERS CAN NOW USE THE CLOUD SOLUTION IN THEIR CUSTOMER DELATIONS

All member customers now have access to BEC's new, ambitious cloud solution for customer relations: Customer Engagement Management (CEM).

CEM is on its way to becoming the primary digital channel for advisers' dialogue with actual and potential customers. The solution supports sales processes, customer relations and relevant marketing by providing an overview of all communications with customers across the various communication channels. In 2021, the solution was further developed to ensure high operational stability and the updating of customer data across platforms in real time.

The CEM solution is based on cloud technology from Salesforce, a crucial element in BEC's future IT infrastructure. BEC develops common Salesforce functionality for all BEC banks. Several larger BEC banks are also developing new functionality which they then make available to all BEC banks.

In 2022, BEC will focus on each BEC bank succeeding in reaping the benefits of efficiency and better customer service now offered by the CEM solution.

At the same time, BEC will make a greater effort to ensure a uniform foundation across BEC banks: Both BEC and the banks are now developing so much and so quickly on the common Salesforce platform that there is a need for close, transparent coordination of the overall development work. In 2022, BEC will strengthen both coordination and joint development principles to ensure that all BEC banks work in the same direction with uniform processes and solutions on the platform, and thereby the lowest possible costs for development and maintenance in the future.







Eight BEC banks went into operation in 2021 with "Investment Account Free", which is displayed in online banking and automatically invests in Sparinvest products when the customer deposits money into the account. A further four BEC banks and an SDC bank are on their way to implementing the solution, which BEC has developed together with Sparinvest.

## CHEAPER DEBT RECOVERY

In 2021, BEC banks were given the opportunity to retrieve documentation (e-certificates) for digitally concluded contracts for loans, for example. Previously, it required manual work at the banks and at BEC when the e-certificates were older than one year, which made it too expensive to collect debt in a number of smaller cases.

### NEW, SIMPLE INVESTMENT OPPORTUNITY IN THE ONLINE BANK

Together with Sparinvest, BEC has developed a brand new investment platform, Investment Account Free, which is displayed in the customer's online bank and automatically invests in Sparinvest products when the customer deposits money in the account. Eight BEC banks went live on the platform in 2021.



BEC has been the perfect partner for Sparinvest, with extensive knowledge of building operational platforms and dedication to the project's success, while supported by a strong commitment and patience from Danske Andelskassers Bank.

Lars Højberg, project manager, Sparinvest



It has been exciting to develop and collaborate on a brand new investment platform. We have been working in new ways with Sparinvest, their partner banks and internally in BEC. This has developed us and placed us in a great position for such projects in the future.

Claus Dahl, product owner, Wealth Management and Trading, BEC





Danske Andelskassers Bank was part of the project and the first to launch Investment Account Free. It was a long gestation period, not least because we had to adapt to new regulations during the project. However, the result was a healthy investment baby. We are happy to have contributed to making the product a success for the banks who will launch Investment Account Free.

**Robert Krogh Lauridsen,** area director, Wealth and Investment, Danske Andelskassers Bank

### **COMPLIANCE:**

# LARGE-SCALE INVESTMENT IN A SAFER FINANCIAL SECTOR

BEC is investing heavily in new technologies that will allow Danish banks to provide safe, secure and responsible financial services in Denmark.

It is a core task for BEC to build the technological foundation for a financial sector in which Danish society has confidence. The technological development offers Danish banks new opportunities to effectively offer financial services that are ever safer, more secure and more responsible.

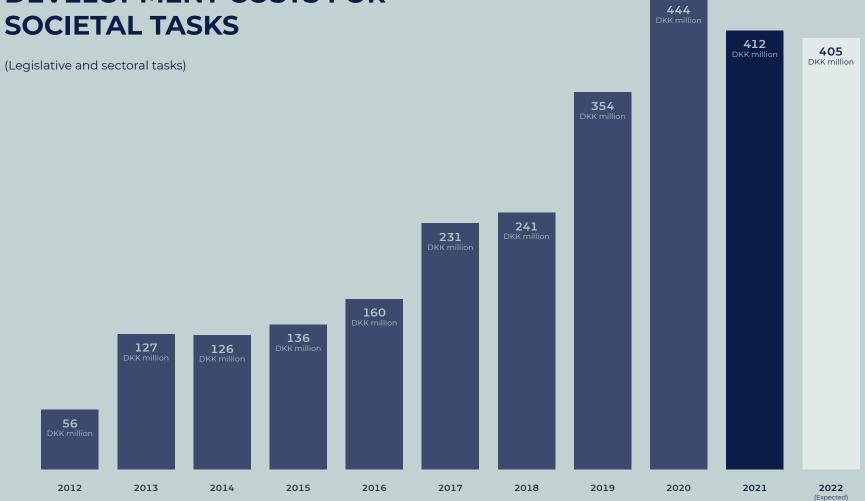
At the same time, society's expectations of financial technology have increased. Naturally, new technology must assist our society in preventing money-laundering, protecting personal data and strengthening financial stability. This can be clearly seen in BEC's development costs for compliance, which have multiplied over the last decade to a very high level in the last couple of years.

In 2021, BEC invested DKK 412 million in developing IT to handle antimoney-laundering measures, more efficient handling of personal data protection, IT to support the capital requirements derived from Basel IV, tighter regulation of non-performing loans and MitID. These projects will continue into 2022, when BEC expects to remain at an historically high level of investment with legislative and sector-driven IT developments worth DKK 400 million. Other things being equal, this means continued pressure on BEC's capacity to develop other technologies for its customers.

BEC wishes to collaborate as much as possible in the Danish financial sector, not least in relation to social endeavors such as anti-money-laundering, open payment standards and the Nordic payment collaboration P27. Over time, this will provide not only the cheapest solutions, but also the best.

In order to avoid wasting resources, BEC calls for new regulations to be prepared thoroughly and well in advance of their entry into force. BEC continues to see regulation as important where small but technically significant details are not determined until months after their entry into force.

