

Case Study



Effective Application Knowledge Management

Neptune Orient Lines(NOL) is a global leader in container shipping, terminals and logistics services. It is a global transportation company with core businesses involved in container transportation, terminal operation and supply chain management.

NOL has two principal operating brands: [APL](#) and [APL Logistics](#).

APL, the container transportation arm of NOL, has been facilitating world trade since 1848 and is one of the shipping industry's leading and most recognized global brands. APL offers premium container shipping and land transportation ranging across Asia, North and South America, Europe, the Middle East, the Indian Subcontinent and Australia.

APL also ranks among the world's leading container terminal operators with facilities, located in Asia and the Americas. These terminals have the capacity to handle more than 4 million TEU (twenty-foot equivalent unit).

APL Logistics, the logistics service provider for NOL solves supply chain challenges by offering a suite of international logistics services that are tailored to each customer's needs. APL Logistics also offers one of the world's largest and most modern networks of storage and distribution facilities.

NOL and its subsidiaries are acknowledged as industry leaders in solving complex supply chain challenges. NOL is headquartered in Singapore.

For more information, contact askus@infosys.com

Business Challenges

NOL was in the process of moving their IT headquarters from the US to Singapore, and their regional headquarters from Oakland, California to Scottsdale, Arizona within the United States.

This movement resulted in a high turnover of experienced IT staff, business staff and Subject Matter Experts (SME). This presented NOL with the challenge of retaining knowledge within their organization. There was also an urgent need to capture and store application knowledge in a central repository, and to transition this to the employees in the new locations.

Meanwhile, NOL was also in the process of modernising and replacing many of its existing IT applications to fit their growing business needs. An in-depth understanding of their business processes and IT applications was required to make the REplacement and MODERNisation of Legacy Systems (REMODEL) programme successful.

NOL needed to address the following challenges in order to serve Business better:

- High SME dependency within the organization, coupled with SME turnover
- Absence of any centralized knowledge repository to store IT application knowledge

The Infosys Approach

After initial discussions based on a solution concept from NOL, Infosys detailed out the approach and structure to help NOL retain and transfer IT application knowledge.

Being the primary, and long-term, application maintenance partner to NOL, Infosys had years of experience in managing NOL's IT portfolio. This experience helped Infosys create a “knowledge taxonomy” that was relevant for NOL's IT portfolio, and would help structure, store and retrieve relevant knowledge efficiently.

The solution was designed by Infosys' Learning Services team, which is geared to helping clients win with innovations in learning. The clients' business problem was typical of an “effective knowledge management” problem that companies face across geographies, organizational boundaries or across a demographic divide in the workforce.

Infosys carried out a pilot with one critical application. The objective of the pilot was to test out Infosys' approach, validate the knowledge taxonomy, identify key knowledge areas, capture knowledge from multiple sources – SMEs, documentation and code, and finally, to make the content available in an easy to use knowledge portal.

Several rounds of discussions were performed with the NOL stakeholders and SMEs for efficient requirement elicitation. Through this pilot, Infosys was able to gauge the right depth of the details required by NOL. The relevance of the content was validated with NOL Application SMEs. The finalized content was then rewritten for readability, impact and usability to NOL IT staff.

In the pilot phase, Infosys also created and tested a portal to host all the newly created content to ensure that the users were able to find the content easily and intuitively.

At the end of the pilot phase, the overall process for knowledge capture was reviewed and the scope of the content capture and presentation for any particular application was finalized and signed-off with NOL.

The next step was to identify the list of all critical IT applications that urgently required knowledge capture. Based on the priorities set for each of the applications, the entire set of NOL IT applications was divided into smaller sets to be delivered across multiple phases in the project.

The Infosys Solution

Infosys “Managed Knowledge Transfer” solution was applied to capture the application knowledge, organize and present it to the target audience. The solution involved following stages:

1. **Discover – Understand Business Problem**

Infosys conducted detailed discussions with key stakeholders to gain a deeper understanding of the scope of the knowledge to be captured, identify knowledge gaps, the expected end state, and the future use of the content.

Based on this understanding, a pilot was implemented to demonstrate the approach to capture knowledge and present it through a knowledge portal. This helped in attaining a clear understanding of the challenges associated with the approach and to define the knowledge capture and transfer process. The approach was validated and approved by NOL stakeholders.

2. **Capture**

Templates were created to define the application knowledge areas that would be captured for each application. Based on these templates, Infosys SME created the knowledge documents for each application, leveraging their domain and application knowledge.

The documents were shared with NOL SMEs for review to ensure correctness of the captured content. Feedback and suggestions were discussed with NOL SMEs and the knowledge documents were accordingly updated. The content was marked ready for publishing after the sign-off from NOL SMEs. This process ensured that the efforts of NOL SMEs were optimally utilized without compromising their core activities.

3. **Refinement and Consolidation**

The knowledge documents were further refined to ensure language correctness and aligning it to the target audience needs. The documents were further consolidated to ensure consistency across the suite of applications.

