

A Case Study From The Industry

 **APMG** International

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INTRODUCTION

IT had been largely ignored in terms of investment for many years and was not a trusted resource.

A major multi-national enterprise with operations headquartered in Germany requested all of its subsidiaries to begin a strategic investment in IT to 'future proof' business operations and to embrace an IT driven approach to business services design. IT had been largely ignored in terms of investment for many years and was not a trusted resource.

The enterprise subsidiaries focused on manufacturing and sales of rubber-based products (for example products such as industrial strength conveyor belts for mining and metal pipe manufacturing, fabrication of rubber cements and glues, and importing and assembling components for tyre repair kits---which even in 2018 is a multi-billion dollar sale--- and re-selling of multiple imported related products), and provision of bespoke services to the mining industry.

This case study relates to the USA subsidiary, the New Jersey HQ office, where the organisation is brigaded under five vice presidents as follows, Purchasing and Supply, Industrial, Corrosion Protection, Automotive and Engineering Belting. The President of the subsidiary made it clear from the start that IT use was inadequate and not remotely in line with modern business.

The IT support (such as it was) was focused on incident management of operational activities and provision of the IT environment, desktops and laptops; mobile phones were distributed and managed in a different area. All Sales and much of the Purchasing and Manufacturing information was intended to be part of a Microsoft Navision suite first installed in 2002/3.

As with many organisations that operate in a complex purchasing / manufacturing / distribution / sales environment, the business information needs were inter-connected, nuanced and engendered many dependencies, requiring detailed analysis before any decisions could be made regarding the information needs of the enterprise.



Initial consultations surfaced an almost entirely absent consistent approach to gathering, storing, securing and exchanging data. Reliance on IT was increasing though the business was surprisingly analogue in its approach; expensive manufacturing designs were (literally and figuratively) made on scraps of paper and stored in filing cabinets. Items imported to warehouse facilities in the South of the USA were placed in storage without any IT support such as bar coding and almost all warehouse activities were manual, duplicated and reliant on people. Purchasing and manufacturing processes were duplicated in the South and in NJ via networked printers reliant on inadequate IT hardware and networking equipment and all activities relating to the processing were manual—no automation of any scale was present.

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However, the USA operations were very profitable, and because of this an ‘If it ain’t broke don’t fix it’ attitude prevailed at the top of the office and the scale of change believed to be needed to move to an IT driven business was both feared and considered to be too risky and expensive.

Furthermore, the IT department did not use any of the best/good practices that exist and was almost entirely reactive. Any strategic proposals regarding improvement and investment were largely ignored.

Clearly saying ‘You need BiSL’ was likely to lead to general hilarity and almost universal head-scratching since no business or IT framework had ever been promoted either from the German HQ or from within NJ. It was decided that the approach to information management was to be focused on trying to improve the efficiency of the enterprise by identifying current and future information needs, identifying how IT should be used, and identifying costs and benefits of investing in training people in new technologies and its use.

The focus of this whitepaper is how BiSL was used in the background of investigations to create a data-warehousing approach for the business focused on their use (or lack of use....) of the Microsoft Navision software and the creation of the guiding coalition at executive level to drive improvements.



GOVERNANCE, STRATEGY, IMPROVEMENT & OPERATION

After initial investigations had unearthed to the surprise of no one an almost entirely absent approach to any form of information management and sharing, and a universal failure to properly maintain the Navision data it was agreed that pilot projects would be needed to demonstrate benefits and to engender support. One such project was the creation and launch of a business-to-business website for existing customer businesses and another was the upgrading of Navision to the 2018 release; the current Navision version was not only contractually 'out of maintenance' with Microsoft but the enterprise had been informed that it was so out-of-date that Microsoft would not provide any form of support. Thus, any maintenance was carried out by a third party consultancy (that for many years had advised the enterprise of the need to upgrade).

Pilot projects were needed.

