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# The Story of Navision and Navision Stat

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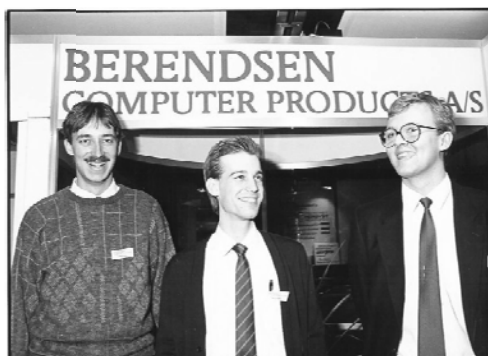
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**Abstract.** This paper is about one of the most successful IT companies and software products in Denmark, Navision, and one of the most successful government IT projects in Danish history, Navision Stat.

## 1 Navision – The Birth of an ERP Company and a Product

In 1984 three students from the Danish Technical University, DTU, Jesper Balser, Peter Bang and Torben Wind, founded a company called PC&C. A few years later this became Navision.



**Fig. 1.** The three founders at Kontor & Data in 1985

Together they created an account package, PC-PLUS, for the IBM PC that became a success overnight. By copying the look and feel of real life artifacts, such as ledgers and a Canon calculator the product set a whole new standard on simplicity for accounting software.

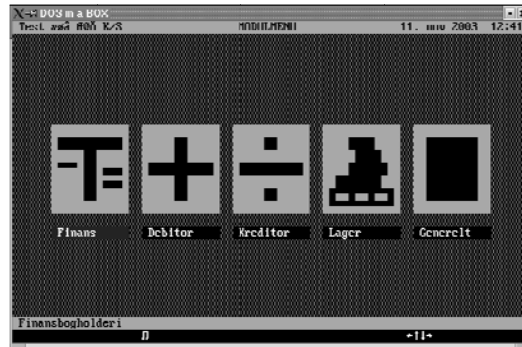


Fig. 2. PC-PLUS main screen

From there the company and the product grew over several iterations. The company grew from being a startup, to being an international company, to becoming listed at the Copenhagen stock exchange, and finally to getting acquired by Microsoft. The product grew in terms of functionality from being a simple accounting package to a fully-fledged ERP package. The underlying platform was transformed from single-user MS-DOS to running in multiuser mode on Unix and Windows, and recently as a service in the cloud. The user interface also transformed from a 80\*25 text-based interface to Windows, browsers, and most recently to support also touch-enabled devices. Despite all these revolutionary changes many of the original customers still have been able to upgrade their business logic to newer releases. As a result the product Navision, now known as Microsoft Dynamics NAV, helps hundreds of thousands of companies with millions of users running their daily businesses.

- a. Finansministeriet søger hermed Finansudvalgets tilslutning til at igangsætte den på finansloven for 1998 forudsatte omlægning af Statens Centrale Regnskabssystem til lokale standard-økonomisystemer suppleret med centrale systemer til brug for de centrale myndigheder. Omlægningen skaber ikke behov for udvidelse af de bevillingsmæssige rammer, da omlægningen finansieres i overgangsfasen dels af indtægterne på Statens Centrale Regnskabssystem og Statens Centrale Lønssystem, dels af Økonomistyrelsens videreførelsesbeløb.
- b. Statens Centrale Regnskabssystem (SCR) har siden 1970'erne været statens fælles regnskabssystem. SCR-systemet anvendes af institutionerne fortrinsvis som regnskabs- og betalingsystem samt af de centrale myndigheder til opsamling af regnskabsdata, udarbejdelse af statsregnskab, revision mv. SCR-systemet er specialudviklet til staten af CSC Danmark (tidligere Datacentralen). Den nuværende version af SCR-systemet blev udviklet og implementeret i perioden 1988-94.  
 I de senere år er kravene til økonomistyringen i staten øget væsentligt. Både i relation til den interne styring i institutionerne, men også ved udarbejdelse af virksomhedsregnskaber, indgåelse af resultatkontrakter mv. Ligeledes kræver den øgede markedsorientering af en række af statens aktiviteter mere af institutionernes styring, da der hermed opstår behov for opstilling af omkostningsregnskaber mv. Hertil kommer, at økonomistyringsbehovene er meget forskellige i statens institutioner pga. den betydelige forskel i opgaveportefølje.

Fig. 3. Three paragraphs from appendix 207 to the finance act of 1998

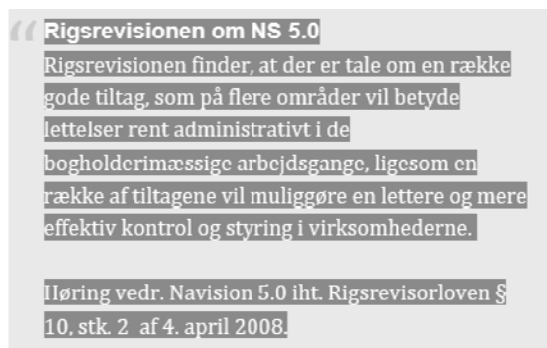
## 2 The Birth of Navision Stat

Navision Stat was born via appendix 207 to the finance act of 1998 and replaced the earlier centralized accounting system for the government.