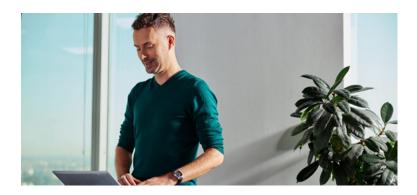
# **DEVELOPMENT COSTS FOR SOCIETAL TASKS**



# MAJOR COMPLIANCE TASKS

BEC's development of new technology for social endeavors spans several major tasks, including anti-money-laundering measures, personal data protection, capital requirements, open payment services (PSD2), MitID, default rules, accounting standards for financial assets, Nordic payment cooperation (P27) and sustainable financing.

BEC aims for compliance solutions to meet the needs of all banks, and BEC and the banks are working to standardize these solutions to minimize costly variance.



# ANTI-MONEY-LAUNDERING MEASURES

BEC's technologies must help the banks in the best possible way to prevent, detect and react to money laundering and other financial crime.

In 2021, BEC implemented a new platform, called Financial Crime Prevention, which supports banks in a risk-based approach to monitoring transactions for suspicious activity. The platform is from SAS Institute, a well-known supplier in the global market for financial crime prevention solutions. In 2021, BEC also entered into an agreement with supplier LexisNexis Risk Solutions on a new platform for transaction screening.

BEC participates in financial sector dialogue on more collaboration among banks, IT suppliers and authorities on the fight against financial crime. This work will be involved in the development of BEC's own solutions, which together aim towards establishing a broad, robust technical foundation for BEC's banks.

# **PERSONAL DATA PROTECTION (GDPR)**

BEC continues to strengthen the protection of personal data through a number of initiatives. In 2021, BEC implemented a privacy management system that will ensure a up-to-date list of processing activities and risk assessments. BEC has further developed a model for processing third-country transfers and heightened awareness of personal data protection among employees. BEC also works continuously to thoroughly implement GDPR in future processes and solutions, in close collaboration between BEC's customers as data controllers and BEC as data processor.

# **CAPITAL REQUIREMENT**(Basel III/IV and CRR II/CRD V)

Basel III and the subsequent revision, popularly called Basel IV, contain new and changed requirements for the banks' capital and liquidity, which are partially implemented in the EU via CRR II and CRD V. The implementation of the outstanding parts has been postponed due to the COVID-19 situation in Europe, but was initiated with the EU Commission's proposal for a banking package in October 2021. The implementation of Basel III/IV will therefore continue at BEC.

Basel III/IV is complex and places increasing demands on data and the IT support that BEC makes available. Among other things, BEC's solutions must support more detailed reporting on capital and liquidity, liquidity statements and the calculation of risk-weighted exposures. BEC has therefore upgraded its capital markets platform, Calypso, and purchased a new reporting solution, AxiomSL, as described on page 33.

# INTERNATIONAL ACCOUNTING STANDARDS (IFRS 9)

BEC continues to work on expanding and automating IT support of the banks' valuation and reporting of financial assets.

The requirements in this area have increased in recent years as a result of the international accounting standard IFRS 9. BEC's focus is now on expanding the banks' options for a flexible and detailed IFRS 9 statement.

New developments were implemented in this area in 2021, and this is expected to continue in 2022 and 2023.

# **OPEN PAYMENT SERVICES** (PSD2)

The PSD2 directive entered into force in 2019, giving European bank customers the right to access account information and make payments in payment accounts directly through third parties. This has required extensive IT development with ongoing adaptation to new technical specifications from the authorities. In April 2021, BEC's API solution for PSD2 was among the first in Denmark to receive the DFSA's final approval. At the beginning of 2022, BEC is updating the solution with new opportunities for using MitID.

BEC has also exploited the new opportunities in PSD2. Read more about account overviews for corporate customers on page 32.

# **MITID**

In 2021 and 2022 NemID is being replaced by MitID, which is the next generation of uniform, secure authentication in Denmark. This has led to a number of IT developments at BEC during 2020 and 2021, including a new third-party solution (broker) to call up MitID, as well as development in BEC's solutions for the new authentication method. 2021 saw the migration of private users, MitID optimization of banks' processes and support for information that banks provide for their customers. The migration of private users will continue until summer 2022 and the migration of business users will start in 2022.

# **P27**

The Nordic P27 collaboration will replace the current settlement of payments in each country over the next five to seven years. P27 will deliver simpler, faster and safer payments, also across the Nordic countries and currencies.

P27 is named after the population of 27 million people in the Nordic Region whom the modern new payment infrastructure will service. In Denmark, P27 will be driven by an united banking sector.

In 2021, BEC commenced work with P27 and in the coming years will deliver it to BEC banks by the deadlines decided in the sector. In this context, BEC is also examining how and when BEC will best be able to modernize its own payment platform to support both P27 and BEC's strategic goal of a new, open architecture.



Hvidbjerg Bank completed Denmark's first payment with MitID.

In May, Lene Vangsgaard Andersen from Hvidbjerg Bank became the first
Dane to use MitID to approve a money transfer from her online bank.





I enjoy creating solutions that are useful for our customers. Working in IT is really meaningful to me. I'm currently working on a solution that makes testing our programs easier.

**Katarzyna Soloducha**Junior software developer

# SUSTAINABLE FINANCING

In 2021, the first EU legislation on sustainable financing came into force. It contains new requirements for investments and investment advice. The EU Sustainability Agenda also affects areas such as credit, risk management, accounting and capital requirements.

In 2021, Finans Danmark also issued a recommendation that, among other things, banks should publish the carbon footprint of investments and lending, and also set targets for future reductions.

BEC collaborates in the financial sector on sustainability requirements and plans a number of deliveries that can help BEC banks to live up to the new expectations.

In 2021, BEC provided a new CO2 calculation service for use in reporting the CO2 footprint of investments. BEC is also working to create a uniform data base that can support CO2 reporting for property and business loans as well as auto loans to private individuals. In 2022, there are solutions that support requirements for sustainable investment advice and customer reporting on sustainability in investments.

