



Økt operativ evne gjennom effektiv logistikk



PLCS for Real

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Using PLCS to capture initial product
and support data for the new
Norwegian Frigate

28 September 2007, Farnborough, UK





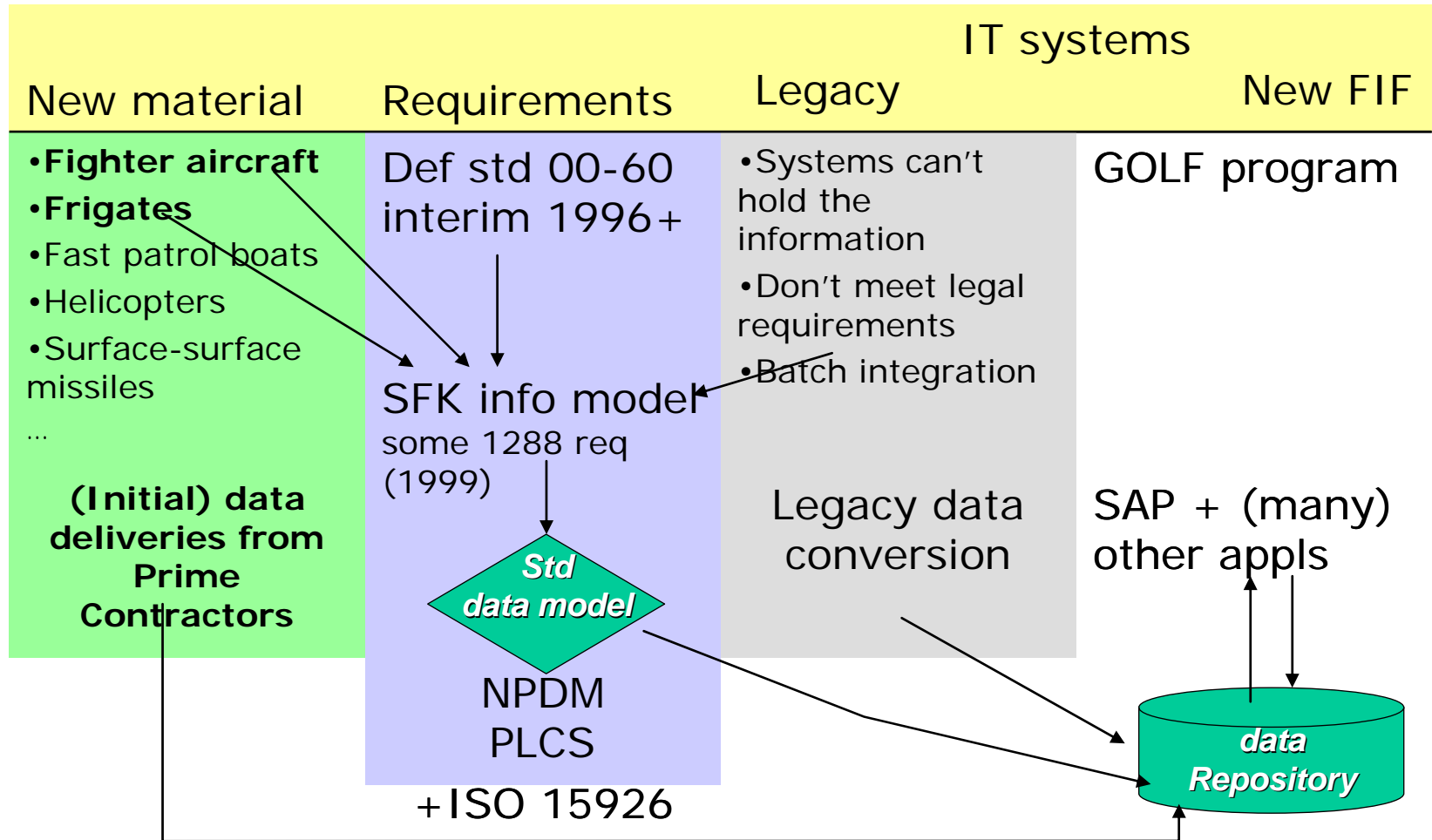
What do we gain using standards?



