

Business Background

Elkjøp is the largest consumer electronics retailer in the Nordic countries, with over 400 stores across six countries and approx. 10,000 employees. The company is owned by British giant Dixons Carphone. The company conducts sales of consumer electronics and household appliances through 400 stores in Norway, Sweden, Denmark, Finland and Iceland, Greenland and the Faroe Islands.

Larsen & Toubro InfoTech Ltd. (L&T InfoTech), one of the fastest growing global IT services company, is ranked by NASSCOM as the 6th largest software & services exporter from India.

Einr is the industry leader in SAP Retail in Norway, being an innovative and customer-centric advisory firm. Einr helps leading retailers develop competitive advantage throughout their Supply Chains.

Skye Consulting was established in 2010 and their head office in Kolbotn, in the outskirts of Oslo, Norway. Skye has about 100 employees as per January 2017, in three locations: Gothenburg, Stockholm and Kolbotn. One of their core competences are SAP processes and technology.

> Whitepaper

One of Elkjøps main competitive advantages in a competitive market has been a strong focus on effective business processes and continuous improvement of these processes. Along with Elkjøp, Skye, L&T and Einr facilitate efficiency based on SAP Retail.

Elkjøp and L&T Infotech Ltd. Started their partnership in 2016. Elkjøp has some IT and business challenges they needed to address:

Simpler IT environment, transforming the datacenter capabilities of Elkjøp by migrating its current environment to an Infrastructure-as-a-Service (IaaS).

Upgrade the Elkjøp core business ERP System SAP to its latest revision and migrating it to HANA (in-memory computing platform that lets you accelerate business processes, deliver more business intelligence, and simplify your IT environment). With this migration, Elkjøp could enable the planned and ongoing projects for their SAP Roadmap.

ECC/SCM/BW on Oracle Migration to SAP HANA

In 2016-17, Elkjøp with support from L&T Infotech Ltd, Einr and Skye performed migration of their SAP ECC, BW and SCM System to SAP HANA. The project was executed in 4 months and was successful in terms of the quality delivered, on time and below budgeted cost and giving the anticipated benefits. Skye Consulting managed the upgrade project, Einr performed the HANA code adoption / adjustment and L&T migrated and upgraded the core SAP landscape.

Technical Benefits – minimum business impact by enabling redundant solution of High Availability and Disaster Recovery setup for HANA and leveraging VM Fault Tolerance functionality by making message server as Single Point of Failure (SPOF) and performance increased and database size compressed.

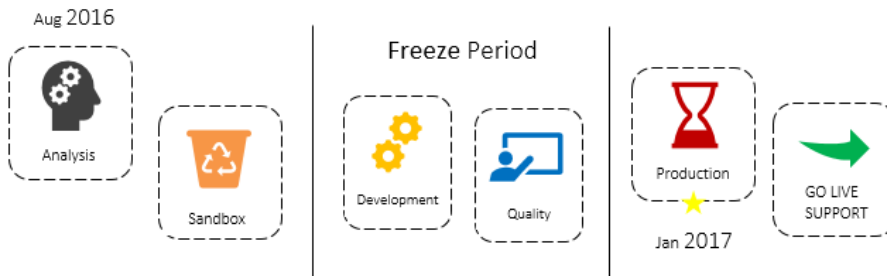
Functional Benefits – Accelerated the processing of large report and financial data is available in-memory:

- 98 000 article/sites **without HANA** would take 5.5 hours, and **with HANA** 5 minutes.
- All customer order on one article for all Danish campaigns in 2016:
Without HANA: 50 seconds (with optimized search on indexes, fields etc.)
With HANA: Response immediate (ms)
- Any given Finance report must be carefully limited with selection filters to avoid timeouts
Without HANA: Several reports must be scheduled as jobs (15 minutes++) to get all the needed data
With HANA: All reports can be executed directly (no filter or selection criteria, no waiting time in Drill down)

Strategic Benefits - with SAP HANA as the main platform, Elkjøp is now following the SAP Roadmap and can easily adopt new functionality and enhance the solution in a long-term perspective. The migration was the first step on the journey towards S/4HANA for retail that will give additional benefits: a simplified data model, predefined operational reports and predefined Fiori apps in a Fiori UX environment.