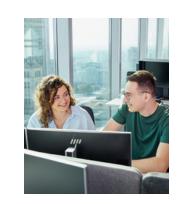
# **DEFAULT**

In 2019-2021, BEC completed a number of comprehensive and complex development tasks that from January 2021 onwards have been supporting new guidelines from the European Banking Authority (EBA) concerning customers who are in default. The solution allows for the collection of credit events on the individual customer, ensuring both a sharper picture of the customer's credit status for the advisor and correct data for the automatic monitoring of whether a customer is in default. The solution was developed within BEC's reference banking concept and supports a consistent process for tracking weak customers across BEC banks.

### **CAREER:**

# WE ARE LOOKING FOR INTERNATIONAL, AMBITIOUS TECH ENTHUSIASTS

Ambitious, competent and helpful people are the core of BEC's international working environment. We simplify complex technology for our customers with the purpose of creating a modern and even more secure, stable and efficient financial sector.





It is the many talented, dedicated people at BEC who will fulfill our customers' digital ambitions by transforming our traditional IT platforms into new, modern technologies. Therefore, our strategy from spring 2021 also includes a powerful vision for professional life at BEC:

We want to create the software house of the future for the financial sector, and we want to be an attractive workplace with talented managers who develop and inspire technology and finance talent in an international fintech environment. We are looking for competent, helpful, curious people who are driven by solving complex professional challenges that are of great importance to a digitized Denmark.

At BEC, we are now organized flexibly across national borders. We have one foot in Denmark, one of the world's most digitized societies, and another foot in Warsaw, one of Europe's leading technology hubs with an impressive talent pool.

Internally, we speak English; we have many managers in both Poland and Denmark, and most teams have members in both countries who work virtually together every day.

### **NEW, FLEXIBLE ORGANIZATION**

The changes at BEC are coming at high speed – we aim to make it easier for us at BEC to deliver market-leading financial technology to our customers. As part of our new strategy, BEC introduced a simplified organization in 2021, with five divisions across national borders.

Our core business – development and operation of technology together with the banks – is assembled in two large divisions: Areas of major change are brought together under the Customers & Business Transformation Division, while areas focusing on infrastructure and optimizing existing solutions are part of the Infrastructure & Business Optimization Division.

The Architecture Division has overall responsibility for BEC's technological framework and roadmap. In addition, there are the support functions Finance & Risk and People & Communications.

Customers & Business Infrastructure & Business Optimization

Finance & Risk Architecture People & Communications

Our new organization is flexible – areas, teams and tasks will continuously change as the banks' IT priorities evolve. It will also give employees the opportunity to move around in the organization to new tasks and areas that match their competences.

#### FREEDOM OF METHOD AT BEC

BEC believes that employees with the right skills and mindset make the best decisions. BEC therefore delegates as much responsibility as possible to employees and development areas.

In order to be able to meet customers' needs quickly and precisely, the individual areas themselves decide how best to plan their work. Some work agile, while others follow other methods that match their tasks better.

# A PROFESSIONAL LIFE WITH LEARNING AND DEVELOPMENT

BEC aims for a culture of curiosity and learning together with and among customers and colleagues. At BEC, we help each other develop our skills and offer good opportunities for career development. BEC offers e-learning, networking, workshops and professional talks.

In 2021, BEC introduced a new model for employee development to ensure that we offer a good and motivating professional life. Exciting career paths are a special focus area. They can be achieved by developing one's professional skills, expanding competence through new tasks and taking on completely new tasks or a managerial role. The model also helps to ensure that we can fill particularly critical positions if an employee leaves BEC.





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I help ensure that our developers continuously expand their skills, so we are always able to provide our banking customers with fast and stable financial technologies.

# Kamil Kościesza

Mainframe competence manager



# FLEXIBLE CONCEPT FOR WORKING FROM HOME

Based on experiences from the COVID-19 period, BEC launched a new concept for working from home on September 1.

The voluntary nature of working from home is the foundation of the concept, which is based on a local agreement under the Danish Financial Collective Agreement. Working from home is not a requirement, but a voluntary offer for a more flexible professional life. It varies from team to team how working from home fits in, but many have agreed with their managers to work from home 1–2 days a week.

The agreement initially covers BEC's employees in Denmark, while BEC awaits a new Polish regulation on working from home.



# COLLABORATION AND EFFI-CIENCY IN THE TIME OF COVID

Since it first came into force in February 2020, the company's epidemic preparedness has continued to function throughout 2021 to ensure stable operations and ongoing development for our customers.

In 2021, depending on the COVID situation, employees worked and collaborated from home to varying extents with impressive commitment and efficiency. For employees of a technology company, virtual collaboration is natural, and the enormous change has barely registered on BEC's productivity.

Not everyone thrives equally when working from home. Therefore, good leadership, colleageality and digital interaction have been special focus areas during the epidemic.

BEC's business has not been directly affected by COVID restrictions in the same way as many other companies. It has therefore also been possible for BEC to maintain considerable economic activity in our local communities.



### AT BEC, THERE IS ROOM FOR EVERYONE

Diversity and inclusion make BEC stronger. Employees with different backgrounds and experiences provide a broader perspective and better solutions for our customers and society. BEC therefore also works to ensure equal opportunities for career development and promotion – regardless of race, gender, religion or belief, political opinion, sexual orientation, age, disability or national, social or ethnic origin.

Many teams have members in both Poland and Denmark who cooperate digitally, and BEC's managers have Polish, Danish and other cultural backgrounds. BEC therefore also trains employees and managers to understand each other and collaborate across cultures.

With 36 percent women in Denmark, BEC has a more balanced gender distribution than many other Danish IT companies. In Poland, we are only 19 percent women, which partly reflects the Polish IT labor market, but is also a focal point of recruitment in Poland. All together, we are 32 percent women at BEC. Read more about BEC's efforts to encourage diversity and inclusion, including bringing more women into the IT industry, into BEC and in BEC management positions in the 2021 CSR report at <a href="https://www.bec.dk/csr">www.bec.dk/csr</a>.

In 2022, BEC will review its policies and processes to ensure that they fully support LGBT+ people, and also initiate efforts to ensure the visible inclusion of LGBT+ people at BEC.