The President of the enterprise made it clear that the business of the enterprise would be difficult to sustain given the advances in technology that were being exploited by rival enterprises; though not supported by the executive in general, the President proposed that the enterprise should embrace automation and where possible, exploit the potential of IT and in particular the potential of data warehousing using the much under-utilised Navision.

Navision is state-of-the-art inventory management software (see Figure 1) where the population of information is the only limitation to its use as enterprise wide data warehousing covering everything from HR to warehouse receiving and shipping.

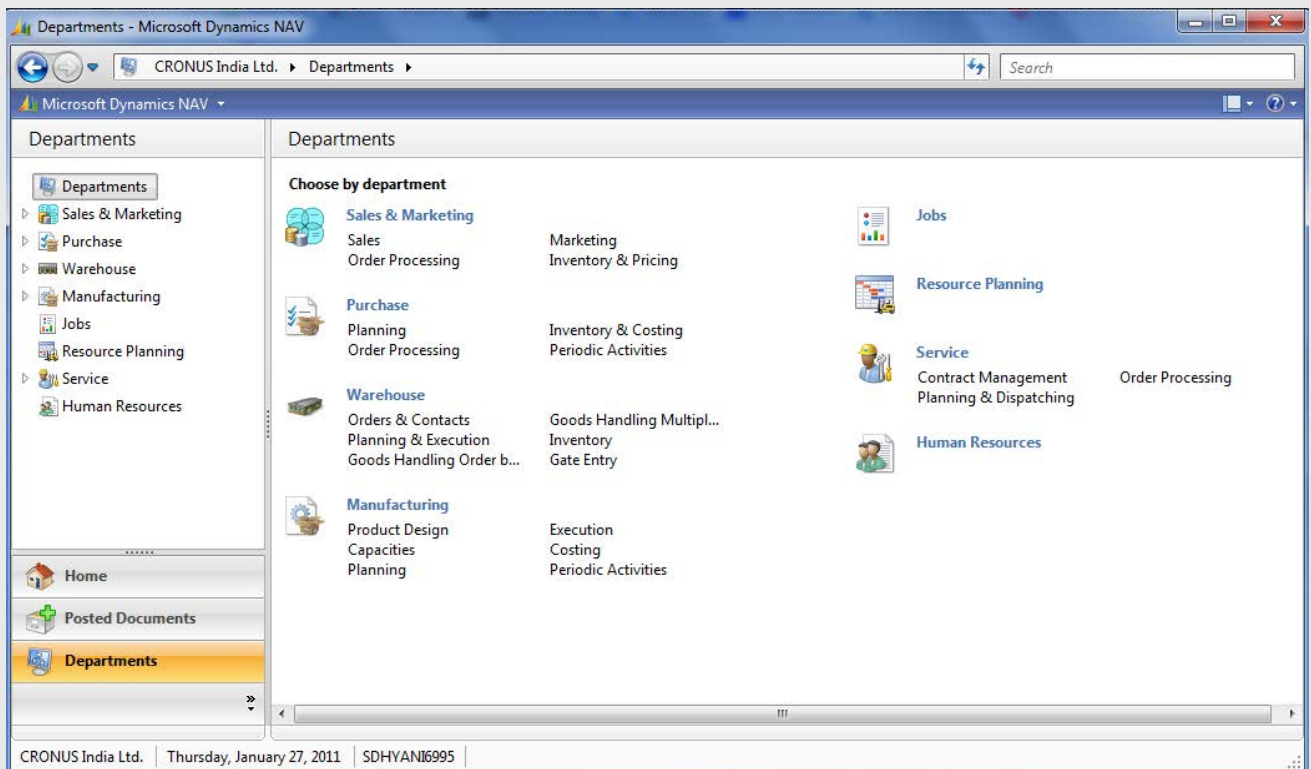


Figure 1. Example of scope of Navision software

Use of bar coding had been an agenda item for many years without any progress in assessing the true Need and Value.

