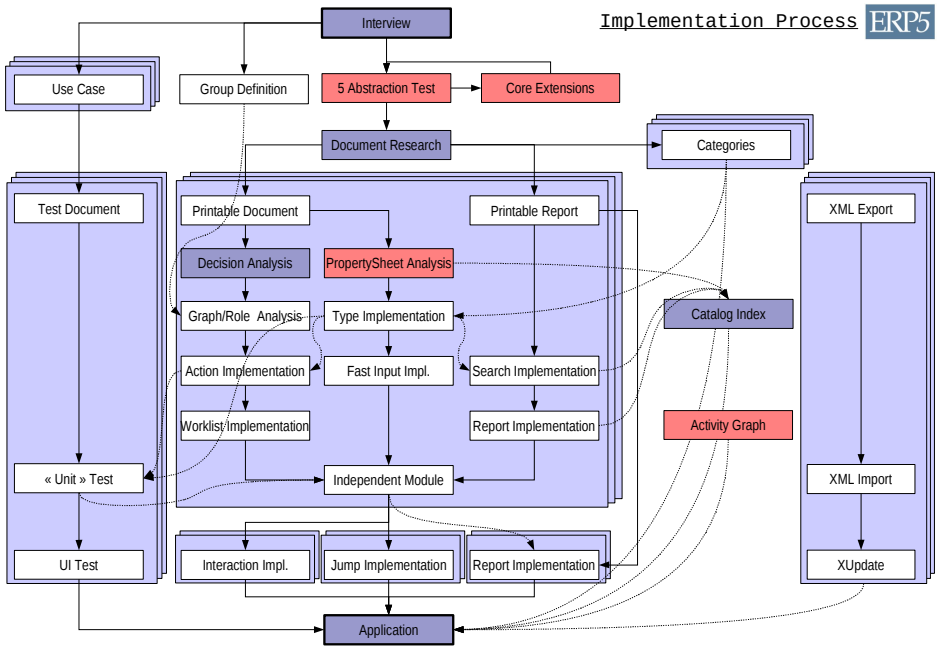
ERP5 Implementation

This guide will teach you:

- The ERP5 concurrent implementation process
- How to plan the implementation of a typical project
- How to implement Project Analysis & Planning



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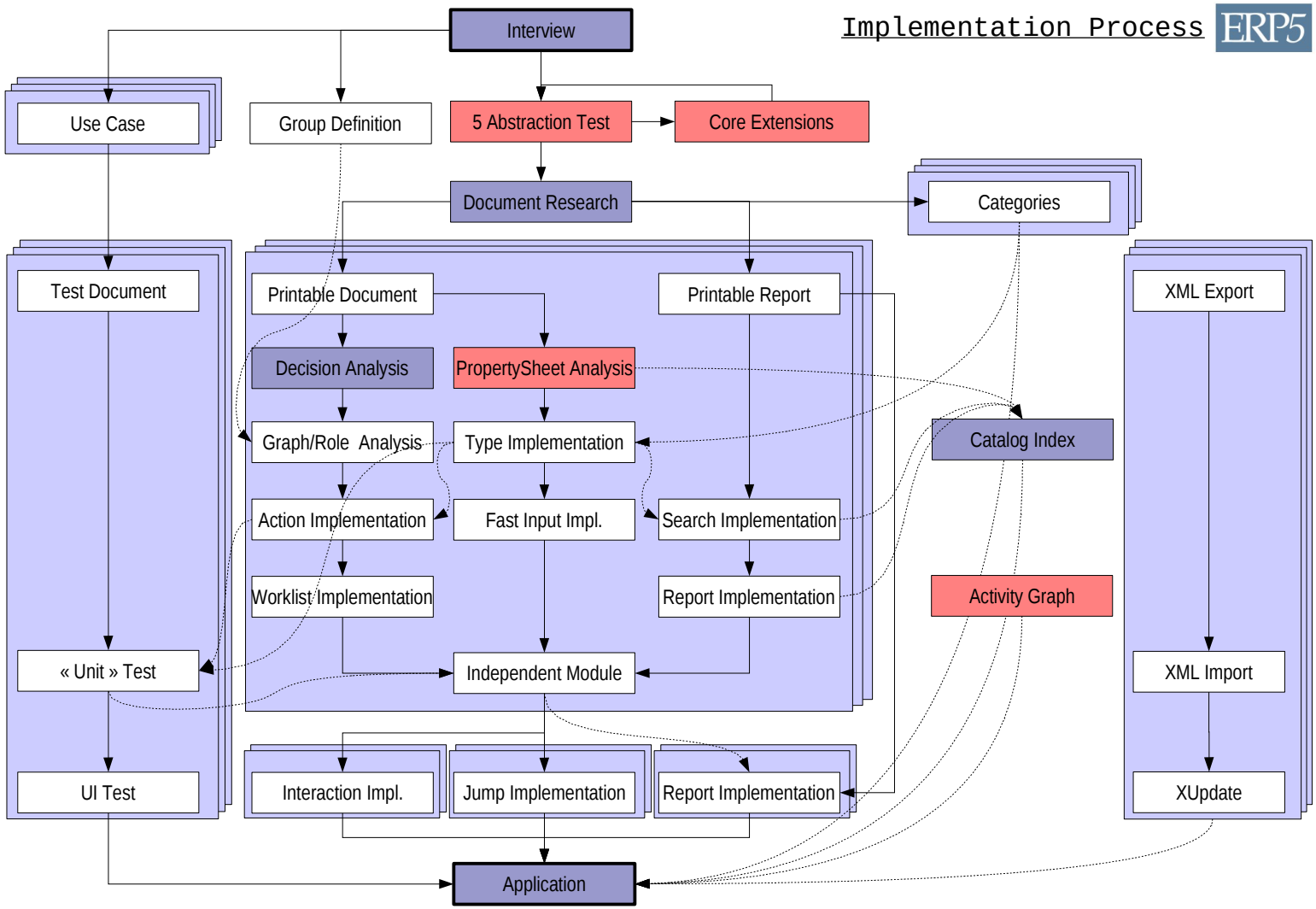
ERP5

ERP5 Implementation Process



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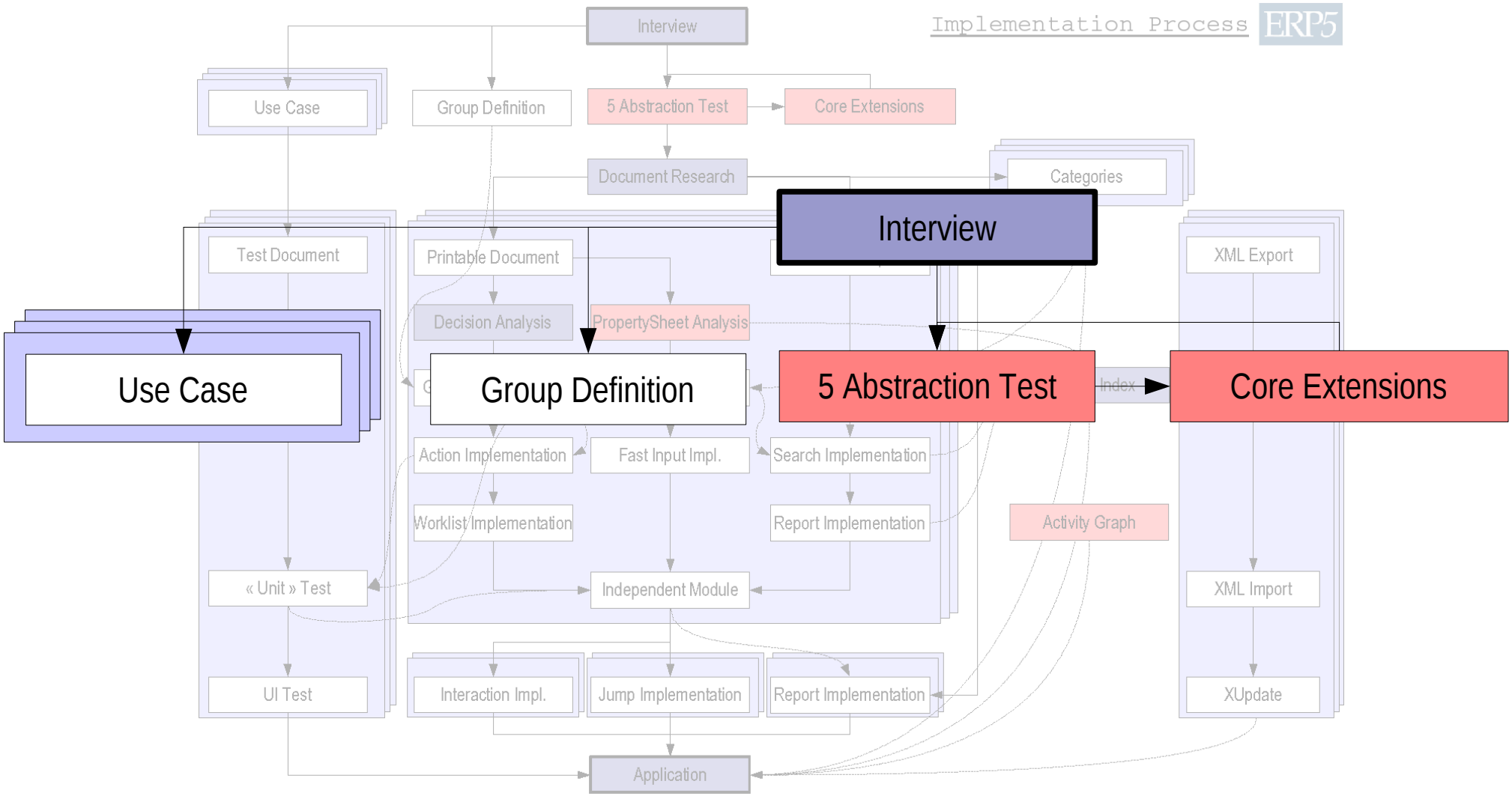
Interview



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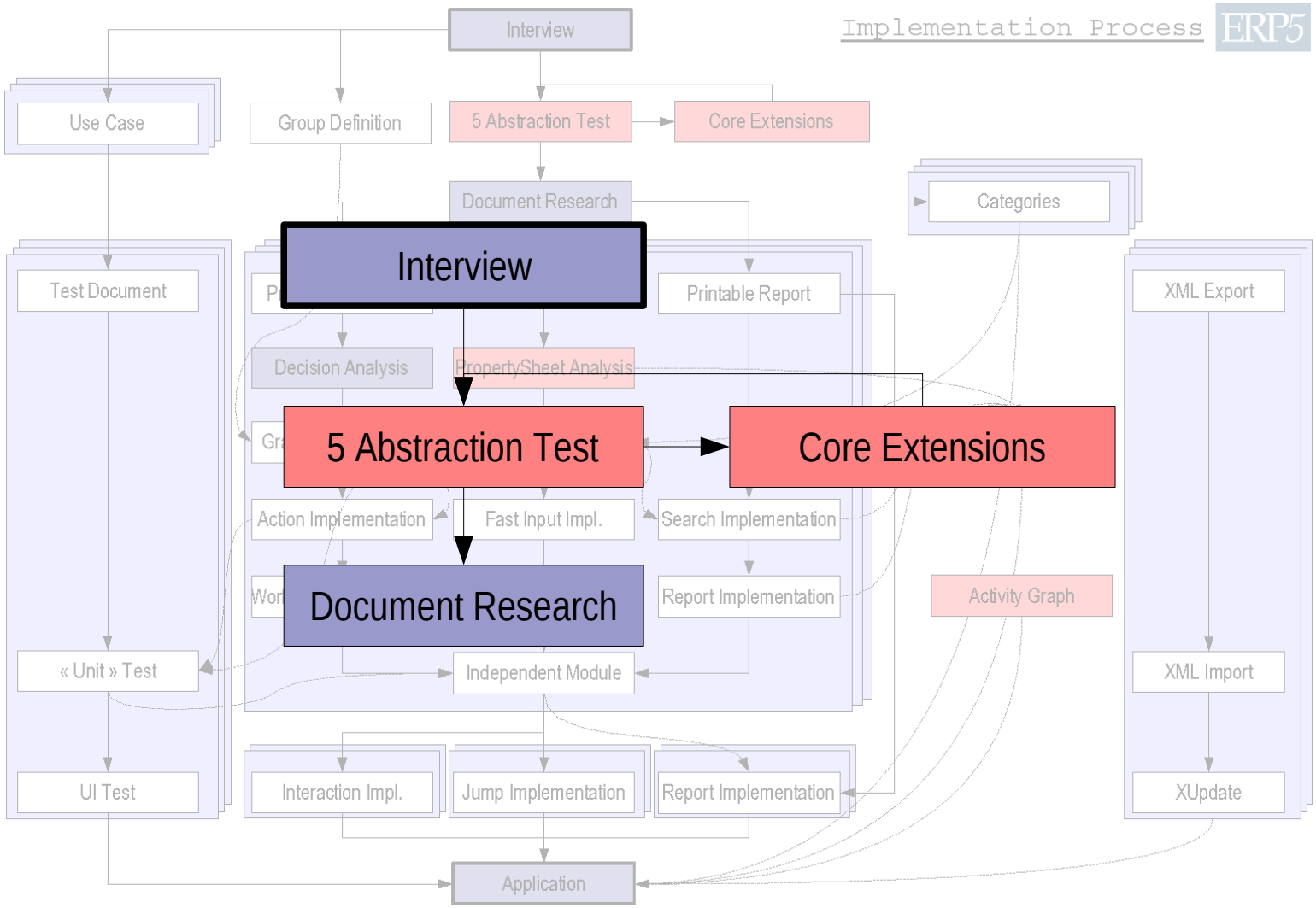
5 Abstraction Test