In 2021, BEC also updated our policy for health and well-being with clear guidelines on behavior and how we handle unacceptable behavior. In addition, BEC has established a whistleblower plan in which employees can anonymously notify management of matters that are illegal, unethical or contrary to internal guidelines.



Test engineer Martin Lai, IT developer Nicolai Mortensen and IT developer Ulrik Vesterlund Nielson.

# IT SPECIALISTS WITH AUTISM STRENGTHEN BEC

In September, BEC permanently employed three former interns from AspIT, which is an IT training course for young people with autism. They started their internships at BEC in 2019.

The young people from AspIT have some special talents that BEC needs when we develop, test and run IT. For example, it could be a special ability to focus, see details and thrive on methodical, repetitive tasks with, for example, the testing of new IT solutions.

"This has given me security for the future. Besides the financial aspect, it's nice to have something to get up for in the morning - to have to solve some tasks that are bigger than oneself. In addition I have good colleagues, so it's fantastic," says Nicolai Mortensen, former AspIT intern and now IT Developer at BEC.

### **GREAT TALENT PROGRAM WITH 74 NEW COLLEAGUES**

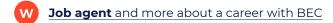
BEC's Talent Program offers newly qualified candidates in Denmark and Poland a structured training program for developing a professional life within financial technology. BEC also ensures access to the latest knowledge from universities and a pipeline of highly specialized employees.

In 2021, we employed 74 candidates in the Talent Program – more than double the number in 2020. With 10 different nationalities among the newly employed talents, the Talent Program also contributes to BEC's diversity.

### A STRONG SOCIAL LIFE - DESPITE COVID

In Denmark, BEC employees have a strong tradition of highly active staff associations that offer a wealth of leisure activities. COVID-19 has naturally put many social activities on hold. Neverthless, the proportion of employees in Denmark who are members of a staff association rose from 67 percent in 2020 to 70 percent in 2021.

BECers in Poland also have a lively culture both with and without the epidemic. The IT specialists in the branch office have a broad mix of backgrounds and cultures from Poland, countries in the region and countries around the world. Professional meet-ups, language courses and other initiatives are regularly arranged to integrate international colleagues into the local culture.



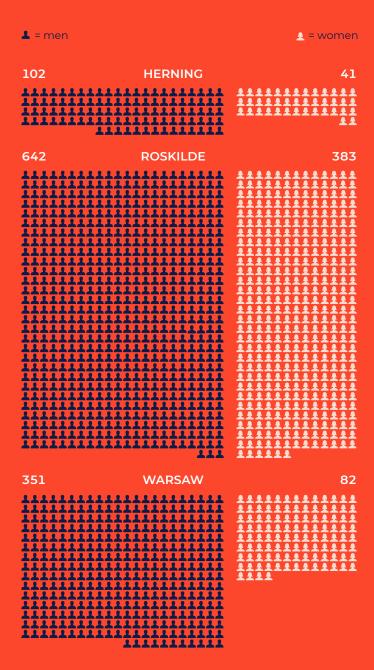






Read more about BEC's efforts for the underrepresented gender, workers' rights and a rewarding working environment in BEC's annual corporate social responsibility report at www.bec.dk/csr.





Not included: 86 consultancy employees in Denmark.

Not included: 132 permanent and consultant employees in Poland, who are permanently allocated to individual customers.

# 1,819 TALENTED INDIVIDUALS IN DENMARK AND POLAND

BEC offers attractive, international fintech jobs in Roskilde, Herning and Warsaw.

In December 2021, we totaled 1,819 people at BEC.

Of those, 1,687 worked directly for BEC (1,254 in Denmark and 433 in Poland), while 132 colleagues in Poland were permanently allocated to individual customers.

For decades, BEC has had Danish locations in Herning and Roskilde, where we have deep insight into both technology and the Danish financial sector. In addition, since 2017 we have built an attractive tech workplace for almost 600 colleagues in Warsaw.

Again in 2021, BEC attracted many new, competent colleagues in Denmark and Poland: two countries where there is great demand for the heavy IT professionalism that our customers increasingly need.

In 2022, the goal is a stable total number of employees. The ambition for the coming years is to further strengthen our Polish site in order to ensure that BEC can continue to recruit the technological and financial expertise that the banks need, and to create two strong and more equal organizations between the two countries. The natural employee rotation at BEC provides good opportunities to gradually place more emphasis on Poland, while we also continue to recruit in Denmark when the tasks demand it.

### **FLEXIBLE FORMS OF EMPLOYMENT**

Of the 1,819 people at BEC in December 2021, 86 in Denmark and 346 in Poland were employed as consultants.

In Poland, consultancy is often the most attractive form of employment for IT specialists, who can be employed as consultants for many years and are included on an equal footing with permanent employees in our development projects and operating organization. However, BEC is flexible about what individual employees in Poland prefer. For example, in the name of diversity in Poland it is important to also offer permanent employment, where we can offer much more attractive maternity leave conditions.

In Denmark, we only contract a few, loosely-associated specialists as consultants, typically for fixed-term assignments.

Excluding consultant employees and those converted to full-time positions, BEC had an average of 1,296 employees (FTE) in 2021.



Margrethe Blomsø, Software enginee

# BEC OPENS THE DOORS TO SCHOOLGIRLS

In October, BEC welcomed girls from the 5th and 6th grades as part of the national campaign day "Girls' Day in Science". The initiative, which BEC continues to support, will help fulfill a Danish societal need, which is that by 2030, Denmark will be short of a large number of engineers and graduates in IT and technology.

Margrethe Blomsø, Software Engineer at BEC, helped to show elementary schoolgirls how IT plays an important role in society.

### **CORPORATE SOCIAL RESPONSIBILITY:**

# BEC IS AN IMPORTANT CONTRIBUTOR TO DENMARK'S FINANCIAL STABILITY

BEC builds secure financial infrastructure for Danish society.