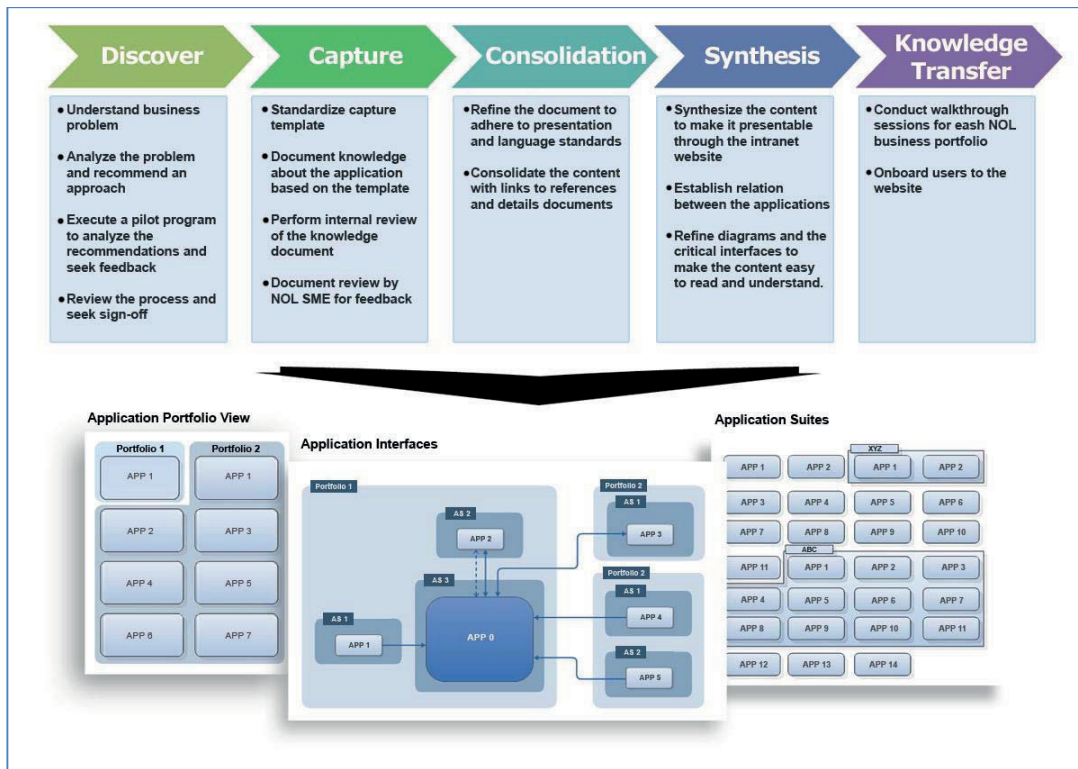
4. **Synthesis**

The captured knowledge was further synthesized by Infosys to present it through a knowledge portal hosted in the NOL intranet. The knowledge portal offered a birds-eye view of the overall NOL application landscape covering the application portfolios, the suite of applications and the respective application details. The content from the knowledge documents were published to HTML files after applying the style-sheets approved by NOL. Interactive flash diagrams were created to establish the relationship between the applications and present context specific information.

5. **Enabling Knowledge Transfer**

Infosys conducted structural walkthrough sessions of the knowledge portal for each NOL portfolio. The target audience included the IT and business staff at NOL along with the SMEs. Feedback was collected through surveys and questionnaires to gauge the end-user experience and the utility of the captured knowledge.

The solution was rolled out in multiple phases. Each phase covered the Capture, Refinement and Consolidation and Synthesis stages.



Client Speak....

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As the project sponsor, I am very pleased with the outcome of this strategic initiative. Infosys has built a high quality system that enables NOL Group IT to manage a sustainable application knowledge management process. This is a significant achievement for the NOL Group IT.

Seah Thiam Siong, Director, IT - Governance, NOL

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The information on our applications and the interfaces between them has been captured and presented in a website in a nicely structured manner with drill-downs providing as much detail as required for different users. This information is helping in our efforts to enhance our application landscape as we can see clearly the dependencies between applications. Having this one-stop and up-to-date reference source is a big help to me in performing my function effectively.

Pervez Kazmi, Director, Enterprise Architecture, NOL

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Benefits

NOL stakeholders acknowledged the benefits of the Application Knowledge Portal:

- **Reduced SME dependency:** The Application knowledge Portal is a central repository of all IT application knowledge at NOL. The portal provides references to detailed documents like Application Knowledge Documents (AKDs), user manuals and jobs flow associated with the applications. It also presents the relationship between applications. As the required knowledge is already captured in the portal, the dependency on the SMEs has reduced. The impact due to SME turnover is also minimal.
- **Easy knowledge dissemination:** The Application Knowledge Portal provides an interactive and user friendly way of presenting application knowledge on the NOL intranet. It is being used for conducting application training and knowledge transition activities. NOL IT staff can use the portal as a reference to assist them in their core activities.
- **Easy decision making for the REMODEL programme:** The Application Knowledge Portal captures and highlights the interfaces between IT applications. This has helped NOL in analysing the impact of replacing or decommissioning any application as part of their REMODEL projects in different IT portfolios.



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