The enterprise COO was very supportive of any activity to increase the collection and use of data in the Navision environment but very sceptical of both the will and the ability of the enterprise personnel to see improvements through. The COO was also very supportive of beginning with good governance; very few Policies (other than HR) had been published and with regard to IT, none existed.

It was decided that an initial key IT driven improvement, focused on B2B (business-to business) customers would be a website where (initially) long-standing customers could order products. The website would to begin, focus on Automotive Products (because of pressure from the VP of Sales in Automotive, who was a proponent of greater investment in and use of IT).

The BiSL next model was introduced in high level discussions, including the third party consultant that had advised the enterprise about using Navision; the model was introduced as providing guidelines not dogma, and to focus on ‘big picture’ issues such as the future state of enterprise data and the building blocks (for example the B2B website) that would need to be constructed in line with the overall Mission of the President to make more use of IT. It was soon clear that the website development would have repercussions across all the lines of business and an approach was agreed to define Governance and Strategy and from there examine the Improvement that would be possible as a result of the well-defined developments required see Figure 2).

Inventory would need to be updated ‘real time’ from warehouse stock figures for the B2B portal to work successfully and the current installation of Navision inventory software was entirely reliant on people updating information manually (unsurprisingly stock taking was a significant event requiring many people and taking up to three months to complete). At this point the business leaders realised the scale of improvement needed would lead to many technological changes and indeed to the need to instil (or acquire) new skills in people. Use of bar coding had been an agenda item for many years without any progress in assessing the true Need and Value let alone the impact on people. HR was immediately called into all meetings...




- Drivers**
-  Need
 -  Value
 -  Mission
 -  Capability
- Perspectives**
-  Business
 -  Data
 -  Service
 -  Technology
- Domains**
-  Governance
 -  Strategy
 -  Improvement
 -  Operation



Figure 2. The BiSL next model

UPGRADING TECHNOLOGY INLINE WITH BUSINESS INFORMATION NEEDS

An upgrade to Navision was urgently needed.

It was identified that good governance required creation of strategic direction/development in accordance with Policy. The COO of the enterprise directed that best practice principles should apply to all Policy making regarding the website and the services to be built and deployed and that customer-centric policies regarding information management must be created by the business and supported by, inter alia, IT. Using the BiSL next guidance regarding Need and Value, and Mission and Capability it was quickly apparent that the overall Mission was neither properly qualified or understood in the enterprise; further discussions identified that the capabilities of the business organisation to use the Navision software (which was key for many processes including annual financial reporting) was sorely lacking and that no senior executives had invested any training time in learning the capabilities of the software.

An upgrade to Navision was urgently needed, and would have significant value; the upgrade was a CSF (critical success factor) for the Mission put forward by the President and COO, but the Capabilities, human and technical were almost entirely absent.

The decision was made at this point to develop a programme of changes to major components of Navision prior to any upgrading of the technology, and to examine the Business, Information/Data, Service and Technology perspectives recommended in the BiSL next guidance at every planning stage of the multiple projects identified. Strong support for upgrading came from the Automotive VP who was convinced that business would benefit from the capability of identifying trends using the dashboard capabilities of software (figure 3).