Large parts of the population and the business community depend on BEC delivering well-functioning payment cards, bank accounts, online banking, etc. They depend on a modern infrastructure that is safe, secure and responsible, efficiently helping to promote a growing and prosperous society.

These days, BEC is investing heavily in technology to prevent money laundering and the funding of terrorism, to prevent financial crises, protect investors and protect personal data. Read more about BEC's investments in a safer financial sector on page 37.

BEC also operates IT systems for a number of stakeholders central to Denmark's financial stability, such as the National Bank of Denmark and Financial Stabilitet.

#### **CSR ACTIVITIES AND CSR REPORT**

It is also crucial that BEC acts responsibly and appropriately with regard to its employees, customers, partners, local community and

society at large. BEC engages in CSR initiatives that are naturally related to its work, for example via partnerships with Women in Tech, Girls' Day in Science, AspIT and Copenhagen Fintech in Denmark, and Foundation Digital University in Poland.

Since 2014, BEC has been a member of the UN Global Compact and prepares an annual progress report on corporate social responsibility, which also comprises the statutory CSR reports, the gender composition of management and data ethics, cf. paragraphs 99a, 99b and 99d of the Danish Financial Statements Act. It is available on BEC's website, where you will also find BEC's Code of Conduct on the company's values and ethical guidelines.



Read more about BEC's corporate social responsibility 2021 and Code of Conduct

# BEC SUPPORTS POLISH FAMILIES IN NEED



Members of the BEC Poland team

BEC supports the social Noble Gift initiative, which is one of the largest, most recognized social assistance programs in Poland. The program helps people and families in difficult situations with gifts tailored to the needs of each recipient. BEC's employees in Poland gathered in December so that a group of colleagues could put together Christmas presents for four families.

### **OPERATIONAL RISKS:**

# BEC BANKS STAND UNITED AGAINST SERIOUS CYBER THREATS

The Danish financial sector faces an unprecedented threat in relation to cyber attacks and digital fraud. The BEC community therefore invests extensive resources to rapidly, persistently and methodically identify, prevent and counteract any technological and human threats.

BEC's customers and Danish society are fundamentally dependent on the availability, data integrity and confidentiality of BEC's services. 22 percent of Denmark's population and 31 percent of Danish companies have a main banking connection with a bank on BEC's IT platform. In addition, BEC operates IT systems for other key stakeholders in Denmark's financial infrastructure. BEC's risk management is therefore part of our customers' control and follow-up of their operational risks.

### **CURRENT THREATS AND INITIATIVES**

The Danish financial sector faces a very high-level threat from cyber crime and a high-level threat from cyber espionage with political or economic motives. This was evaluated by the Center for Cyber Security in its latest threat assessment of cyber threats to the financial sector. From other Danish and international sources, BEC also sees an increase in the overall threat, including new targeted attack methods being used against diverse companies.

In 2021, BEC was one of the many organizations affected by the Log4j vulnerability. As mentioned in the media, a critical vulnerability in the Log4j software component was identified in 2021. Log4j is widely used in many IT systems around the world. In BEC's system review, a single system was identified that had the vulnerability and had contact with the internet. The vulnerability was immediately mitigated in this system and there is nothing to indicate that the vulnerability was exploited.

Like the rest of the sector, BEC continues to experience high cyber attack activity (primarily random but also targeted) such as phishing emails, which attempt to trick employees and customers unknowingly into bypassing security measures. In 2021, BEC therefore continued to focus on cultivating the right behavior among our employees and to help banks and other customers to foster the same awareness among their employees.

It remains critical that BEC invests in and raises the level of security if it is to keep pace with developments in the overall threat scenario for the years ahead.

In 2021, we strengthened several areas and introduced several new defense mechanisms – including an organizational change that has improved BEC's segregation of duties and defense lines.

bec contents





#### **NEW ORGANIZATION**

BEC manages its operational risks according to the principle of "three lines of defense." In short, the first line of defense is the day-to-day responsibility of the operative functions responsible for the development and operation of the individual systems. The second line of defense are the central functions that work with risk, security and compliance. The third line of defense is the internal system audit.

In 2021, BEC strengthened the second line of defense with an organizational change, starting with an expansion of the risk management function. A clear segregation of duties between the first and second lines of defense was ensured by moving the key functions working

with risk, security and compliance out of the development and operational organization and into a separate division for finance and risk. The central functions will continue to support the operational functions by interpreting security requirements, etc.

#### **NEW CYBER DEFENSE CENTER**

BEC cooperates closely with its partners at JN Data, who cover the majority of the Danish financial sector. In 2020-2021, BEC and the other parties significantly increased their investments in a joint Cyber Defense Center that monitors and responds to security incidents across the sector.

### FRAMEWORK FOR WORK ON SECURITY

BEC is subject to the Executive Order on the Performance of System Audits in Joint Data Centers. As a consequence, BEC's security is controlled by internal and external system audits. BEC is also under the supervision of the Danish Financial Supervisory Authority, Finanstilsynet. The Executive Board draws up BEC's security policy, which is approved by the Board of Directors. It also applies to outsourcing and other partners.

BEC works according to reputable international standards, including DS/ISO/IEC 27001. With regard to cyber security, BEC also uses the recognized NIST framework from the US National Institute of Standards and Technology.

BEC prepares an annual risk assessment for the Board of Directors. The purpose of the risk assessment is to document a precise, accurate depiction of the security situation, to assess IT risks that may have a critical or serious impact on BEC and its customers, and to verify that BEC's security baseline corresponds to those threats and that inherent residual risk is clearly identified.



# **SYSTEM AUDIT**

Each year, BEC's customers receive a declaration on BEC's internal system auditing: "ISAE 3402 Declaration on General IT Controls in Relation to IT-Based User Systems". On January 26, 2022, BEC issued the Declaration for 2021.

BEC's external system auditor, Deloitte, stated that the BEC's overall systems, data and operational security are adequate, with the proviso that they were waiting to receive reporting on the dependence of significant sub-contractors on Microsoft Office 365. Since then, BEC has received and assessed the necessary reporting from Microsoft and thereby neutralized the proviso.