- Reduced costs related to maintenance of the standards
- Reduced costs through reduced number of proprietary translators
- Enhanced quality through
 - Mapping activities
 - Use of reference data (common terminology)
 - Requirements for use of formal notation and rules
 - Through life information integration (as opposed to today's fragmented approach)
- Increased interest and focus from suppliers/sub-contractors through projects like NASAMS II
 - Some suppliers have changed their systems/routines as a result of the PLCS requirement from NDLO



Background





Policy statement on PLCS



- Policy statement on PLCS:
 - ISO 10303-239 (PLCS) is to be used for all external information exchange for the areas covered by the standard
 - Applies to all new projects from July 2004
 - On-going projects to be considered on a case-by-case basis taking information quality, time and cost into consideration
 - PLCS is a design parameter for the new ERP system provided by the GOLF/LOS program
- *NDLO's strategy is not for one standard but for a set of compatible standards to address the full scope of Integrated Logistic Support throughout the entire lifecycle of the product...
Dec 2002*
- Consequences:
 - ISO 10303-239 (PLCS) is to be used for all external information exchange for the areas covered by the standard
 - SCORM is to be used for electronic training information
May 2006
 - S1000D is to be used for electronic documentation



NDLO Policy Statements



- NDLO has identified 112 PLCS relevant projects the next 4-5 years
- Overall objective to move from a 'fragmented' situation to an integrated approach through use of international standards → Common approach for all material acquisition project



ISO 10303-239, ISO 15926 and DEXs are used in the Norwegian Frigate Project to ensure and enhance the Information Quality