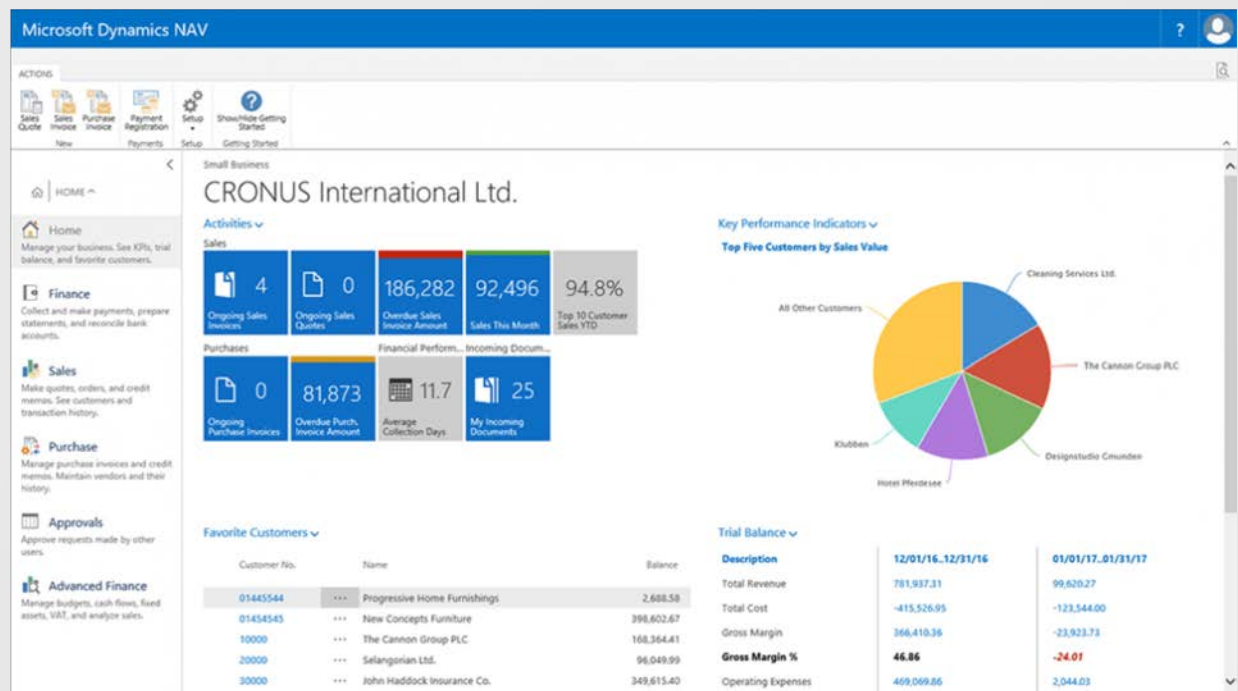


Figure 3. Example Business Dashboard

At this stage of programme planning, investigation of the data and information needs of the enterprise it became clear that business VPs routinely contacted the CFO for financial information and sales reports that were available in the current version of Navision, but they had no idea how to access the reports (an example at Figure 4); it also was surfaced that month after month IT raised the same incident reports and supplied the same resolutions to almost every business unit regarding their inability to access reports.