The DFSA performed a routine IT inspection of BEC in 2018. The DSFA found that BEC is focused on IT security management and, based on the IT threat scenario, is continuously aware of the need to implement improvement initiatives. It did, however, find that BEC was, in certain areas, operating with increased risk and issued four enforcement notices, as described in the 2018 annual report. Since 2018, BEC has worked continuously to counter the identified risks.

In 2021, the DSFA approved the way in which BEC has complied with the agency's last enforcement notice from 2018, and all enforcement notices have thus ended.

# NATIONAL AND INTERNATIONAL COLLABORATION

# FINANCIAL SECTOR FORUM FOR OPERATIONAL RESILIENCE (FSOR)

BEC participates in the Financial Sector Forum for Operational Resilience (FSOR), which has been set up at the initiative of the National Bank of Denmark to increase operational resilience in the sector, including resilience against cyber attacks. BEC participates in FSOR crisis preparedness and drills to deal with serious operational incidents and red team tests. In 2021, BEC undertook to facilitate the next sector exercise, which will be held in the first half of 2024.

# NORDIC FINANCIAL CERT

BEC participates actively in Nordic Financial CERT, a Nordic sector collaboration that protects against and gathers knowledge about cyber attacks against banks. This collaboration gives BEC deeper insights in the ongoing operational threat scenario against the Danish and international financial sector. At the same time, this gives BEC access to specialist skills that will be able to assist BEC in the event of serious cyber attacks.

### **PROFIT AND LOSS STATEMENT:**

# BEC'S ORDINARY ACTIVITIES REMAIN IN BALANCE

Through 2021, BEC has maintained a balance between revenues and costs from ordinary activities, and has accelerated its investments in modernizing its technological foundation.

BEC's purpose is to use IT to effectively support the association's members and other customers, at as low and predictable a price as possible. The association's financial goal is to ensure a balance between income and expenses. BEC's expenses should all help to provide IT support to our customers. BEC's primary income comes from payments by our customers.

As expected, the result of BEC's core activities – development, management and operation of IT solutions for its customers – was a profit of DKK 4 million in 2021. This includes costs for BEC's strategic transformation towards a simpler, more efficient IT supplier with greater focus on our customers.

This result is considered satisfactory.

### **BEC UNIT PRICES:**

**-3**%

# NUMBER OF PRODUCTIVE HOURS

(parent company):

+14%

# **DEVELOPMENT ACTIVITIES**

(parent company):

963 MDKK

45%

### **OF BEC'S GROSS EXPENSES**

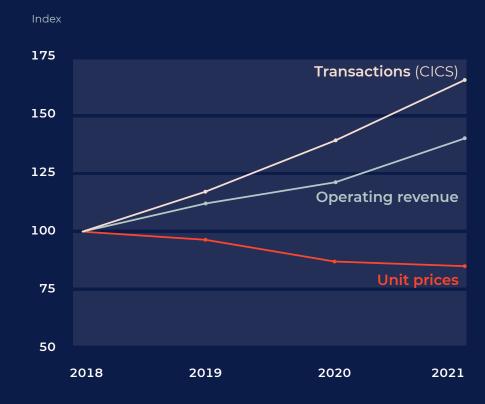
are spent on IT solutions development

Revenue increased to a historically high level of activity in 2021. The increase of DKK 278 million, corresponding to 14 percent, was primarily driven by increased depreciation on development investments in recent years and derivative expenses for operating licenses. In addition, there are continued increases in security and compliance costs, as well as overall growth in activity, given that the number of transactions increased by 19 percent over the 2020 figure.

Operating costs were positively affected by BEC's unit costs falling by 3 % in 2021, as well as a significant reduction in the use of external consultants. The decrease in unit costs is mainly driven by a scalable cost structure and systematic focus on the ongoing optimization of operating costs.

A significant element of the growth of BEC's development activities is located in Poland, where the number of employees increased by 156 in 2021 (an increase of 52 percent). This means that BEC has been able to reduce its IT development activity unit costs by 7 % in 2021.

# THE UNIT PRICE FELL 15 PERCENT FROM 2018 TO 2021



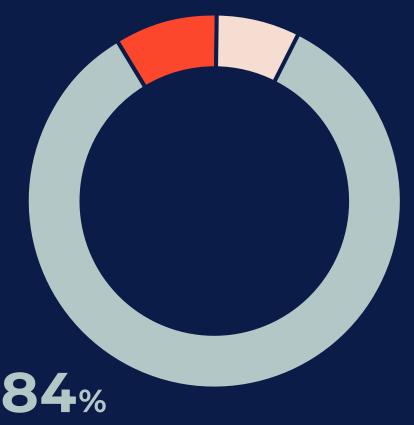


# HOW REVENUE IS DISTRIBUTED ACROSS BEC'S MORE THAN 50 CUSTOMERS

9%

# SERVICE CUSTOMERS - special financial stakeholders

Specific stakeholders in the financial sector such as organizations, authorities and suppliers to banks, e.g. Finansiel Stabilitet and The National Bank of Denmark. These stakeholders use varying individual solutions and selected elements of BEC's standard solutions. Special financial stakeholders are not members (co-owners) of BEC.



7%

### SERVICE CUSTOMERS

### banks

A number of non-member banks (co-owners) who typically offer a smaller product palette or who focus on certain types of customers, e.g.

Lunar Bank, Coop Bank and PFA Bank.

These banks use selected elements from BEC's standard solutions, as well as certain individual solutions.

**MEMBERS** 

The 19 banks that are co-owners of BEC, e.g. **Spar Nord**, **Nykredit**, **Arbejdernes Landsbank** and **Vestjysk Bank**. These banks typically use a wide range of BEC's solutions. In addition, larger customers in particular often also have individual solutions.

# BEC's expectations for 2021 have been met

BEC's business has developed in line with previously announced expectations.

- The result after tax is affected by planned investments in modernizing BEC's technology, as well as the costs of transforming BEC to become more efficient, with an increased customer focus.
- Gross costs and the overall development level are, as expected, the same as 2020.
- Unit costs fell again in 2021, driven by increasing transaction volumes, increased productivity and significant upscaling of 156 employees in Poland.