When the appendix had been approved by the Finance subcommittee of the Danish parliament, the result of the EU tender could move forward. Among the four bidders a contract was signed with Navision Software Denmark for implementing the new system based on Navision Financials.

## 3 Navision Stat – Creating a Successful ERP Solution for Government Offices

In 1998 Navision signed a contract with the Danish government board for economic administration, Økonomistyrelsen<sup>1</sup>, to collaborate on an ERP solution, aiming to increase efficiency in government administration. From the very start the project was backed by senior government officials, and it became one of the rare successes in government IT projects that was delivered on time and within budget, and the project resulted in massive savings in the government budgets. The project was also the beginning of a long relationship between Økonomistyrelsen R&D team and the Navision R&D team. Over the years the solution has grown and has been through several iterations where it has been adapted to new technologies, more centralization, and new areas of functionality have been added.



**Fig. 4.** Quote from the government auditor regarding the impact of the Navision Stat project at the release of NS 5.0

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<sup>1</sup> Moderniseringsstyrelsen was created in 2012 as a merge of Økonomistyrelsen and Personalestyrelsen.

## 4 Navision Stat - Growing Up

Navision Stat was built with very few governmental customizations of the standard product. Focusing on integration into the government's master system (SKS) and on paving the way for collecting accounting data for more than 400 decentralized government offices. An integration with the government's payroll system (SLS) also made it possible to exchange human resource data.

In addition to this, a number of governmental audit trails have been implemented to support the separation of work functions. Also, a bank integration solution for manual file exchange was acquired and added to the solution.

Since then, Navision Stat has been upgraded to new standard versions from Microsoft and extended with new governmental functionality where the focus has been to deliver as robust and coherent a solution as possible.

At time of writing Navision Stat has been extended with the following integrated solutions:

- E-HANDEL: NemHandel support for the exchange of electronic sales and purchase documents.
- Danske Bank: Exchange of payment data and responses.
- Nemkonto: Exchange of payment orders and responses.
- INDFAK: Exchange with the governmental procurement and invoicing system.
- REJSUD: Exchange with the governmental travel expense system.
- GIS: Generic interface for integrating with the various government agencies domain-specific systems.
- NETS: Exchange of requests for payment and responses.
- CVR: Exchange of validated customer and vendor address data.
- EFI: Exchange of claims and status data with SKAT for the collection of debt of government claims.
- ØS-LDV: Creation of transaction-based LIS-data (Management information) for BI solutions.

Additionally new internal application functionality for various purposes has been built into the solution.

All governmental agencies were migrated from SCR to Navision Stat in the years 1999-2003 except for a few cases<sup>2</sup>, where an exception was granted for specific governmental agencies. Since then all 250 private agencies within the Ministry of Education decided to migrate anyway to Navision Stat in 2007.

The current Navision Stat solution is based on Microsoft Dynamics NAV 5.0 SP1 Update II, representing 473 active licenses that cover 417 government agencies and 388 databases in production, where each database typically contains two companies,

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<sup>2</sup> Only the large governmental offices with SAP installation such as Statens Serum Institut, Vejdirektoratet and Bane Danmark, are today exempt from using Navision Stat.

with different charts of accounts.

Most recently, in January 2014, the University of Copenhagen with 9000 employees and 400 concurrent Navision Stat users replaced an Oracle solution with Navision Stat.

## **5      Creating the Accounting Service Center (ØkonomiServiceCentret)**

In the spring of 2008 it was decided to establish administrative service centers across public administration. The centers were tasked to provide service for the majority of government agencies within the following areas:

1. Payroll
2. Accounting
3. Travel
4. IT maintenance and support

Areas 1-3 were initially established within Økonomistyrelsen, but are today handled by the government administration in ØkonomiServiceCentret (ØSC). Area 4, IT-maintenance and support, is today handled by the central government IT department, Statens IT.

One of the purposes of establishing ØSC was to increase efficiency as an effect of centralizing tasks combined with an expectation of the employees getting higher mobility.

Those accountants, who were already working with Navision Stat, were transferred from each individual government agency to the governmental administration. The specific databases and all included customizations were also transferred to the central administration. This meant initially that the mobility of the employees, process improvements and consolidation of the solution into one, was limited at the time of transfer to the ØSC.

On the positive side, 50% of the customers collocated to the buildings where development and maintenance of Navision Stat takes place. This provided a unique opportunity to establish an agile work collaboration between users, consultants, and software developers. In other words, the establishment of ØSC ended up being of high importance and influenced strongly the current product strategy for Navision Stat.

## **6      Navision Stat product strategy 2014**

To benefit the governmental agencies outside the ØSC, who still are allowed to do their own customization based on their requirements, and at the same time secure that all ØSC databases stay based on the same standardized codebase, the Navision Stat product strategy were adjusted accordingly. The strategy defines the overall development of Navision Stat and consists of the following underlying strategies:

- General functionality
- Distribution
- ØSC Upgrades

Integrations  
Functionality specific domains  
Reporting

The strategy for general functionality defines the framework for standardization and lay out the guidelines for the other strategies.