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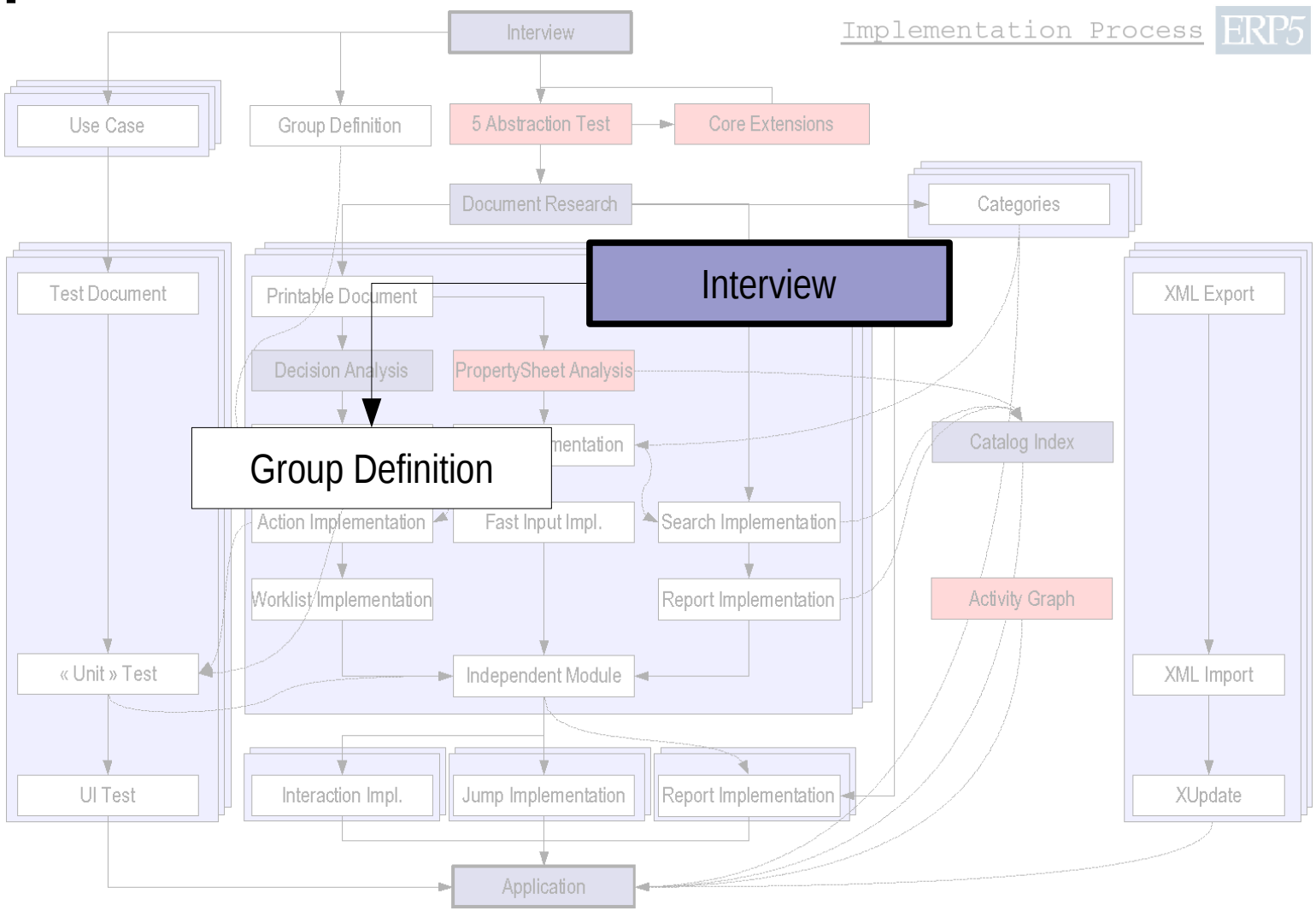
Group Definition



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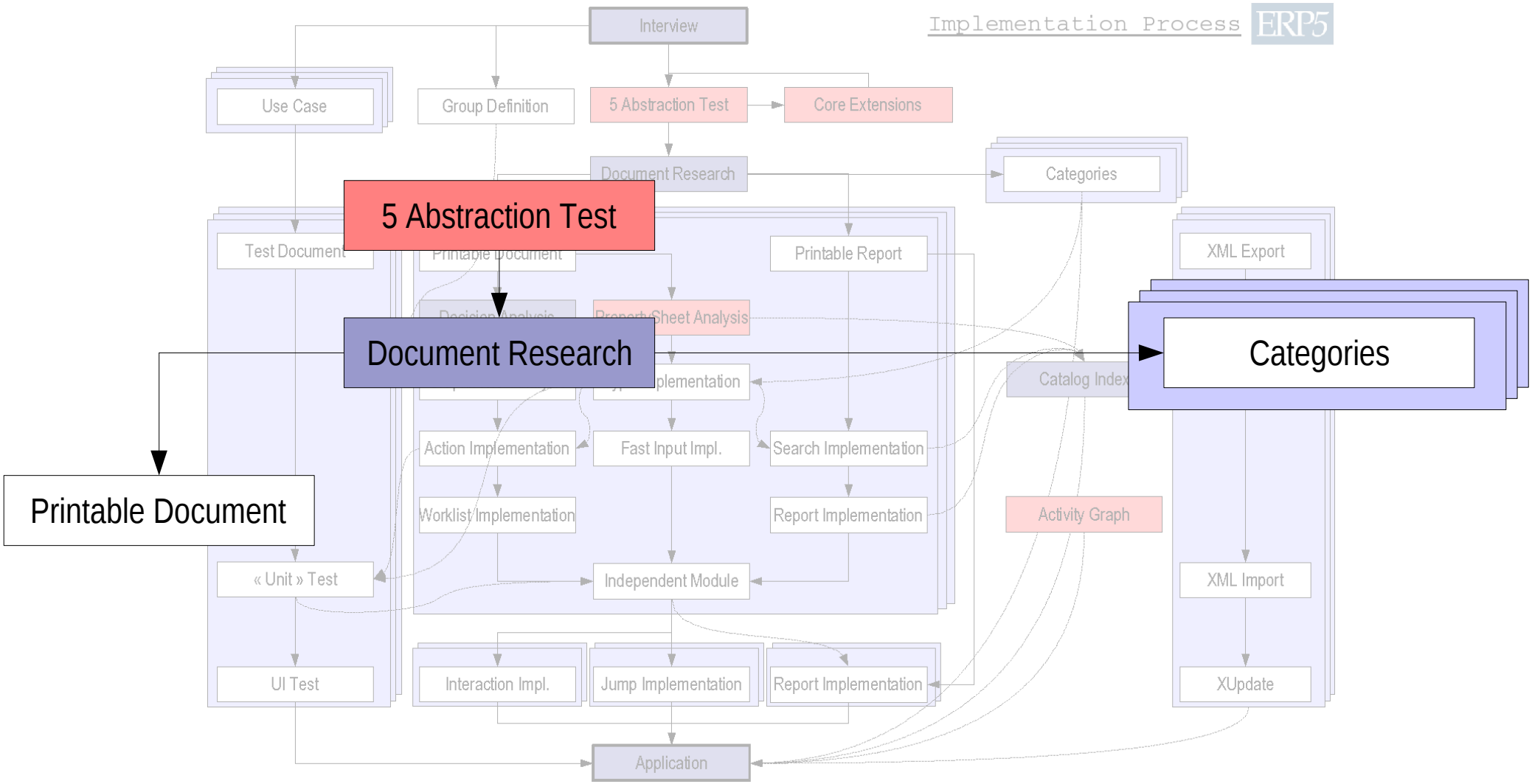
Document Research



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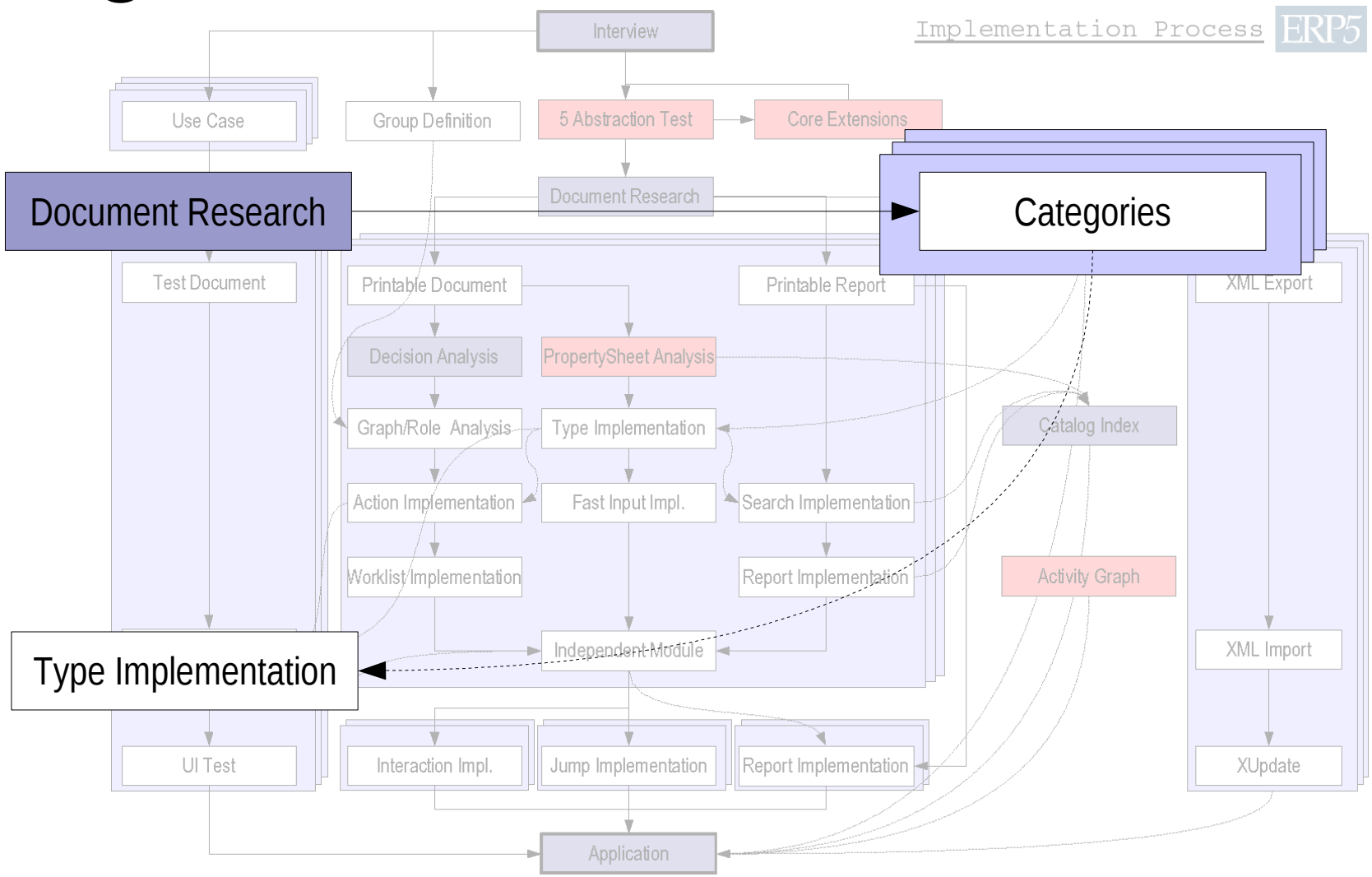
Categories