# Events after the end of the financial year

No events have occurred after the end of the financial year which are materially considered as potentially affecting BEC's income or financial position. The war in Ukraine, the neighboring country to Poland where BEC has a location, is not assessed to affect BEC financially or operationally.



### In 2022 BEC expects:

- to deliver a positive result after tax of up to DKK 10 million;
- to maintain the high level of activity in relation to turnover and number of employees;
- an increased focus on stable operational activities and continuing developmental activities on compliance solutions, sector solutions and the transformation of BEC's technology;
- to increase productivity and reduce unit costs in both operational and developmental activities, through a focus on ongoing streamlining and cost reductions.

BEC's operating costs are challenged by the high level of development, and particularly with regards to compliance and rising costs for cloud-based licensing solutions. BEC's ambition is to absorb price developments by strengthening the company's ability to scale processes and capacity.

This is supported by BEC's cost out program, which in 2022 is expected to contribute approximately DKK 100 million, due to falling unit prices in both operations and IT developmental activities.

### **BALANCE:**

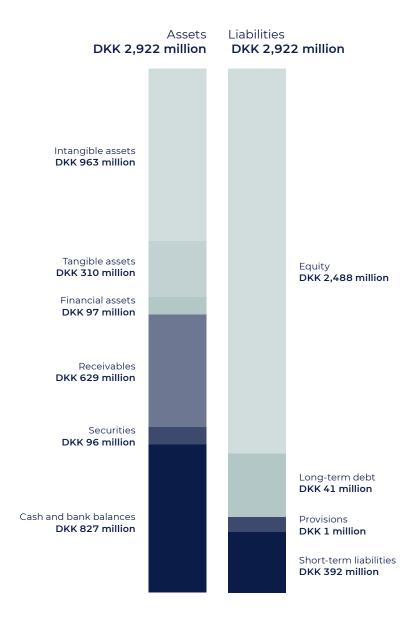
# A STRONG FINANCIAL POSITION

High solvency and high liquidity continue to characterize BEC's financial position.

The group has no interest-bearing debt, and with a solvency ratio of 86 percent (78 percent in 2020), it stands on a very solid financial basis.

The group's end-of-year equity amounts to DKK 2,488 million (DKK 2,174 million in 2020). Equity increased by DKK 314 million as a result of the annual adjustment.

Compared to 2020, the group's holdings of cash, cash equivalents and securities increased by DKK 365 million as a result of increased capital contributions and repayment of receivables.



# BEC (group)

The group comprises of its parent company BEC Financial Technologies a.m.b.a., including its branch in Poland and the wholly owned subsidiary BEC Ejendomsselskab A/S.

Revenue: 2,288 MDKK
Operating profit (EBITDA): 601 MDKK
Net income after tax: 4 MDKK
Full-time employees (average) 1,296



# **BEC** (parent company)

Services the Danish market for banks and the financial sector in general with IT services.

Revenue: 2,284 MDKK
Operating profit (EBITDA): 585 MDKK
Net income aftar tax: 4 MDKK
Full-time employees (average) 1,296

# **BEC Ejendomsselskab**

Owns BEC's buildings in Roskilde and rents them to the parent company and to JN Data A/S. The company has no employees, but owns buildings with a total value of DKK 286 million.

Net income after tax: 9 MDKK
Full-time employees (average) 0

# MARKET AND COMPETITIVE SITUATION

The market for finance IT is changing continuously. This can create new opportunities and risks for BEC.

BEC's market and competitive situation could change significantly:

- if banks change a data center to or from BEC, typically through consolidations involving BEC's existing customers;
- if BEC's competitors are involved in consolidations with each other or with new entrants to the market:
- in the event of changing market conditions for BEC's customers, which can change expectations for (and the relevance of) BEC's solutions.

BEC is well positioned to create new opportunities from such changes, because it has a good volume, a strong ownership group, is open to new partnerships and is well on its way towards a new, open architecture with modern technologies.



# **ECONOMIES OF SCALE**

Economies of scale are necessary in order to provide cost-effective IT services to financial companies. BEC has proven its competitiveness and attracted new customers who emphasize BEC's operational stability, operating volume, development power and innovation power. BEC's IT operations are largely outsourced to JN Data, which handles IT operations for a large part of the Danish financial sector and ensures economies of scale for everyone. BEC's IT development is handled by BEC itself, or is purchased from subcontractors. BEC's broad membership means that BEC has the necessary volume to develop or acquire flexible IT solutions at low prices.



# **RELEVANT, UP-TO-DATE IT SOLUTIONS**

International and Danish markets for financial services and financial technology are changing rapidly. Traditional and new stakeholders are developing and launching innovative solutions at a fast pace, which increases competition for ever larger parts of what were once traditional areas of business for Danish banks.

Modern, innovative technology, which strengthens customers' competitiveness in a rapidly transforming financial sector, is therefore necessary to maintain and expand BEC's scope for business.

This brings both opportunities and risk for BEC:

One risk is that BEC is unable to adapt to the market's needs for faster, more flexible development methods and technologies, and is therefore unable to deliver IT development at the quality and pace required by customers. Another risk is that BEC's customers lose market share or areas of business, which would weaken BEC's volume.

BEC is working to seize digital opportunities to strengthen the competitiveness of banks by:

- introducing new technology to make BEC's technological platform more efficient, flexible, open and future-proof;
- collaborating with new partners in areas such as the integration of cloud solutions and other global-leading technologies into BEC's banking platform;
- simplifying and streamlining BEC's organization so that it can adapt quickly and flexibly to new requirements.

# FINAN-CIAL RISKS

BEC's financial risks are limited. Risk of loss from customers is largely hedged by contributed capital and deposits.

The Group's core business is not particularly exposed to financial risks. The Group operates mainly in Danish kroner, and the group's customers have minimal credit periods. The presence of credit risk occurs primarily in connection with the joint development of the parent company towards its member customers (the owners).