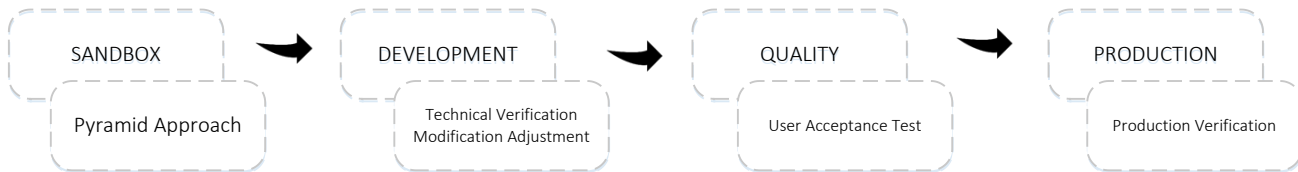
HANA Migration Project Execution

The project started with a planning and analysis phase using the best practice solution for SAP Migration and High Availability solutions for SAP Applications and HANA. It is recommended to always start a Migration project with a Sandbox that is recently copied from Production. This approach will give valuable input to the project plan (scope of the code that must be adopted, downtime of the upgrade etc.). Basing most part of the testing in Sandbox, this will shorten the freeze period, and give the project more flexibility without effecting the production line.



Thorough testing should be done in the sandbox following the Pyramid approach where the critical processes are tested first, before proceeding with tests of the less critical processes.

After Sandbox testing is completed, the migration can be started in development system and the freeze period start. Usually, every business wants to minimize this period as much as possible without impacting daily operation or ongoing projects.



Migration Key takeaways

Planning is everything – Start early with planning and allocate personnel in your hosting center for the technical preparation (network, operating system, disk, backup, and appliance).

HANA Platform – Procure the hardware well in advance and pre-check all the OS parameters and HANA database Installation. Perform HA/DR setup well in advance along with the initial testing.

Use Sandbox – Perform first migration and test in Sandbox to reduce risk and minimize freeze period.

Technical Functional Intervention - Involve developer in the analysis phase to investigate the amount of adjustments necessary to make the custom code HANA compliant. This is a key variable of the project estimate and plan.

Sizing – Analyze database size including the expected HANA compression factor before the migration to see if there is any need for archiving data before the migration. Include sandbox or other planned systems in your total sizing estimate for the new HANA hardware. It is also important to understand future growth of planned projects before procurement.

HANA Key points

Size it right – If you are performing migration, run the sizing report in ABAP system to get the estimation of sizing

Involve Application Owner – ABAP report shows the sizing based on the current data of the system but future enhancement in the business needs to be taken care and verify interfaces that will be directly connecting to HANA beside the system getting migrated.

High Availability – If you are setting up HA and DR for the business, multi-tier is possible but plan it out how you need it to be configured. Figure out the clustering solution to achieve automatic failover for high availability.

Cluster Solution – Figure out with business which clustering solution needs to be applied in order to achieve automatic failover for high availability. In multi-tier, clustering solution is not supported between Site 2 to Site 3.

Backup – Plan the backup strategy as not all backup solutions are applicable to HANA. It should be approved from SAP and choose whether to have backing or File System backup.

Project Summary

Elkjøp have executed a successful HANA Migration for ECC/BW/SCM System. Elkjøp has now their core SAP System running on the latest release of HANA.

This in-memory platform gives the end-users possibility to explore and analyze data in real time. The HANA technology changes the way Elkjøp are using their SAP System.

Better performance in functional areas like Finance, Costing, Sales etc. Real time sales and customer analysis enabling more functionality and feature for future projects

Quote from Bjørn Dalen, Director of IT Systems and Integrations in Elkjøp :

I am very pleased with the upgrade of SAP to the HANA platform. The new technology is a game changer when it comes to speed and access to data in SAP, and will give our users great benefits. It will also be an important cornerstone in the future enhanced use of the SAP Platform in our retail channels.

The upgrade project has been challenging due to coordination with several other ongoing projects and the fact that it's been carried out during our peak season. The project is delivered near to perfection – no major disturbances in our production environments during or after the upgrade!

So big thanks to the project team with participants from the Elkjøp IT department and our partners Einr, Skye and L&T Infotech for a job very well done!

Best regards,

Bjørn Dalen, Director of IT Systems and Operations