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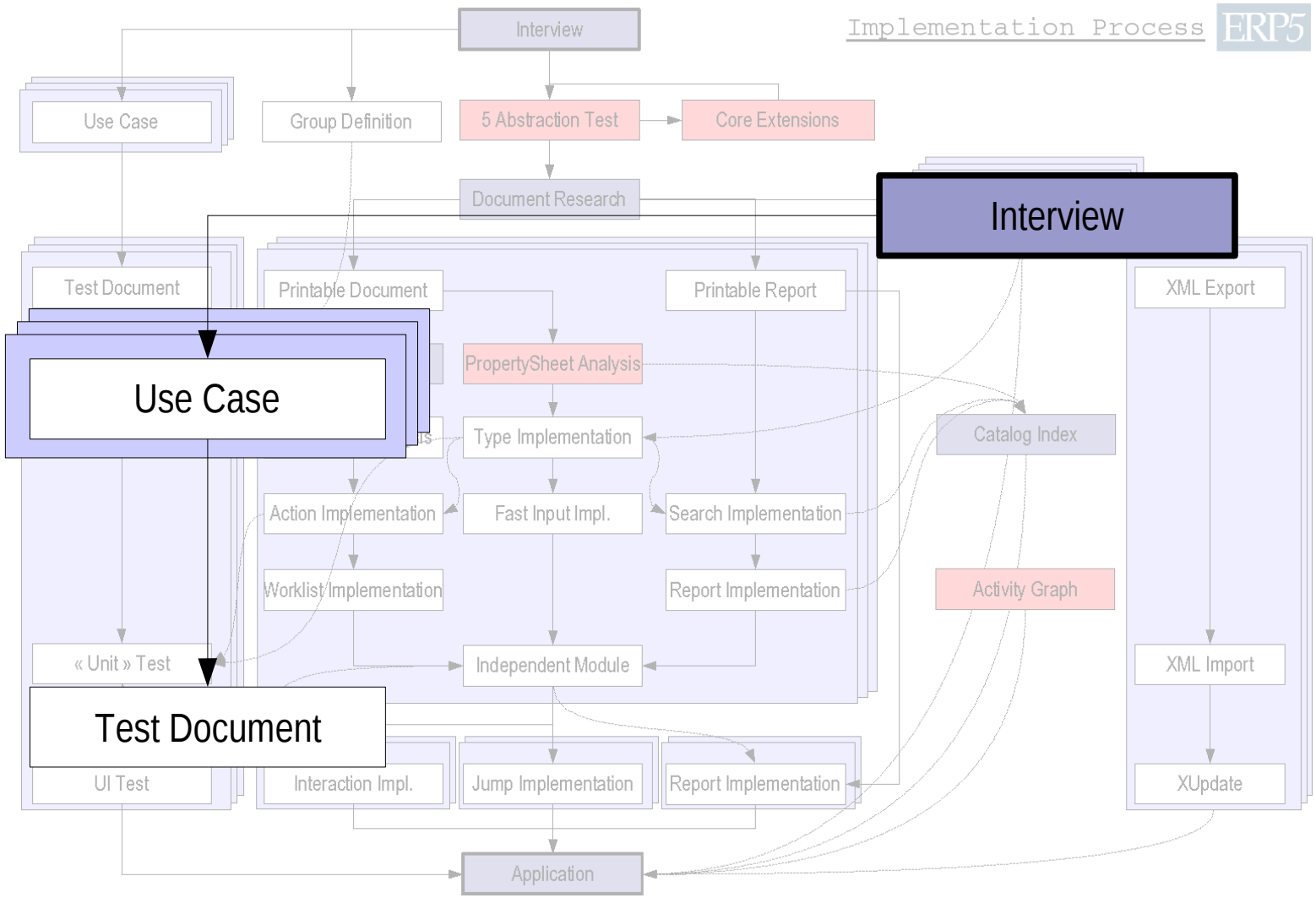
Use Case



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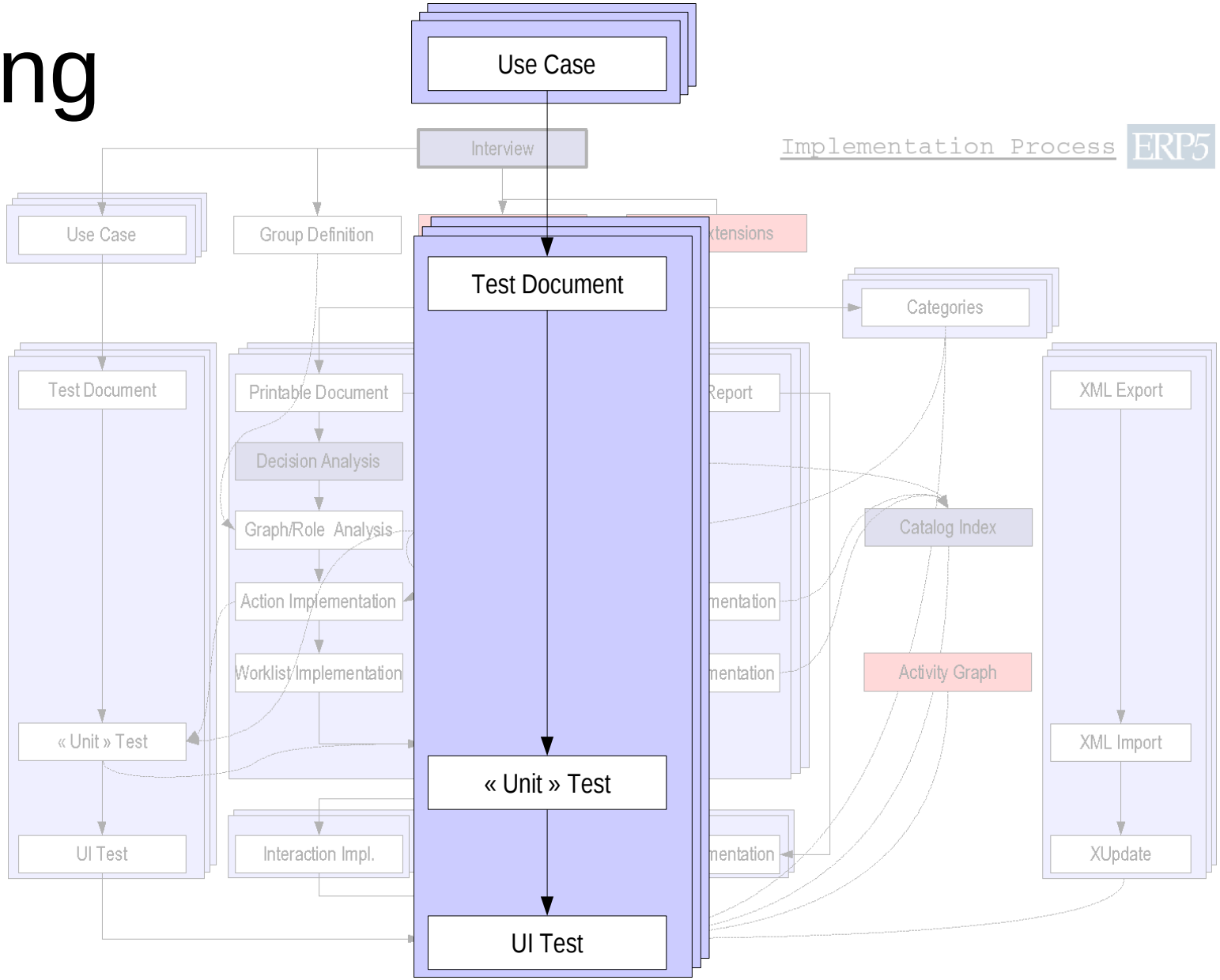
Testing



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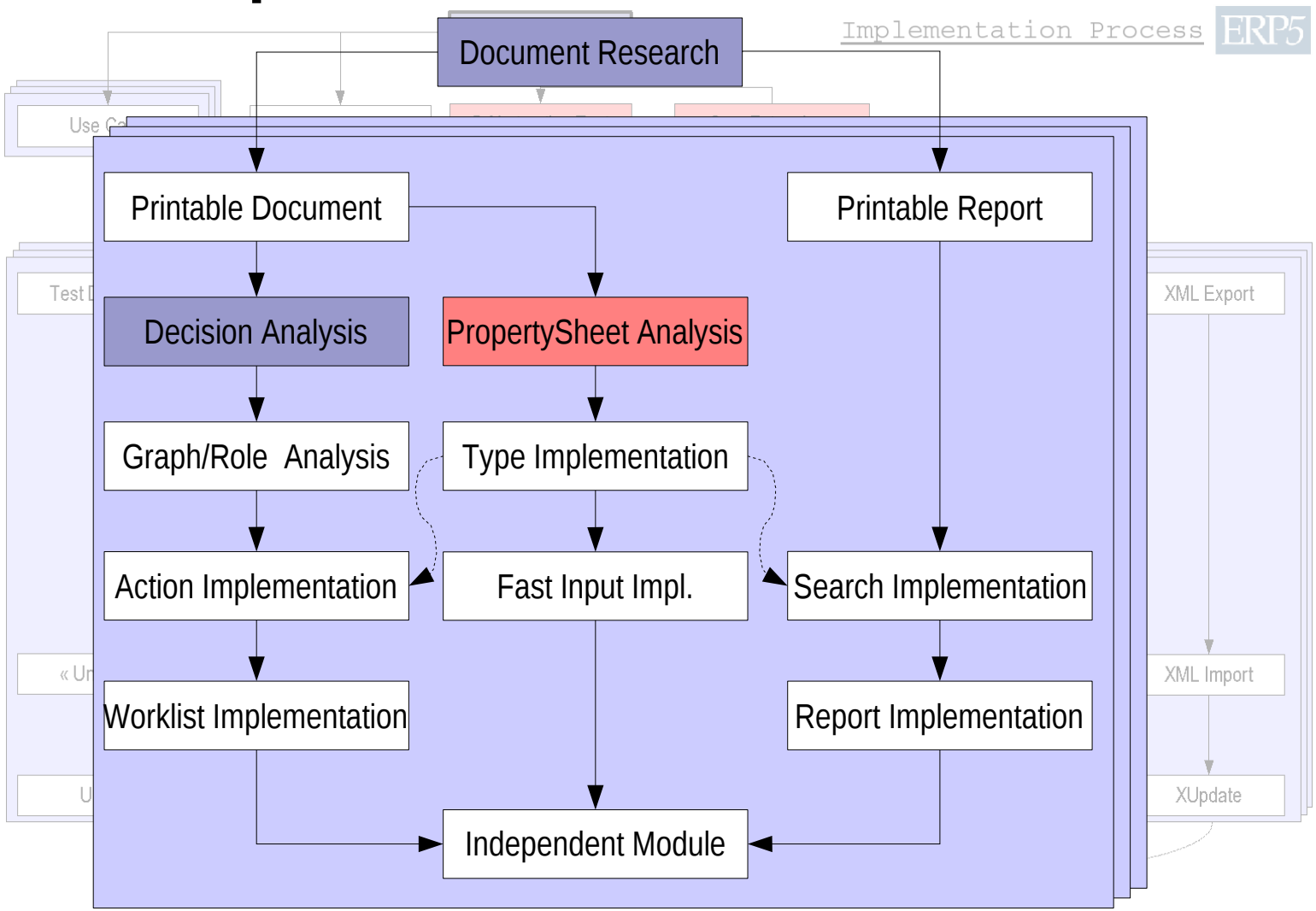
Module Implementation