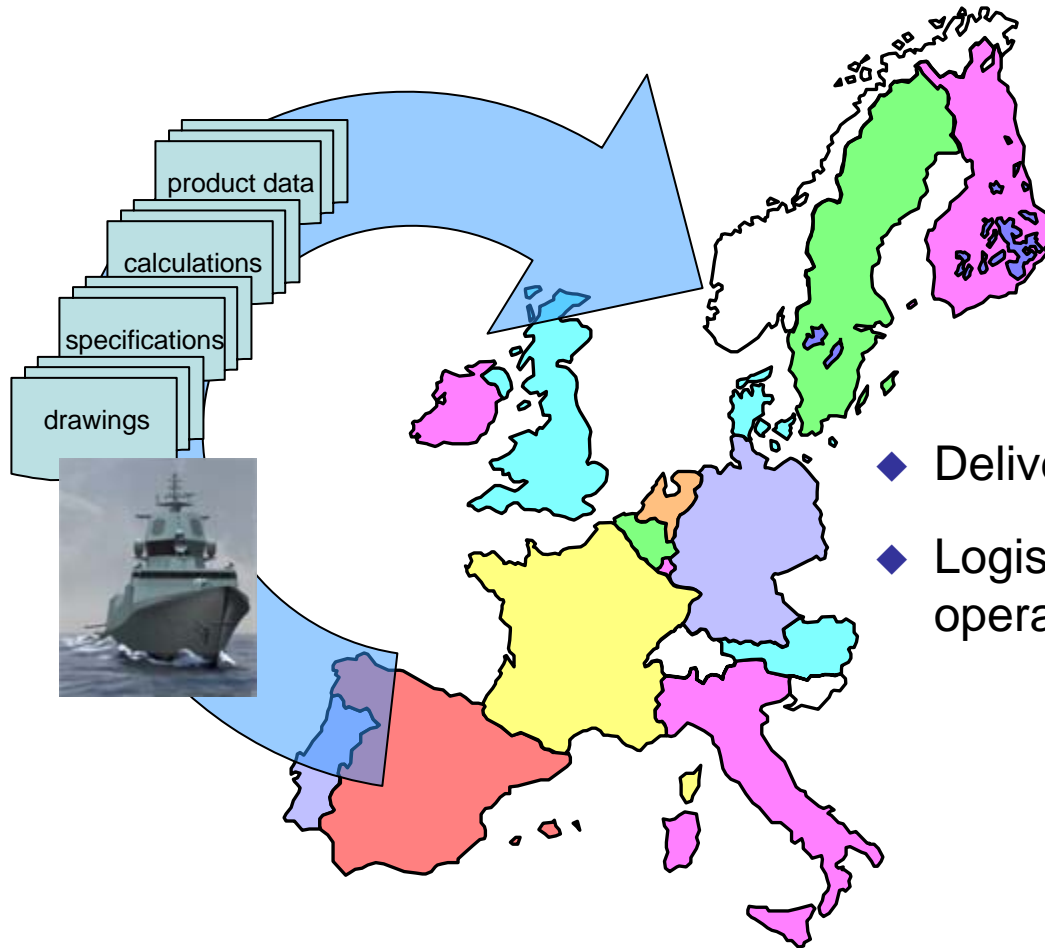
Norwegian PLCS Implementation Projects



The Frigate Project



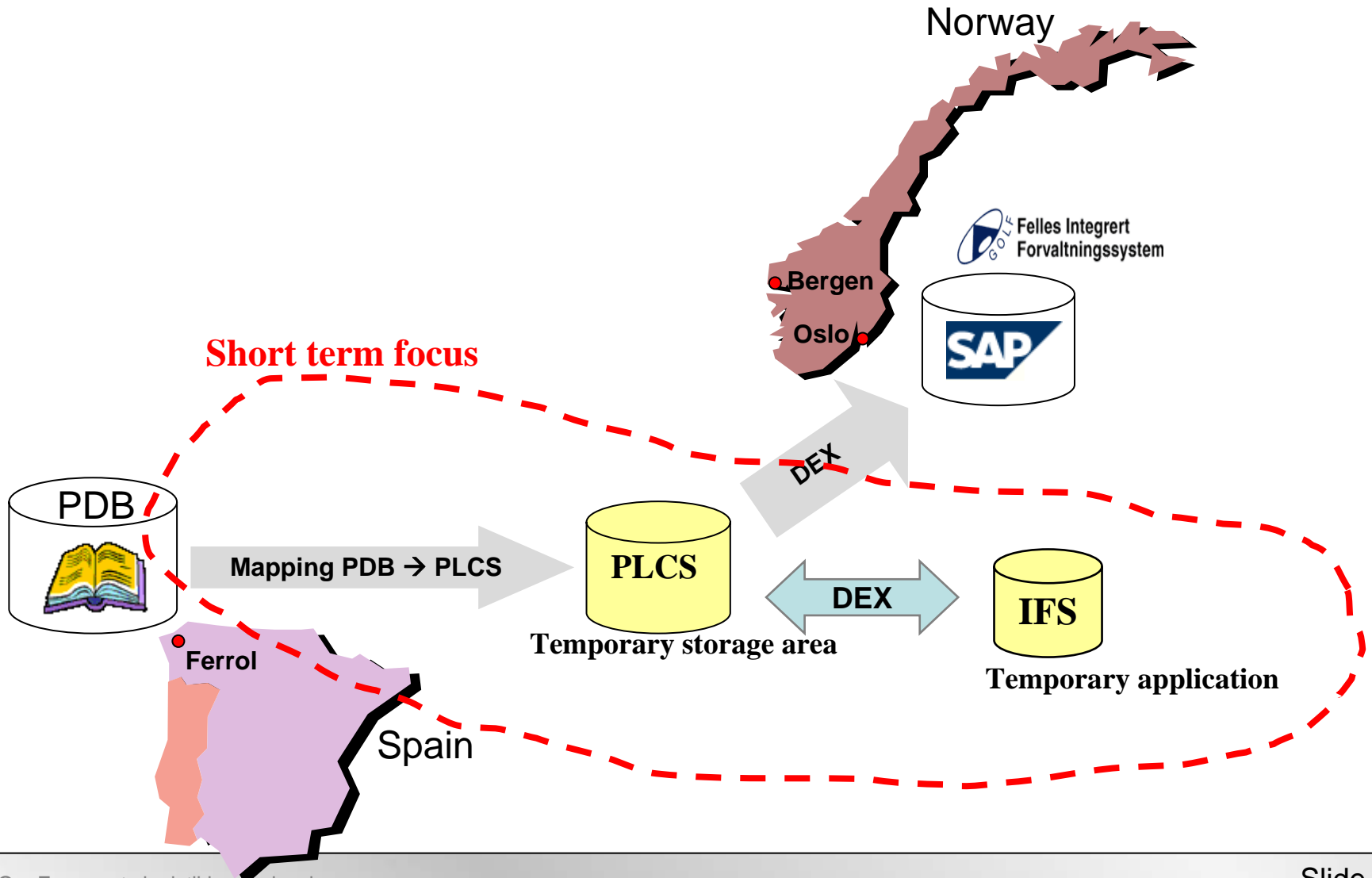
Current Projects – Frigate Acquisition



- ◆ Deliveries from June 2006 to 2010
- ◆ Logistics support applications in operation in March 2006