The latest up-to-date base version of Navision Stat consists of the Microsoft Dynamics NAV base product, including the required government customizations that are based on the following general rules:

1. Customizations must be avoided if at all possible.
2. If not, they must be implemented:
  - In the most generic way possible to make it reusable by as many customers as possible.
  - In the leanest possible way without interfering with the logic of the underlying standard functionality.
  - In a way so that changes are perceived as native to the product.
  - In a way so they have the same look and feel as the standard product.
  - In a way so that all changes are documented and traceable across code, requirement documents, tests, and end user documentation.
3. When customizations can be replaced by new functionality in the base product in a reliable and economically viable way, the customizations are eliminated and replaced with standard functionality.
4. Navision Stat is maintained continuously as a modern accounting system and upgraded to support the newest technical platform. This is based on an ongoing evaluation of new versions of the base product released by Microsoft.

The implementation of governmental customizations is derived by the following:

Government rules for accounting and auditing, where they differ from what applies to the private sector.

New legislation where system support is a precondition or a main drive for implementing the laws.

Customer-driven demand for extending the solution that is judged to be of common value for all customers.

Considerations based on strategic choices such as:

- Process optimizations
- Demanded increase of efficiency
- Security optimizations to control logging and approval processes.

The distribution strategy defines which services and limitations the customers must adhere to, depending on whether they are an ØSC customer or not.

### 6.1 Standard model (Non ØCS customer)

Moderniseringsstyrelsen is responsible for the end-to-end development of Navision Stat Standard, which can be downloaded from a website by customers and consultants. If the customers require specific customizations, they must hire external consultant companies. This means that each customer has his own variant of Navision Stat that he must maintain and upgrade separately to be in compliance with the standard version of Navision Stat.

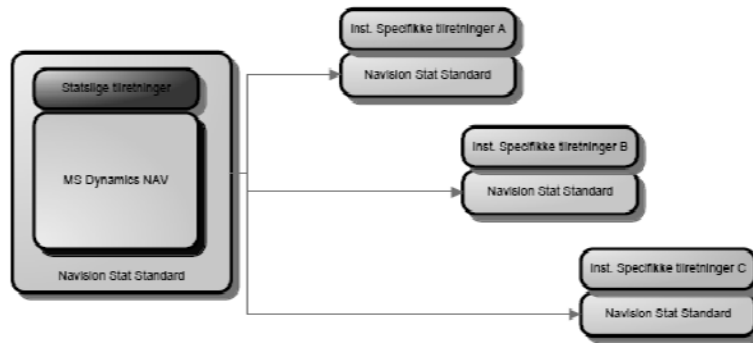


Fig. 5. Standard model (Non ØCS customer)

### 6.2 ØSC model (ØCS customer)

Moderniseringsstyrelsen is responsible for the end-to-end development of Navision Stat Standard, which can be downloaded and hosted by Statens IT (the central IT department) or KMD (a Danish IT company with roots in public administration).

Moderniseringsstyrelsen is also responsible for the implementation, maintenance and upgrade for the individual customer. The customer cannot have individual customizations.

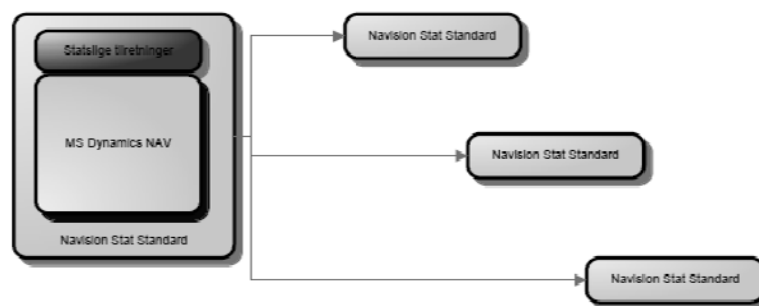


Fig. 6. ØSC model (ØCS customer)



To secure this scenario it was necessary to eliminate all local customizations from the standard model. By establishing a common integration API (GIS) and a common report layout on sales documents<sup>3</sup> for all ØCS customers, it was possible to create a common solution for all ØSC databases. As a result, today there are 90 databases that are based on one standard ØCS Navision Stat solution.

## **7 The Future of Navision Stat**

The system portfolio is continuously being evaluated, most recently in conjunction with “System målbillede 2020”, a Moderniseringsstyrelsen strategy for customer-facing systems. As part of the evaluation, once again it was concluded that Navision Stat still is a functional, flexible and cost-efficient solution that the Government wants to continue to evolve and support.

Based on the feedback, the Navision Stat R&D team is building hybrid mail integration based on the existing platform (Microsoft Dynamics NAV 5.0 SP1) and has at the same time started upgrading to Navision Stat 7.0 that is based on Microsoft Dynamics NAV 2013 R2. With Navision Stat 7.0, Navision Stat will most likely be certified for Microsoft Dynamics NAV 2013 R2.



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<sup>3</sup> Sales invoice, credit memo, reminders customer statements for print-outs to customers in the private sector.