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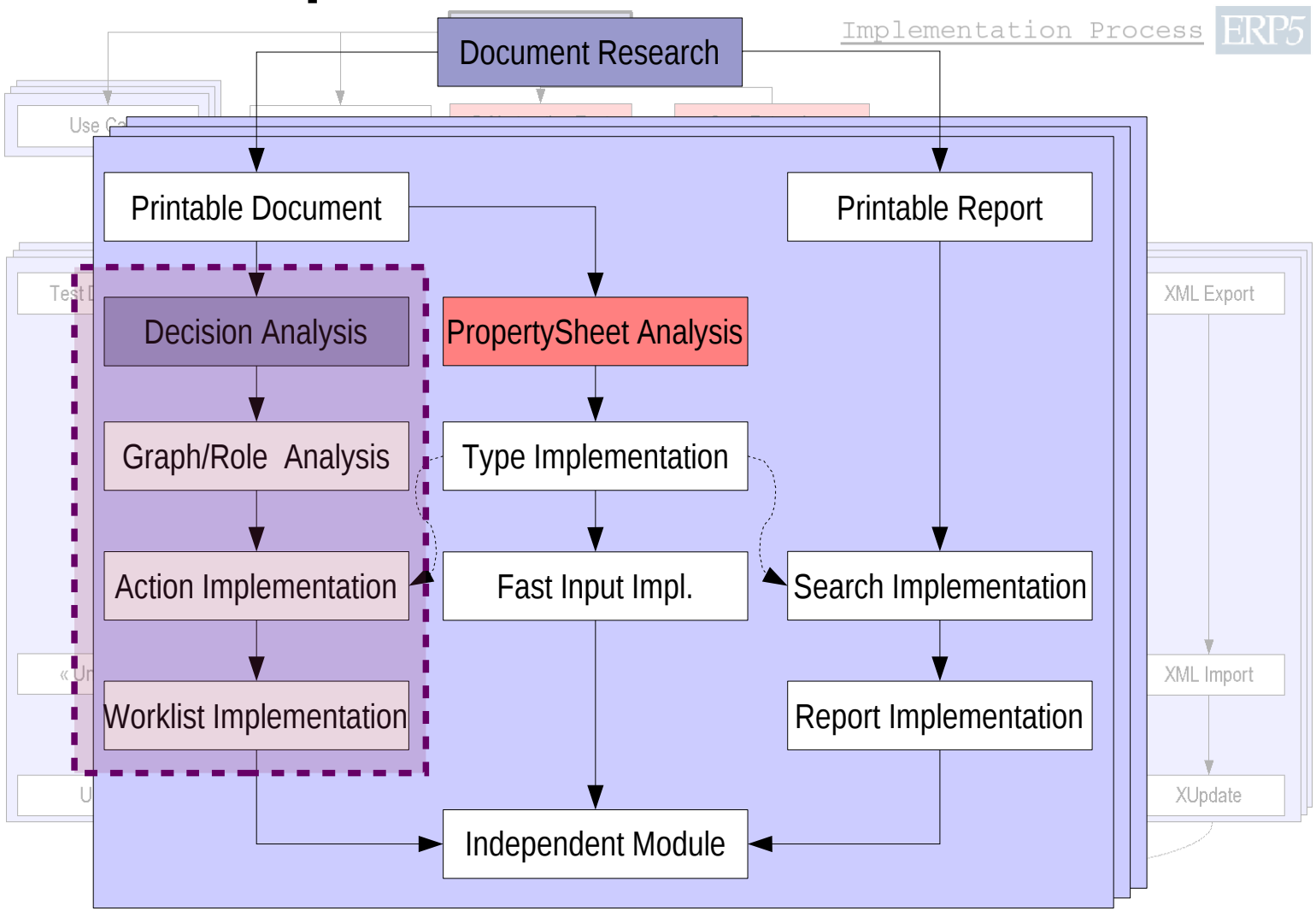
Decision Implementation



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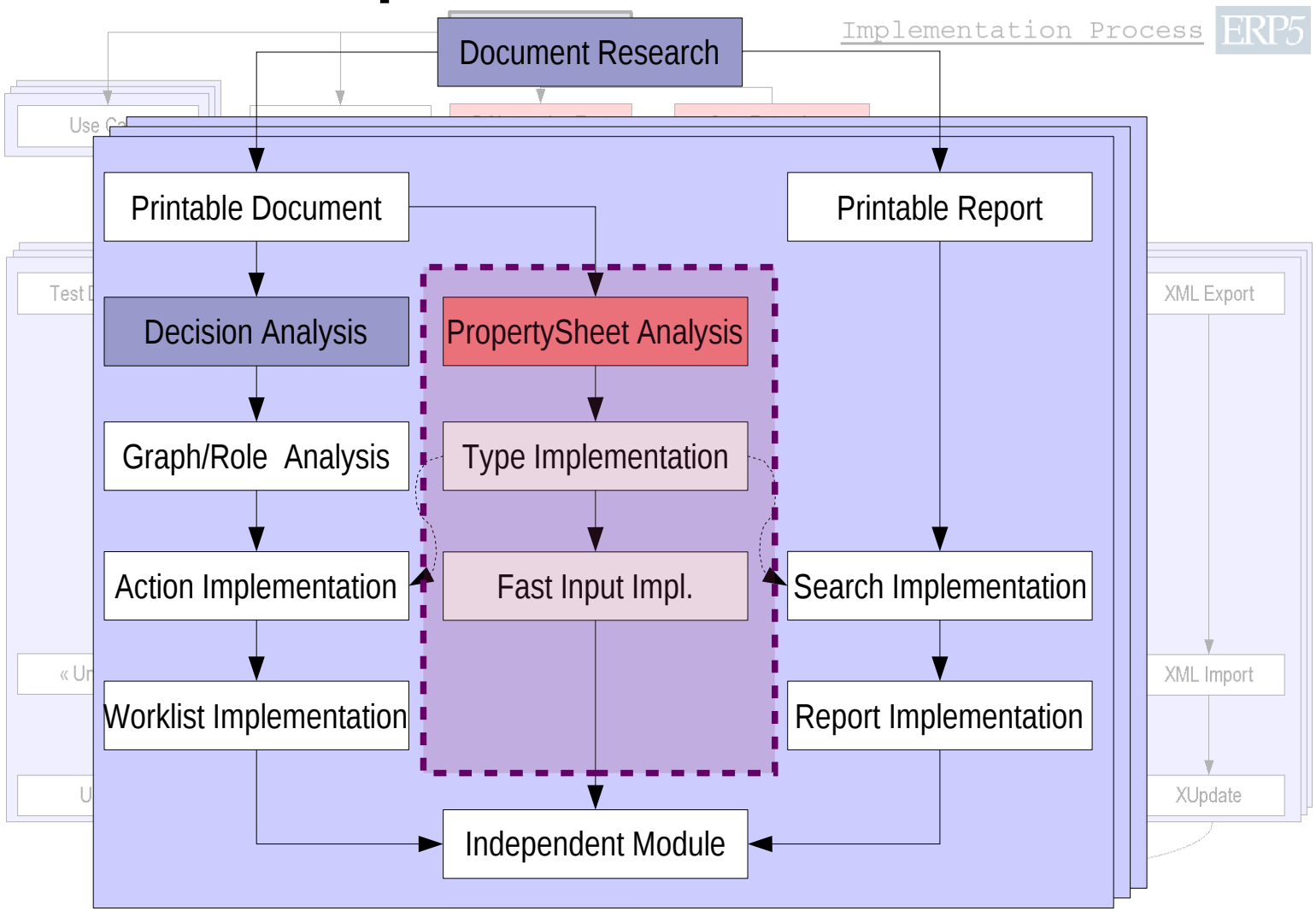
Document Implementation



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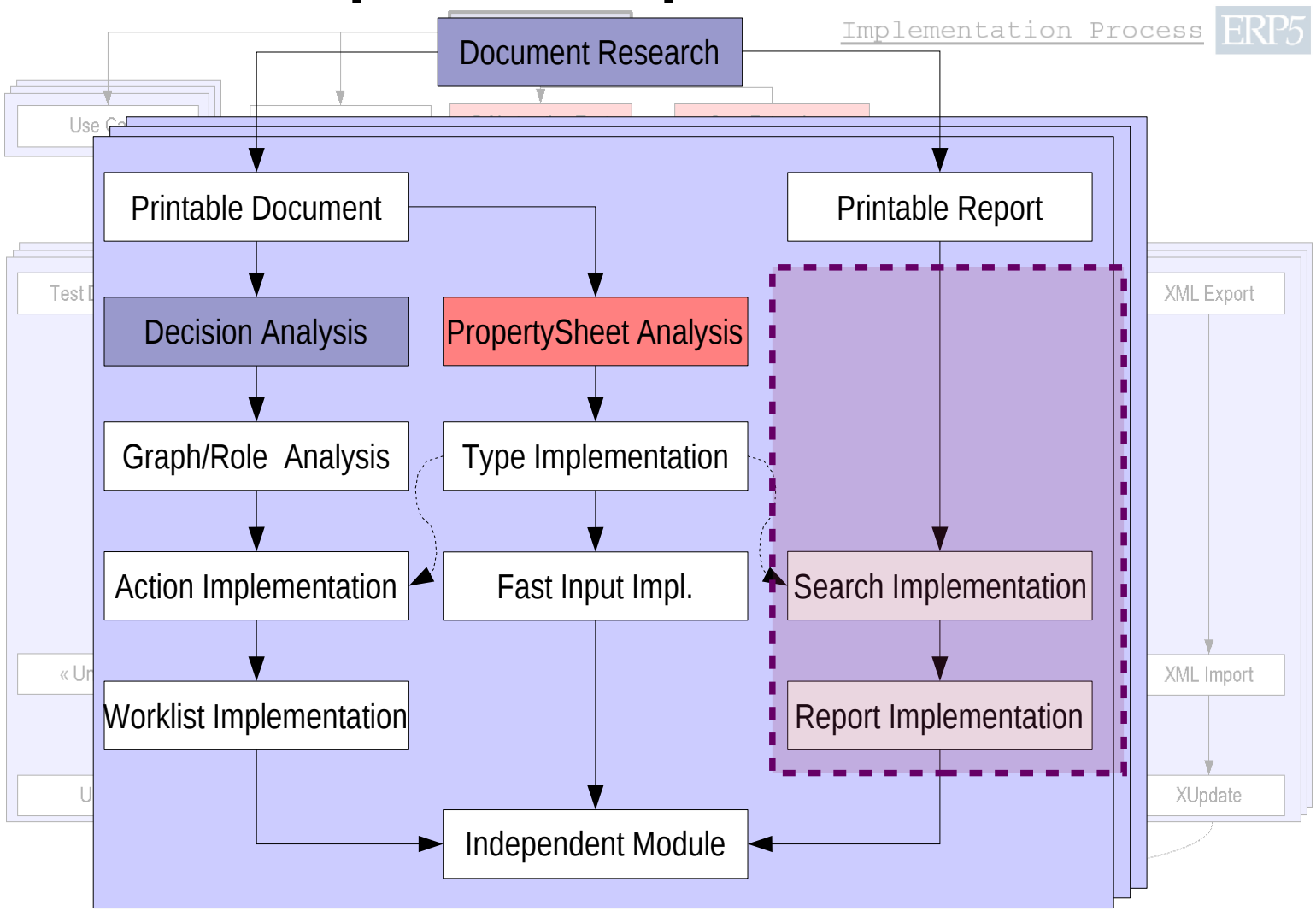
Search & Report Implementation