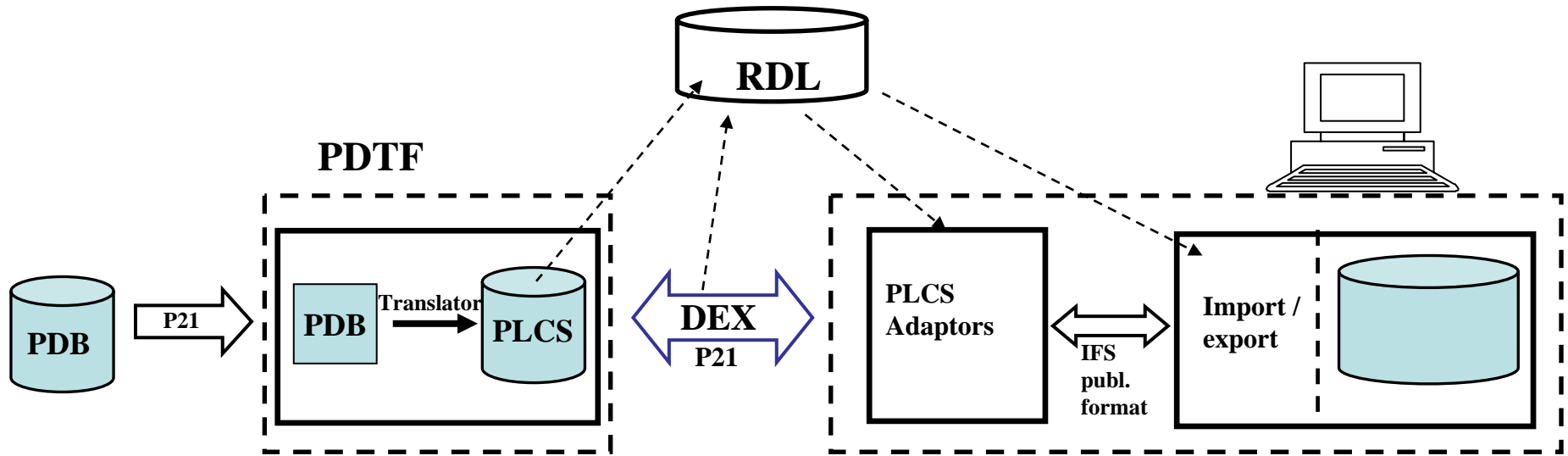


The Pilot – a Temporary Solution





Data exchange between Navantia and IFS





DEXs developed by NDLO

The following DEXs are developed by NDLO:

- Product breakdown structure
- Individual product data
- Maintenance task description and usage
- Part characterization
- Part supply data
- Part usage
- Document

OASIS Documentation environment:

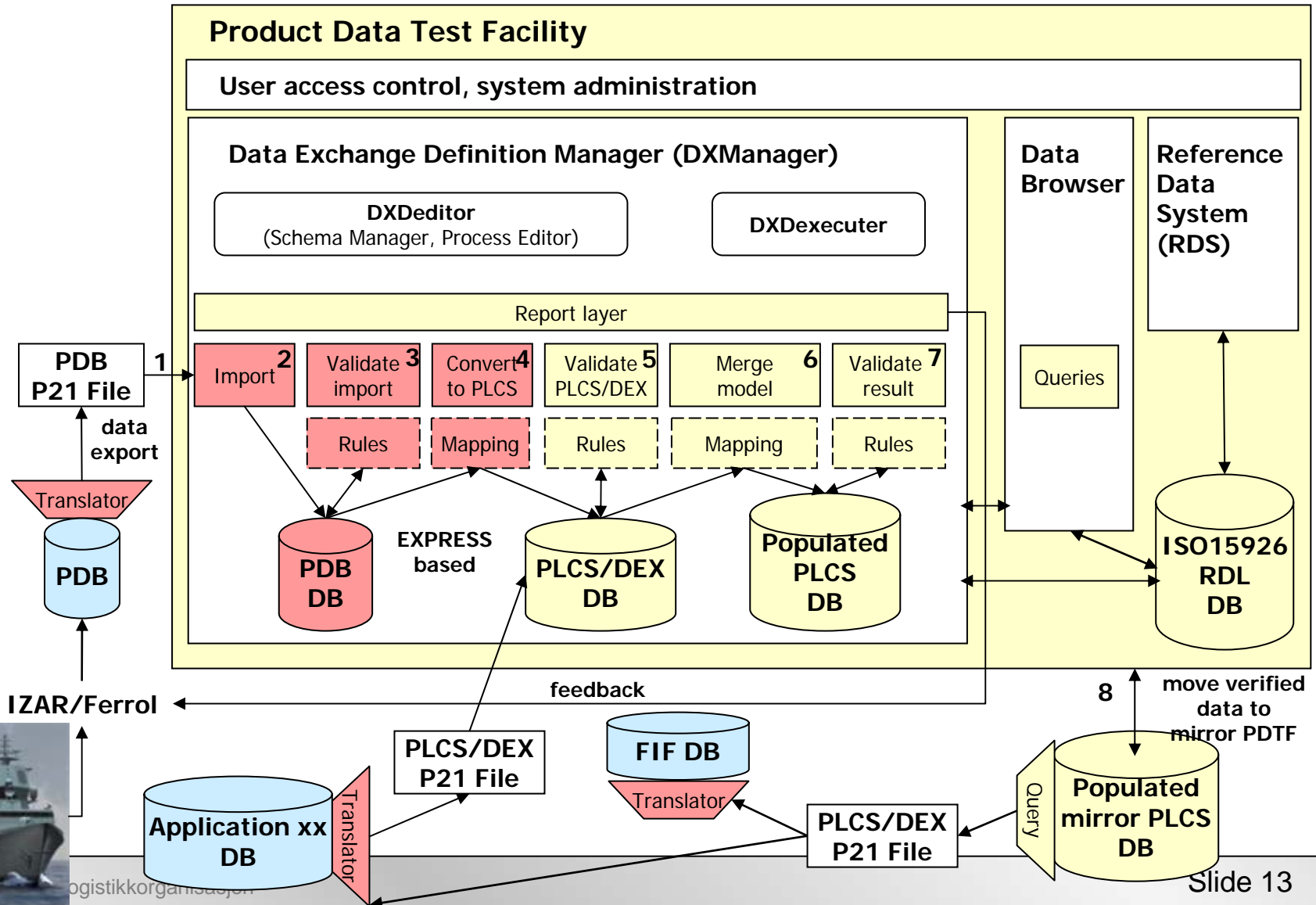
DEXLib <http://www.plcs-resources.org/>



The Implementation Environment



PDTF – applied to NDLO Frigate programme





- ISO 10303-239 and ISO 15926 are used in the Norwegian Frigate Project to ensure and enhance the Information Quality
- Example of results from Data Validation:

<i>Error types</i>	<i>No. of cheks</i>		<i>No. of errors</i>		<i>% of Errors</i>	
	<i>First</i>	<i>Latest</i>	<i>First</i>	<i>Latest</i>	<i>First</i>	<i>Latest</i>
<i>Referential Integrity</i>	<i>1.728.872</i>	<i>2.889.052</i>	<i>355.502</i>	<i>47.016</i>	<i>20.6</i>	<i>1.6</i>
<i>Legal Values</i>	<i>317.025</i>	<i>740.385</i>	<i>10.789</i>	<i>70.978</i>	<i>3.4</i>	<i>9.6</i>
<i>Unique PrimayKey</i>	-	-	<i>56</i>	<i>356</i>	-	-
<i>String Length</i>	-	-	<i>18</i>	-	-	-
<i>Illegal Characters</i>	-	-	<i>9</i>	<i>7</i>	-	-



The Challenges



Implementation Challenges



- Understand the PLCS model and the DEX architecture
- Understand P21 and EXPRESS
- Reference data
- Business domains and work processes
- Source and target models
- Mapping according to PLCS standard
- Coding
- Testing
- Data validation



Other PLCS work



Other PLCS work



OPDIM

Open Product Documentation and Information Management

NOLITO

Nordic Open Logistics IT Office



P2529 PLCS



Process

Establish and realize requirements for information elements to sustain the logistics processes, based on the SFK-Information model.

To be carried out in close cooperation with the responsible parties for the respective processes, through their Process Change Control Boards.