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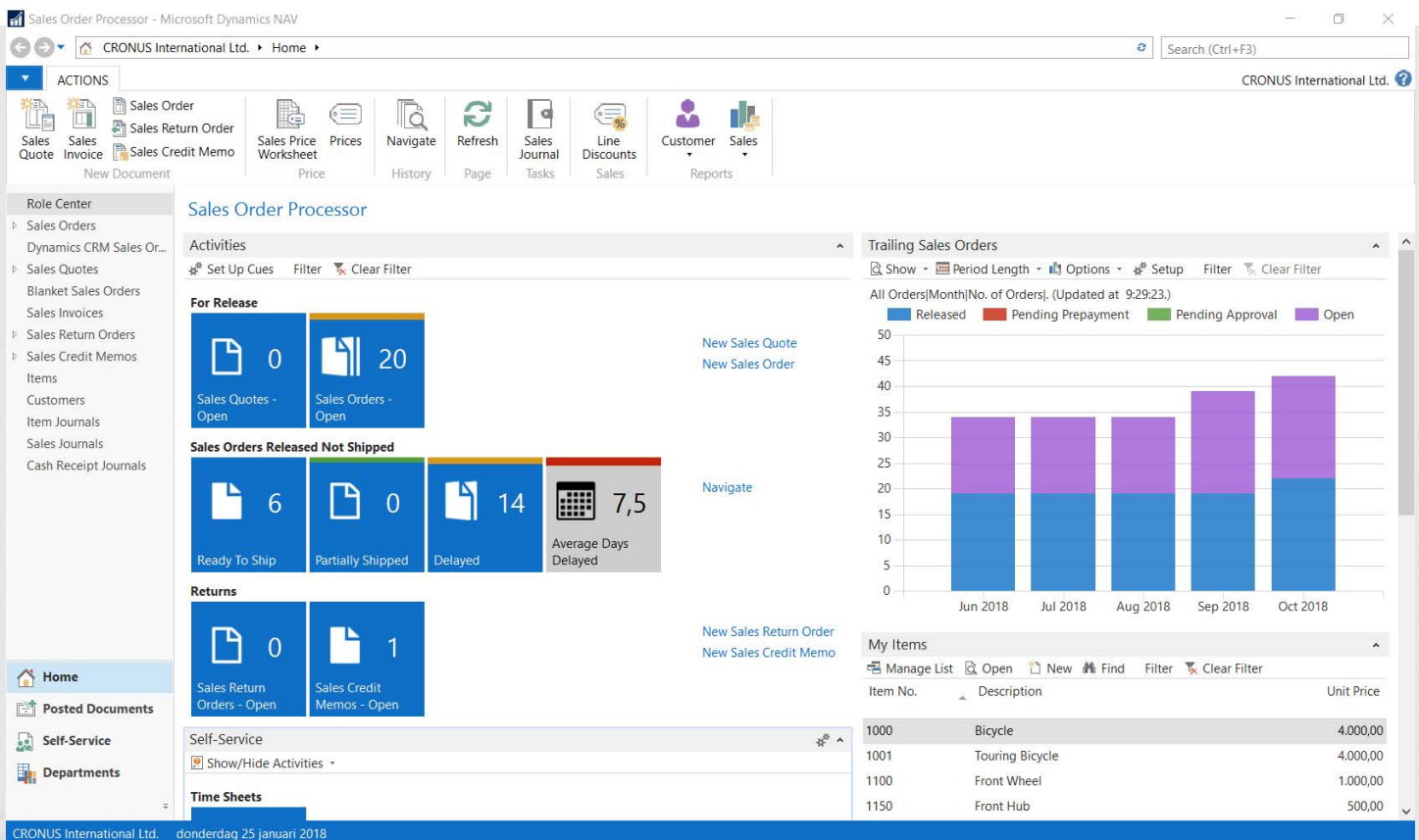


Figure 4. Example Sales Report

PRACTICAL IMPLEMENTATION

The scale of information gathering was daunting for the business leaders and IT was already under-resourced and unable to assist. It was agreed to use third party consultants to gather the information necessary to create information schemas for each 'menu' item shown earlier in Figure 1, and to identify dependencies; individual LoB leaders would have overall responsibility for finalising their own data schema and for ensuring all dependencies were identified.

Each VP was also tasked with identifying the types and contents of reports they needed; every VP had a different requirement and none had ever committed those requirements in a specification.

Third party consultants would create an overall business information schema and be responsible for all coding and report creation; the sheer scale of the exercise indicated high risk and detailed project management, therefore Agile methods were relegated by the COO.

The analysis of individual projects using the BiSL next guidance started in April 2018 and will be ongoing until implementation of Navision 2018 in early 2019.



BUSINESS SALES WEBSITE

The support given by the VP of Automotive for the Navision technology upgrade led to their nomination as a Senior Responsible Owner (SRO) for the B2B website project, and in tandem with the Director of Marketing, being made responsible for content. The design of the website was entirely from the perspective of Business in the first stages. The BiSL next guidance was used to design the interview techniques that would be used for both the information/data design and the functionality of the website. The success of analysing the business drivers, (Need, Value, Mission and Capability) and adopting the four perspectives (Business, Information/Data, Service and Technology) when planning the technology upgrade, meant that the approach had proven to be of benefit.