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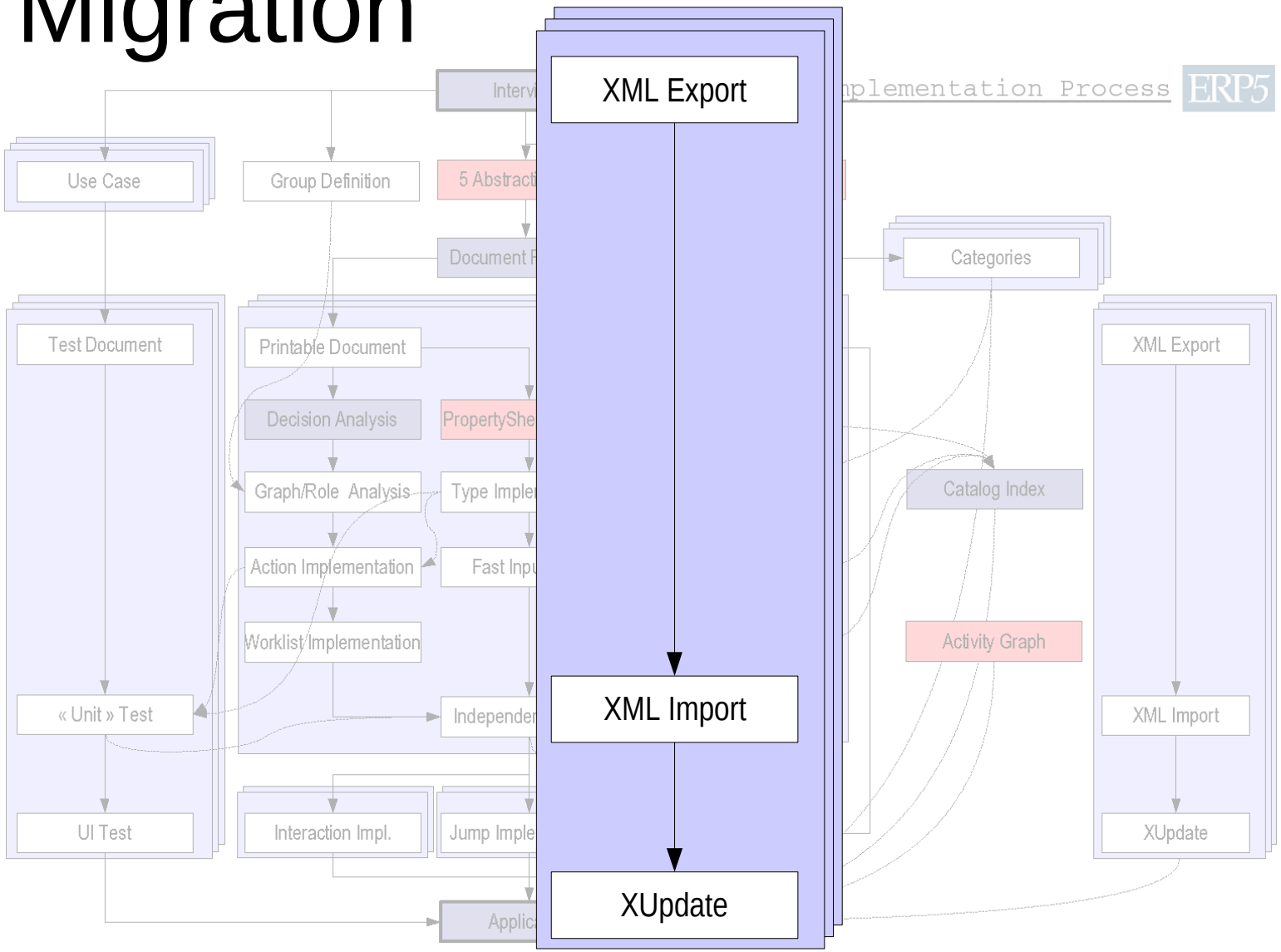
Data Migration



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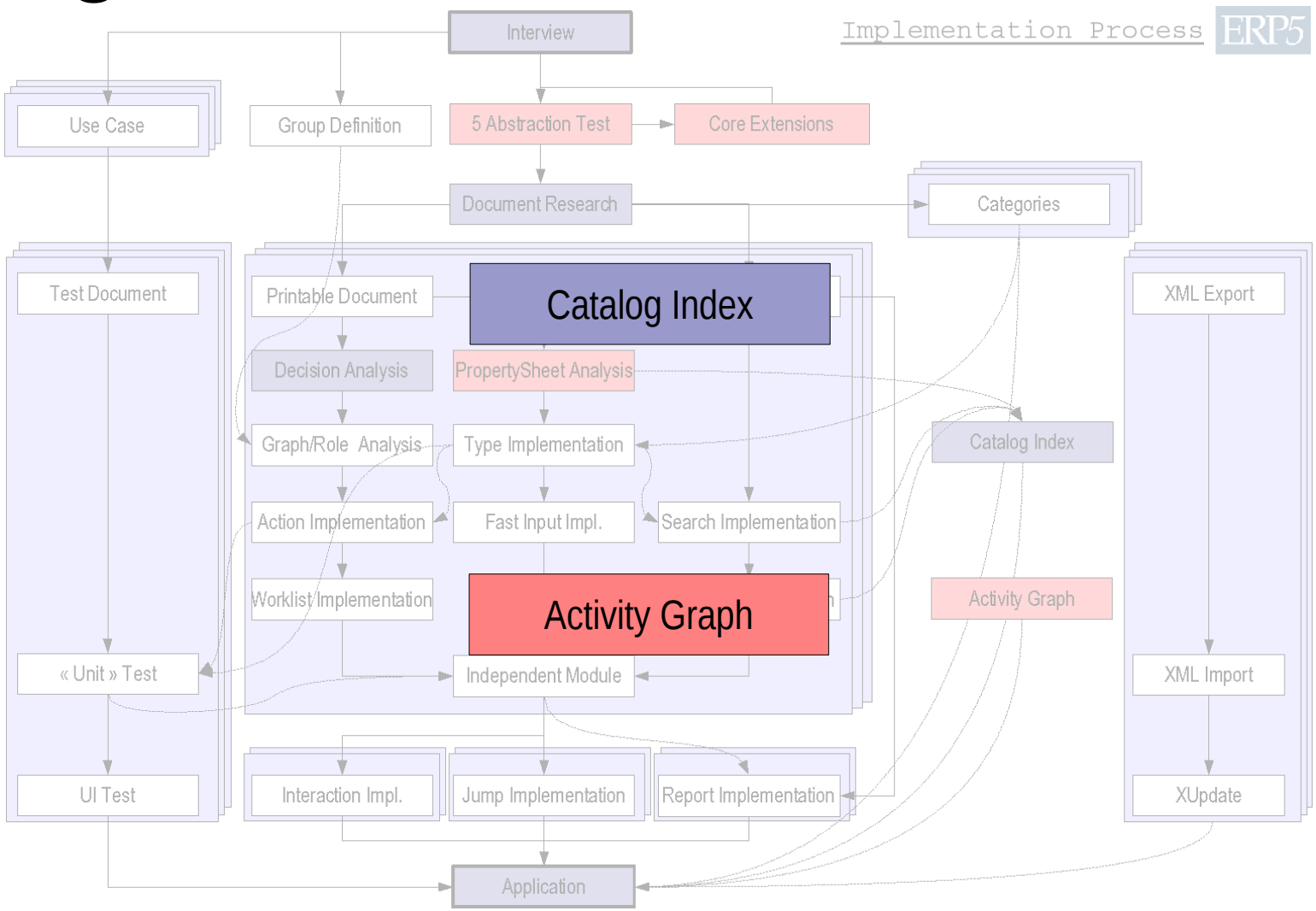
Catalog & Activities



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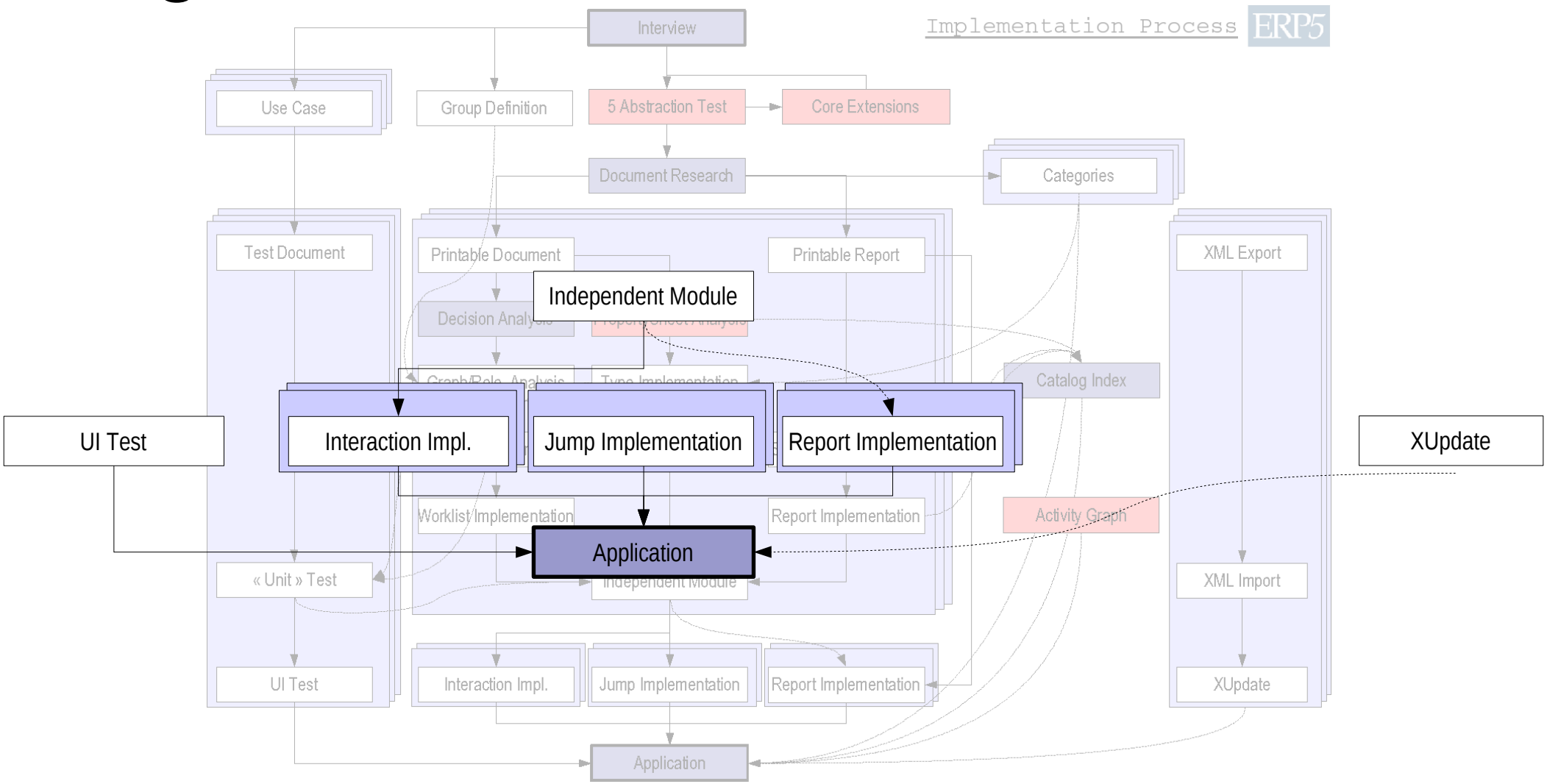
Integration



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ERP5

Implementation Plan

	Date	Nexedi	Partner / Client
Pre-project	September September October	Interview 5 Abstraction Test Plan Proposal	Interview
Initial training	January	1 Week Technical Training	1 Week Technical Training
Implementation	January February March April May June	Generic Module 1 Generic Module 2 Generic Module 3 Generic Module 4 Generic Module 5 Generic Module 6	Custom Module 1 Custom Module 2 Custom Module 3 Custom Module 4 Custom Module 5 Custom Module 6
Production	July August-December	Optimisation Support	Hardware upgrade

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ERP5

Implementation Plan (2)

	Date	Nexedi	Nexedi	Partner / Client	Partner / Client
Pre-project	September	Interview		Interview	
	September	5 Abstraction Test			
	October	Plan Proposal			
	November	Use Case	Document Research	Use Case	Document Research
Initial training	December	1 month technical training	Analysis	1 month technical training	1 month technical training
Implementation	January	Import 1	Test 1	Module 1	Module 2
	February	Import 2	Test 2	Module 3	Module 4
	March	Import 3	Test 3	Module 5	Module 6
	April	Integration	Test 4	Module 7	Module 8
	May	Integration	Test 5	Module 9	Module 10
	June	Optimisation	Test 6	Module 11	Module 12
Production	July	Optimisation	Support	Hardware upgrade	
	August-December	Support			

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ERP5

Feature Module

Feature - Konqueror

Document Édition Affichage Aller Signets Outils Configuration Fenêtre Aide

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Jump... | Action...