The parent company activates developmental costs that member customers subsequently pay over a period of three to five years after launch of the IT solutions.

To mitigate the risk of loss, members have contributed capital as collateral for the payment of a statutory withdrawal fee. The withdrawal fee ensures BEC has the necessary time to act and reduce the financial impact on the remaining customers. At the same time, it ensures payment for, among other things, historically incurred expenses for the development of services for members. A withdrawal fee is customary for Danish data centers. A BEC withdrawal fee will be five times the revenue from the previous year, plus certain costs, if a member resigns their membership at the end of a calendar year without prior notice. The member will, however, be able to continue as a member during a notice period.

BEC's withdrawal conditions are on a par with those for other data centers in Denmark.

In October 2021, Handelsbanken put its Danish branch up for sale. Handelsbanken is a member of BEC, and a sale may thus have an impact on future coverage of BEC's costs, including any withdrawal compensation.

The contractual constraints of BEC's service customers (not owners) generally covers a shorter period than those of its members. The shorter the customers' contractual commitment period to BEC, the greater the short-term business risk. This risk is offset, however, by an ongoing gross margin from service customers combined with the payment of deposits.

Cash and securities are placed with a low risk profile in accordance with the group's financial policy, as established by the board of directors. Bank deposits are spread across several banks with solid credit ratings, and surplus liquidity is placed in Danish government or mortgage bonds. However, the Group is exposed to interest rate fluctuations, and an average interest rate change of one percentage point would, over a year, impact pre-tax profits by about DKK 10-15 million.

# **EXECUTIVE BOARD**

In 2021, Lars Malmberg took up the position of new Deputy Managing Director at BEC.

# **JESPER NIELSEN**(b. 1968)

CEO of BEC since 2020.

Positions of trust:

Board member of the Danish Financial Sector Employers' Association and JN Data A/S.

**Education:** 

Cand.polit.

Previous positions:

Interim CEO and other management positions at Danske Bank.

# LARS MALMBERG (b. 1966)

### **Deputy CEO**

**Head of Customers & Business Transformation** at BEC since 2021.

### Education:

MSc in Economics and Business Administration, CBS Executive Board Program, Insead Business Program (SMB).

#### Previous positions:

Global head of Banking Business Development, interim COO and other executive positions at Danske Bank, BG Bank and Bikuben. Member of the boards of directors of byFounders, Spiir and Home. Chairman of the board of NOCA (Network of Corporate Academies).



# **BOARD**



# **DAVID HELLEMANN** (b. 1970)

**Chairman** of BEC's board of directors since 2020, elected in 2016. Director of Nykredit A/S and Nykredit Realkredit A/S.

Other management and trust positions:
Chairman of Kalvebod Ejendomme A/S and
Kirstinehøj 17 A/S. Vice chairman of JN Data A/S
and Totalkredit A/S. Board member of the CBS
Executive Fund, Landsdækkende Banker and
Nykredit Bank A/S.

**Education:** 

MA in Political Science



# GERT R. JONASSEN (b. 1959)

**Vice chairman** of BEC's board of directors since 2020, elected in 2006. Managing director of Arbejdernes Landsbank A/S.

Other management and trust positions:
Vice chairman of Denmark's Green Investment
Fund. Chairman of AL Finans A/S. Vice chairman of
Vestjysk Bank. Board member of Landsdækkende
Banker, PensionDanmark Holding A/S, PensionDanmark Pensionsforsikringsaktieselskab A/S
and PRAS A/S. President of Ejendomsselkskabet
Sluseholmen A/S. Council member of the Danish
Economic Council of the Labor Movement. Expert
judge at Østre Landsret (Eastern High Court).
Education: Bank training and BComm in finance,
organization and personnel management.



**BEC board member** since 2009.
Bank director at GrønlandsBANKEN A/S. **Other management and trust positions:**Board member of the Bird Protection Fund.
Member of the Economic Council for Greenland. **Education:** 

Bank training, executive programs at Insead and The Wharton School.



# JAN PEDERSEN (b. 1964)

BEC board member since 2010.
CEO of Danske Andelskassers Bank A/S.
Other management and trust positions:
Board member of Danske Andelskassers Bank
i område Nord, Danske Andelskassers Bank
i område Syd, Sparinvest Holdings SE and
Opendo A/S. Chairman and director of Villa Prisme
Complementary Partner Company.
Education:

MSc in Marketing, Diploma in Business Excellence (DBE) and Executive Programs at Columbia Business School and Insead.



## MICHAEL N. PETERSEN(b. 1963)

**BEC board member** since 2012. Bank director at Vestjysk Bank A/S. **Other management and trust positions:** Member of the board of Factor Insurance Brokers A/S.

Board member of Lokal Puljeinvest, expert judge at the Maritime and Commercial Court. *Education:* 

MBA from Henley, HD Accounting and HD Organization.



## LARS MOESGAARD (b. 1968)

BEC board member since 2014.
CEO of Handelsbanken Denmark.
Executive director and member of the corporate management board at Svenska Handelsbanken AB.
Other management and trust positions:
Chairman of Ejendomsselskabet af 1. Maj 2009 A/S and LokalBolig A/S.

Education:

Bank training, HD Accounting and IFL Executive Education, Stockholm School of Business.





# **JOHN LUNDSGAARD**(b. 1964)

BEC board member since 2015.
Bank manager at Spar Nord Bank A/S.
Other management and trust positions:
Chairman of Factor Insurance Brokers A/S. Vice chairman of Skelagervej 15 A/S, BOKIS A/S and The Danish Financial Sector Training Center.
Board member of Erhverv Norddanmark,
Kunsten Museum of Modern Art Aalborg,
Sparekassen Nordjyllands Fond of 29 March
1976 and Utzon Center.

Education:

Bank training, MBA.



# JACOB BJØRN HOLM(born 1979)

**BEC Board member** since 2021.

Product owner at BEC. **Other management and trust positions:** 

Chairman of Allerslev Vandværk A.m.b.a. Education:

MSc in Applied Mathematics.





# BEC Financial Technologies a.m.b.a.

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