As with all business service designs initiation should begin with analysis of Need (for the services) and Value (actual and perceived) in the context of the business demand from customers; if a service had no value, it was unlikely to be needed--and vice versa. The COO in particular demanded evidence from the Automotive LoB that customers were putting pressure on Sales staff to have access to a web portal where they could purchase their goods and that customers would value the service; Need for a website within the enterprise was also carefully considered along with Value to the enterprise because no business case had been prepared that illustrated cost vs benefit. If customers did not use the portal, or had no way of knowing the portal existed the investment would be wasted.

Although it would have been desirable to construct a web portal within the Navision 2018 suite an early decision to build the portal as a standalone project was taken because first, the web portal was considered a priority and second, because it would be a solution that allowed important decisions to be made and tested that would impact the upgrading of Navision.

Operation needs were recognised early in the lifecycle of development and definition of Key Performance Indicators and Critical Success Factors (KPI and CSF), would drive the outcomes required. A key outcome was increasing Sales; measuring the contribution of the web portal was however a challenge.

IT, though a key stakeholder because of they would be responsible operational activities once the website was launched (and for integration with the upgraded Navision technology) was not considered to be able to define the business requirement. For one thing, it became obvious that abrogating the design of business information services while reducing the workload of the business VPs was a retrograde step; only business managers knew the business information needs and neither they, or the IT department was sufficiently competent to create a specification for the business services only the indicated functionality. For that reason BiSL expertise was again employed to ensure that data design for the web portal would be carried forward to the future information design of the Navision software. As inventory needed to be updated in real time, a temporary solution using technology to access current Navision data files would be used (sufficient to ensure that orders could be fulfilled) but the future of the portal was predicated on full integration with Navision 2018.

After consultation with business stakeholders, Policies were agreed and communicated and a Strategy based on strategic business service design undertaken; the project was led by BiSL practitioner with direct access to the SRO and impacted business managers.

Throughout design it became clear that significant investment in new skills (or new personnel) would be a fact. Examples of specific deficiencies in skills were creation of taxonomies of information, data design, the ability to elaborate business requirements and the skills to create information/data dependencies that would provide the degree of accurate and appropriate data to the service desk and thus to customers. Warehouse personnel were identified as being significantly lacking in even very basic IT skills, with many executives being vocal about their concerns that even bar coding would be beyond the current skill set.

The issues of Improvement and Operation were discussed in detail and KPI/ CSF identified for the business, information/data, service and technology problems. ITIL processes were identified as suitable for managing requests, incidents, problems and so on, which was in line with BiSL next recommendations regarding using well researched best practices; as mentioned earlier IT did not make use of any best practices.

From inception of the website portal project to final user acceptance testing took four months including interviewing of potential suppliers of the portal technology. This was considered a major success given that most projects in the enterprise that involved business leaders and IT, either failed, were mothballed or simply were left to wither away and hope that no one would notice.

An initial approach to use Agile methods was a complete failure because of the inability of both business leaders and IT to adequately specify requirements. Requirements from the business were either unclear or insufficiently detailed and design prototype after prototype was thrown out because functionality was lacking (sometimes because it was not considered as needed until the design was 'tested' and sometimes because the requirements were simply misunderstood by the programmers because they were insufficiently detailed).

A project plan was drawn up, key roles identified and BiSL practitioners took control of the design exercise which led to acceptance within a week, and all information being made available within a month.

Supplier management became part of the programme as it became clear that inventory would be impacted by the technologies used by the many different suppliers of goods (many goods were imported from the German HQ though many more arrived from China, Chile, Canada and other countries). In each case the information and data was analysed to ensure completeness and identification of dependencies.

THE FUTURE

The 'soft skills' described in BiSL next were used as a template for an adapted skills matrix for current and future employees; similarly the workload calculation guidance was used to determine staffing levels and based on all of the evidential criteria, staff training and development plans were drawn up and training planned to be available as required. The projects are of course ongoing, though currently at least considered to be a great success.

BiSL next provided the necessary strategic guidance to establish sensible over-arching principles and policies for a complex transformation of data requirements. The guidance was also central to the overall programme being designed in such a way that appropriate best practices and expertise were available to manage and control the different facets of the overall design.



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