ERP5 / Features / Projet Du s / Fiche client /

Logged In as : jp

View

Title: Fiche client

Implementation State: Standard

Feature State: confirmed

Description

Sub-Features: 11 record(s) - 0 item(s) selected

1 of 1

ID	Sub-Feature Title	Sub-Feature Description	Feature State
1	Multi-adress	Citation: "Elle reprend les différentes adresses de livraison ou de facturation," ERP5: Possibilité de mettre plein d'adresses pour un client. Cependant il faut dans ce cas prévoir de sélectionner l'adresse parmi la liste. Cependant, souvent nous faisons différentes organisations ou personnes, ex "CDI Lille", "CDI Challans".... Demander ce qui convient le mieux.	planned
10	Notes	Citation: "Pour chacun de ces paramètres, une table définit des critères (libellés) associés à une note qui sera attribuée pour ce paramètre." ERP5: XXX Demander XXX	planned
11	Paramètres commerciaux	Citation: "Elle contient également différents paramètres servant à définir la priorité du client comme la qualité financière, le positionnement commercial, la nature du magasin, le réseau de distribution, la cote d'amour, la prépondérance de la marque chez le client, les dates de non-livraison et de livraison souhaitées, etc. " ERP5: Ecriture d'une propertySheet particulière pour entrer toutes ces informations.	confirmed
2	Multii-interlocuteur	Citation: "le pays (langue), les interlocuteurs," ERP5: Affectation de personnes à une sociétés. Dans la société, on peut voir la liste des personnes qui sont affectées, donc liste des interlocuteurs.	confirmed
3	Données comptables	Citation: "les données comptables" ERP5: Il y a plein d'infos sur l'onget Details sur les organisations, voir si cela est suffisant.	planned
4	Conditions commerciales	Citation: "les conditions commerciales, les textes rattachés," ERP5: Module du condition d'achat permet de définir les conditions commerciales.	confirmed
5	GENCOD	Citation: "les gencod spécifiques," ERP5: XXX DEmander XXX	planned

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ERP5

Project Module

Project - Konqueror

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Jump... | Action...

ERP5 / Project / Du is / Logged In as : jp

View | History | Metadata

ID	du s	Start Date	2004 / 12 / 01
Title	Du s	Stop Date	2005 / 09 / 15
Invoiced Client	Du s	Resources	Sébastien Robin Romain Courteaud Louis R rd
Real Client	Du s		

Estimated Time	
Revenue of Billiable Time	
Estimated Billiable Time	

listbox: 9 record(s) - 0 item(s) selected — 1 of 1

ID	Index	Task Title	Resource	Begin	End	Estimated Time	Unit	Location
1	2	Formation initiale	Sébastien Robin	2005 / 03 / 01	2005 / 07 / 01	5.0	time/day	Nexedi
10	14	Préparation et livraison client	Sébastien Robin	2005 / 06 / 15	2005 / 08 / 15	0.0	time/day	Nexedi
11	16	Fin des travaux	Sébastien Robin	2005 / 07 / 15	2005 / 09 / 15	0.0	time/day	Dubouis
12	18	Emploi du temps Du	Sébastien Robin	2004 / 12 / 01	2005 / 09 / 15	0.0	time/day	Dubouis
5	4	Module gestion et création	Sébastien Robin	2004 / 12 / 01	2005 / 02 / 20	0.0	time/day	Dubouis
6	6	Saisie d'ordres et prévisions traduites	Sébastien Robin	2005 / 03 / 01	2005 / 04 / 10	0.0	time/day	Nexedi
7	8	Achat Livraison et stocks de composants	Sébastien Robin	2005 / 03 / 15	2005 / 05 / 10	0.0	time/day	Nexedi
8	10	Lancement production et stocks de produits finis	Sébastien Robin	2005 / 04 / 15	2005 / 06 / 10	0.0	time/day	Nexedi
9	12	Module calcul des besoins	Sébastien Robin	2004 / 05 / 15	2005 / 07 / 10	0.0	time/day	Nexedi

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ERP5

Use Case Module

Use Case Scenario - OK - Konqueror <2>

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Jump... | Action...

BAOBAB / Use Cases / Emission DAP / OK /

Logged In as : jp

Scenario View

Scenario ID 3

Scenario Title OK

Scenario Description

Scenario Steps: 17 record(s) - 0 item(s) selected

1 of 1

ID	Title	Description	Role
0010	1	Scanne le chèque DAP et enregistre les images recto et verso dans des	Comptable
0020	2	Il saisi le numéro de chèque DAP	Comptable
0030	3	Il saisi les noms de fichiers correspondants aux images scannées du	Comptable
0040	4	Le système charge les images du chèque DAP	
0050	5	Il saisi la référence de l'opération de paiement	Comptable
0060	6	Il saisi le bénéficiaire du chèque DAP	Comptable
0070	7	Il saisi la date d'émission du chèque DAP	Comptable

Page chargée.

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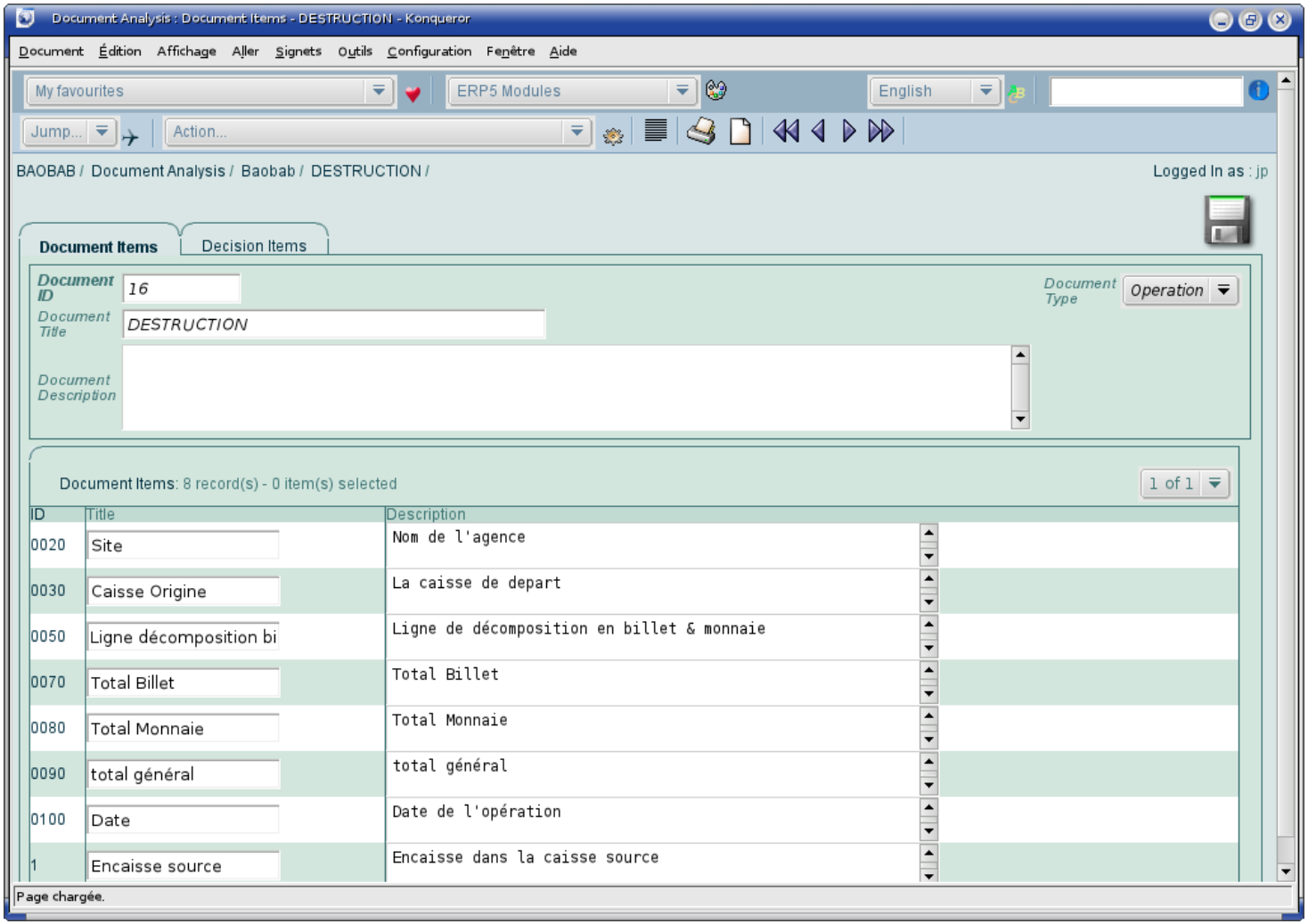
ERP5

Document Analysis Module



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ERP5

Document Lexicon

Document Analysis : Lexicon - Change manuel : délivrance de billet en devise par débit en compte - Konqueror

Document Édition Affichage Aller Signets Outils Configuration Fenêtre Aide

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Jump... | Action...

BAOBAB / Document Analysis / Baobab / Change manuel : délivrance de billet en devise par débit en compte / Logged In as : jp

Lexicon View

Lexicon ID: 26

Lexicon Source Type: Document

Lexicon Title: Change manuel : délivranc

Lexicon Description: *Délivrance de billet en devise par débit en compte. Il s'agit d'un mouvement de billets du guichet à un individu, avec dans le sens inverse, un mouvement de "devise" d'un compte en banque à un autre. On gère cela comme une Banking Operation contenant des CashTransferLine. La principale question concernant la notion de montant fixe et de frais. On la traite comme un prix un peu compliqué (base_price, discount_ratio, etc.). C'est l'occasion d'enrichir la PropertySheet price.*

Lexicon Items: 21 record(s) - 0 item(s) selected — 1 of 1

ID	Title	Description	Type	UBM / Type	Class / Property	PropertySheet
0010	Site	Nom de l'agence	Category	String		Arrow
0020	Montant	Montant en devise à saisir	Property	Float		Arrow
0030	Montant fixe	Montant fixe des frais à prélever	Property	Float		
0040	pourcentage	pourcentage des frais à prélever du montant total	Property	Float		Task
0070	Ligne de billetage delivr	Ligne de décomposition du billetage delivré au client en Devise	Document Item	Movement		

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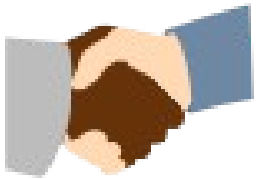
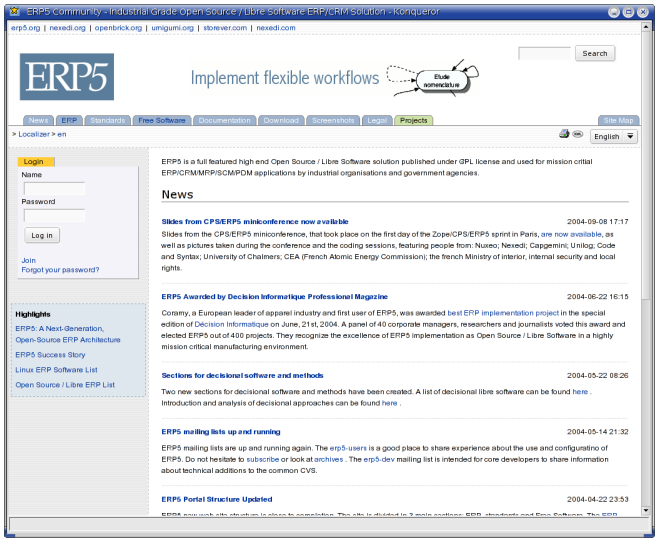
ERP5

Commercial Support

Enterprise Services

- Consulting
- Professional Training
- Custom Development





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ERP5

ERP5 Implementation

This guide will teach you:

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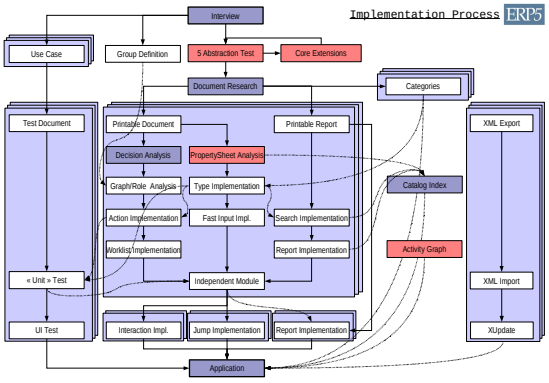

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ERP5

This visual guide has been created for learning and for teaching ERP5.