Metode

Main deliverable is methods for exchange of logistics related information.

LCS (ISO 10303-239) will be functionally enhanced mainly by linking in other international standards.

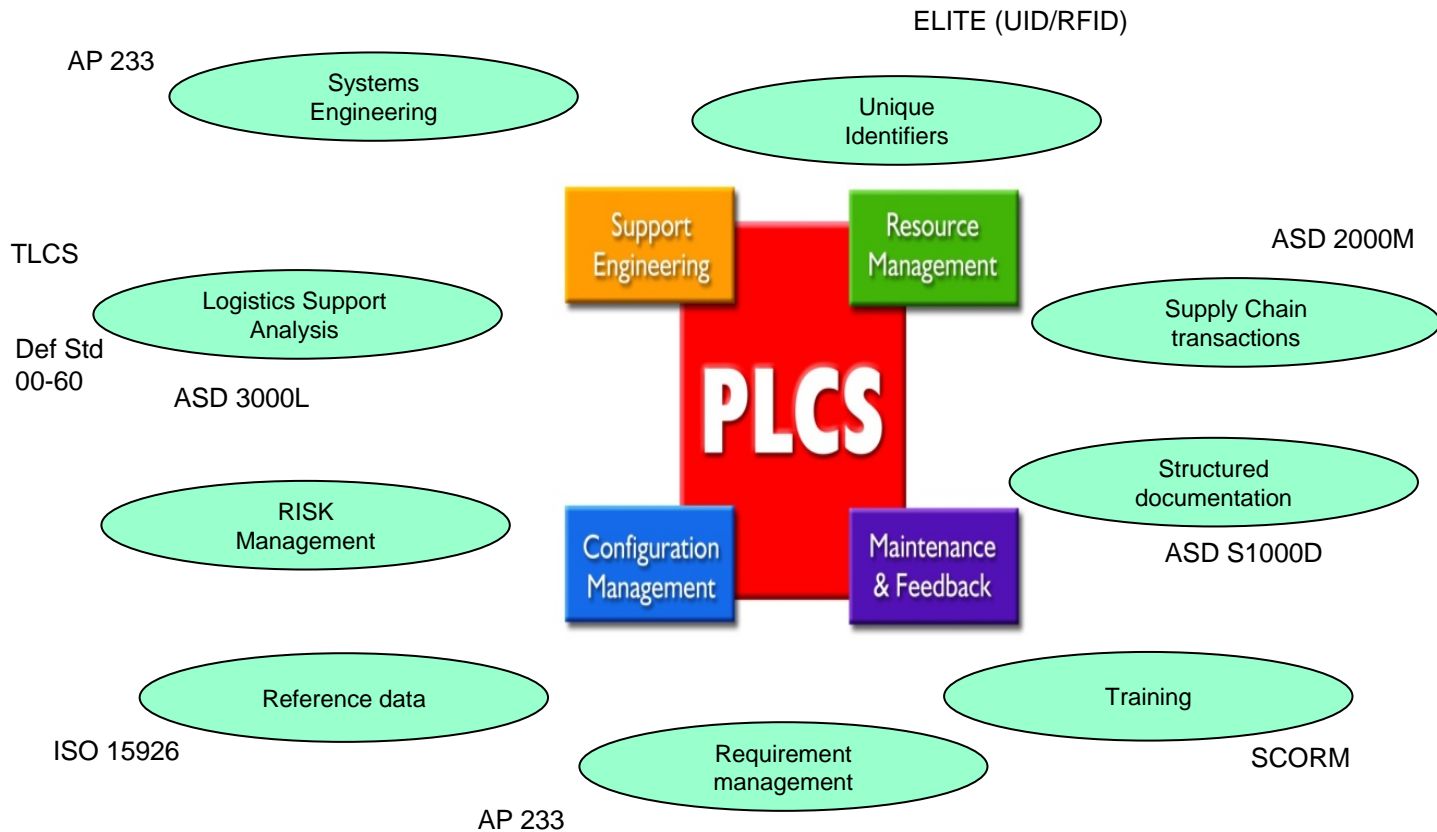
Tools

Some expert tools will be enhanced, developed and implemented for support of various SE, ILS and IM analysis.

Coordination with LOS to ensure FIF implementation
of P2529 deliverables



P2529 scope



**48 months, 75 MNOK+
Awaiting start-up order**