For learning ERP5 alone, readers should first have a quick look at the illustration on the upper part of the page then read the text bellow carefully and associate each word written in bold to the corresponding item(s) in the illustration.

This visual guide can also be used as a presentation for teaching ERP5 to a public audience. In this case, teachers are required to read audibly to the audience the Back Cover Text.

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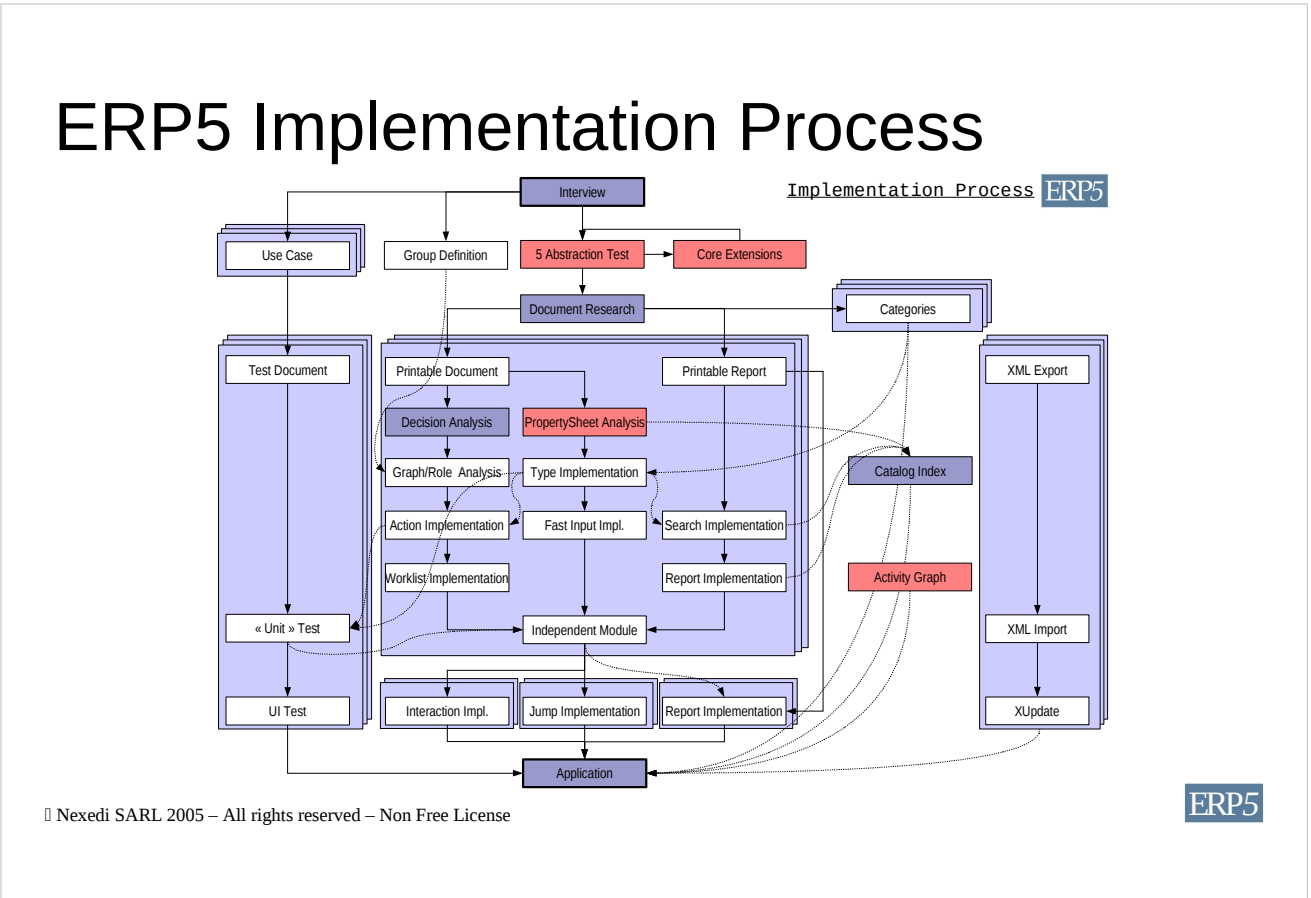


The goal of the ERP5 Standard Implementation Process is to describe the sequence and parallelism of tasks involved in a complete ERP5 project with a view to reduce the total time of implementation. It also provides a classification of implementation tasks from an experience point of view. Tasks in white require some training. Tasks in blue require some experience. Tasks in red require much experience.

The process has 5 main major phases: analysis, development, test, import / export and integration.

The analysis phase (top of the diagram) includes the following phases: pre-analysis (Interview), abstract feature analysis (abstraction test), documentary analysis (Document Search), behaviourist analysis (Use Case) and categorial analysis (Category).

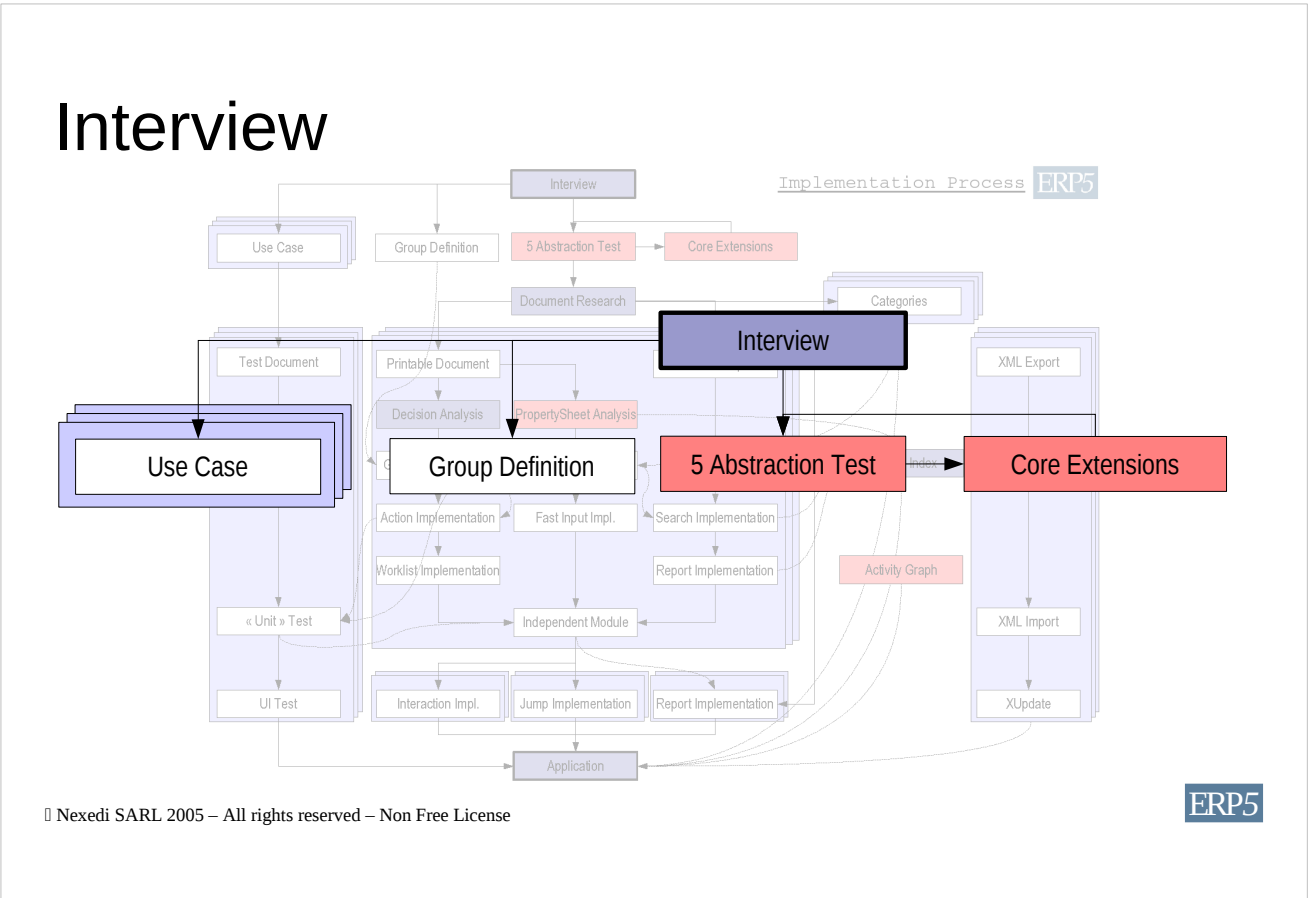
The development phase (center of the diagram) consists mainly in configuring forms, workflows and reports for each document type of the project, without taking care of any related document or module.

The test phase (left of the diagram) consists in developing unit tests and functional tests which simulate the real use of the implemented ERP5 system at the customer premice.

The import / export test (right of the diagram) consists in developing a synchronisation module for the data which needs to be retrieved from the existing system and imported into the new ERP5 system.

The integration phase (bottom of the diagram) consists in implementing any reports or behaviour which is dependent on multiple document types. Additionaly, interface development may also be required.

Once all phases desribed above are completed, the implementation of an ERP5 project is finished. Then comes training, support, maintenance, evolutions, etc.

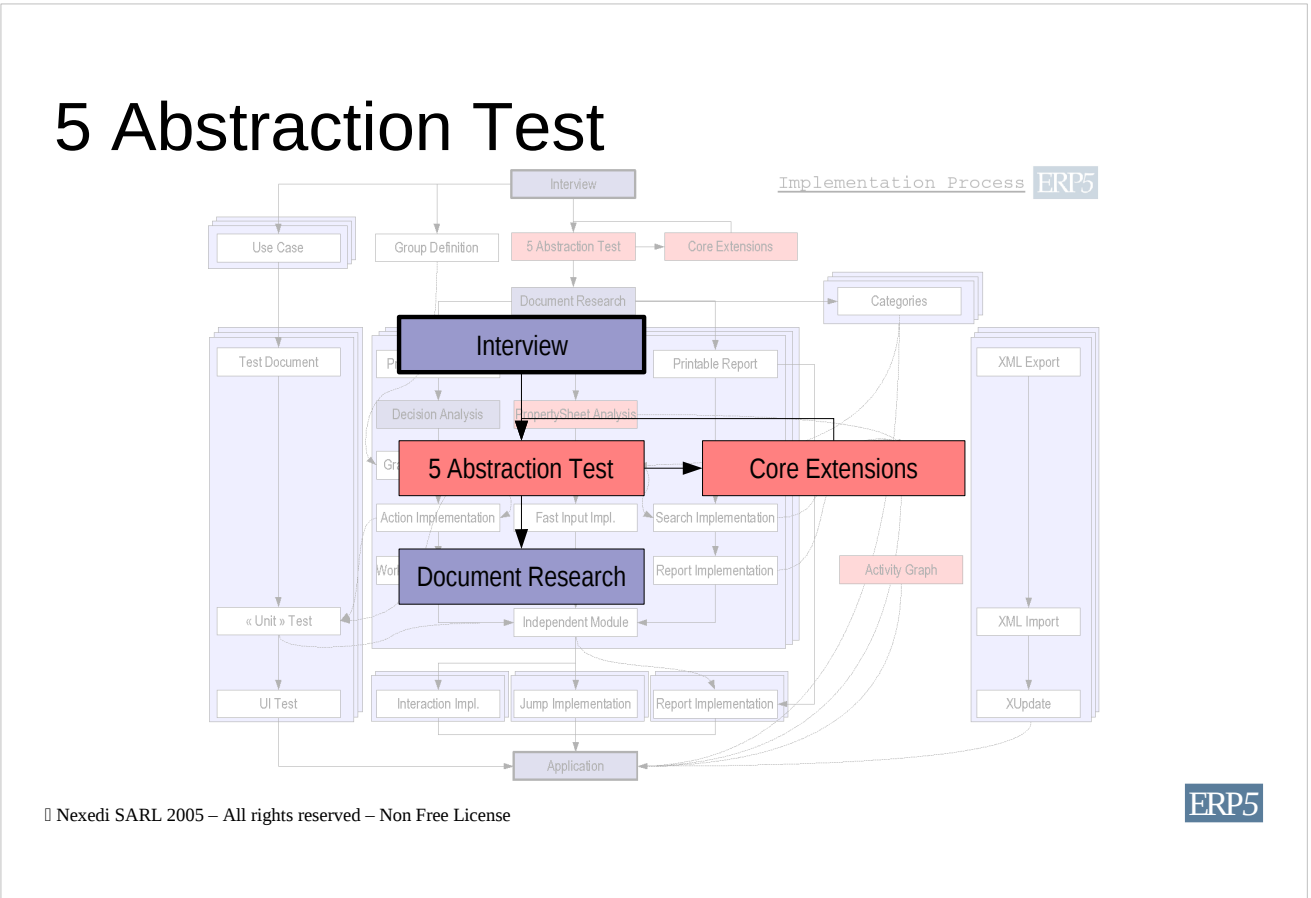


Every ERP5 project should start by an analysis phase. The first step to conduct in that phase is an interview in order to understand both the social aspects, the organisational aspects, the functional aspects and the technical aspects of a prospect project. This step should be allow for deciding whether to use or not ERP5.

The general philosophy is to lead the interview in order to discover in priority resource flows and not onlydecision processes. The rationale is that ERP5 core model is based on flows combined with a flexible workflow based decision model. ERP5 limitations, if any, are related to how flows can be modeled within ERP5. There should be no limitations related to business process modeling.

For example, in a factory, we should first analyse how components, products, etc. flow from one workshop to another, how they are transformed, shipped to a subcontractor, etc. In finance, we should analyse how ownership flows from one entity to another, how payables or receivable flow from one account to another. In a central bank, we should analyse how notes flow from one vault to another. In communication, we should analyse how contents flow from a publication source to a publication target. A general overview of flows should be obtained at the end and should include not only physical flows but also changes of ownership and decision actors involved in a flow.

That being said, the interview should end up with a short self contained document which describes like a story and with simple words the basics of the interviewed organisation. It should sound like “Our company creates and produces in its own factories women clothes which are then sold through our own distribution network. First of all, designers...”. The result should fit in an equivalent of 5 pages in English.



The most difficult step in the analysis phase is the **5 Abstraction Test**.

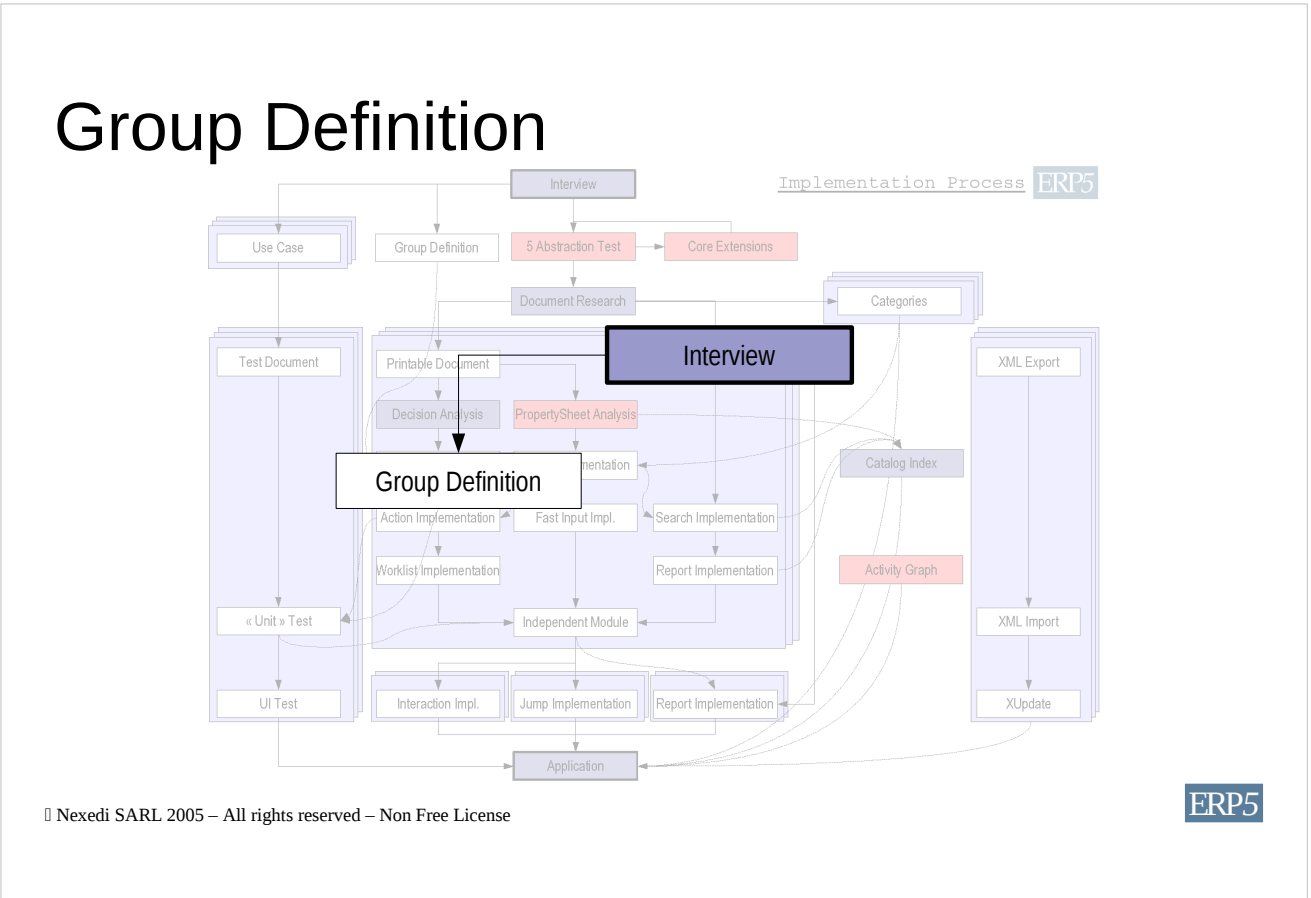
The goal of this step is to find out if ERP5 core model can represent the flows described in the interview. In the event some flows may not be modeled, **Core Extensions** to ERP5 may be required, if feasable.

This phase should be conducted by a business analyst with an experience of multiple implementations of ERP5 projects and may require help from the designers of ERP5 core.

For example, ERP5 flows only defined initialy the source and destination of goods in a trade transactions. However, companies with a distribution network require sometimes to know the final destination of goods sold through a distributor. This requirement ended up in an extension of ERP5 core to support traceable indirect sales or purchase.

In general, no extensions should be required. The standard ERP5 framework is normally sufficient to cover most business cases. However, since ERP5 is an ever evolving open source framework, it is not because the standard framework does not cover a specific business case that ERP5 should not be used. Extending ERP5 core is sometimes only a matter of hours or days for an experienced engineer. The cost of ERP5 extension is usually neglectable compared to the cost of implementing and configuring ERP5.

ERP5 implementors should therefore not hesitate in evaluating the cost of Core Extensions with the help of experienced business analysts and core designers.



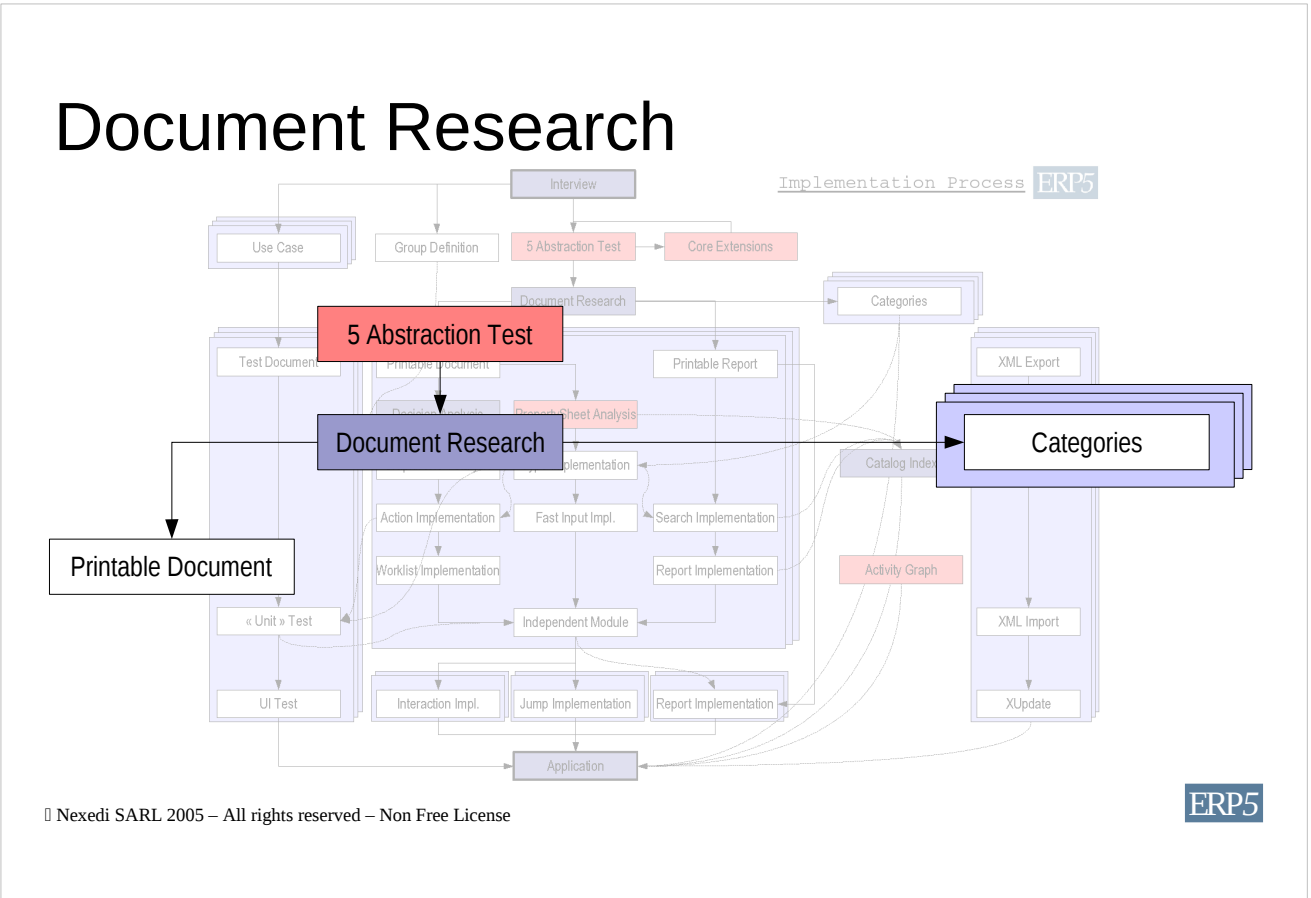
The real project analysis can now start. First of all, security groups must be defined. Security in ERP5 is based on local roles whjch are associated to documents. Local roles allow for example one user to view a purchase order and prevent another user from viewing that purchase order.

Whenever security and permissions are associated to individual persons, such as in online shops, local roles should be associated to users. Whenever security is associated to the function of persons or to groups of persons, local roles should be associated to security groups. If groups are the way to go for security, the **Group Definition** step consists in finding how users are categorised from a security point of view.

For example, in a bank, every worker and user is associated to a branch, a function and a service. It is the combination of the three associations which defines the security permissions. Two users working at the same level in the same service but in different branches should not be able to access and modify the same customer accounts.

In a small company with sales managers in charge of specific customers, every worker and user is associated to a customer, a function and a service, which defines the security permissions. Two users working at the same level in the same service but in charge of different customers should not be able to access and modify the same customer orders.

The result of the Group Definition analysis should be presented as relation diagram to ERP5 categories (group, site, function, etc.) and documents (ex. Trade Condition, Person, etc.) together with a spreadsheet which lists all relevant group, functions, sites, etc. for decision analysis.



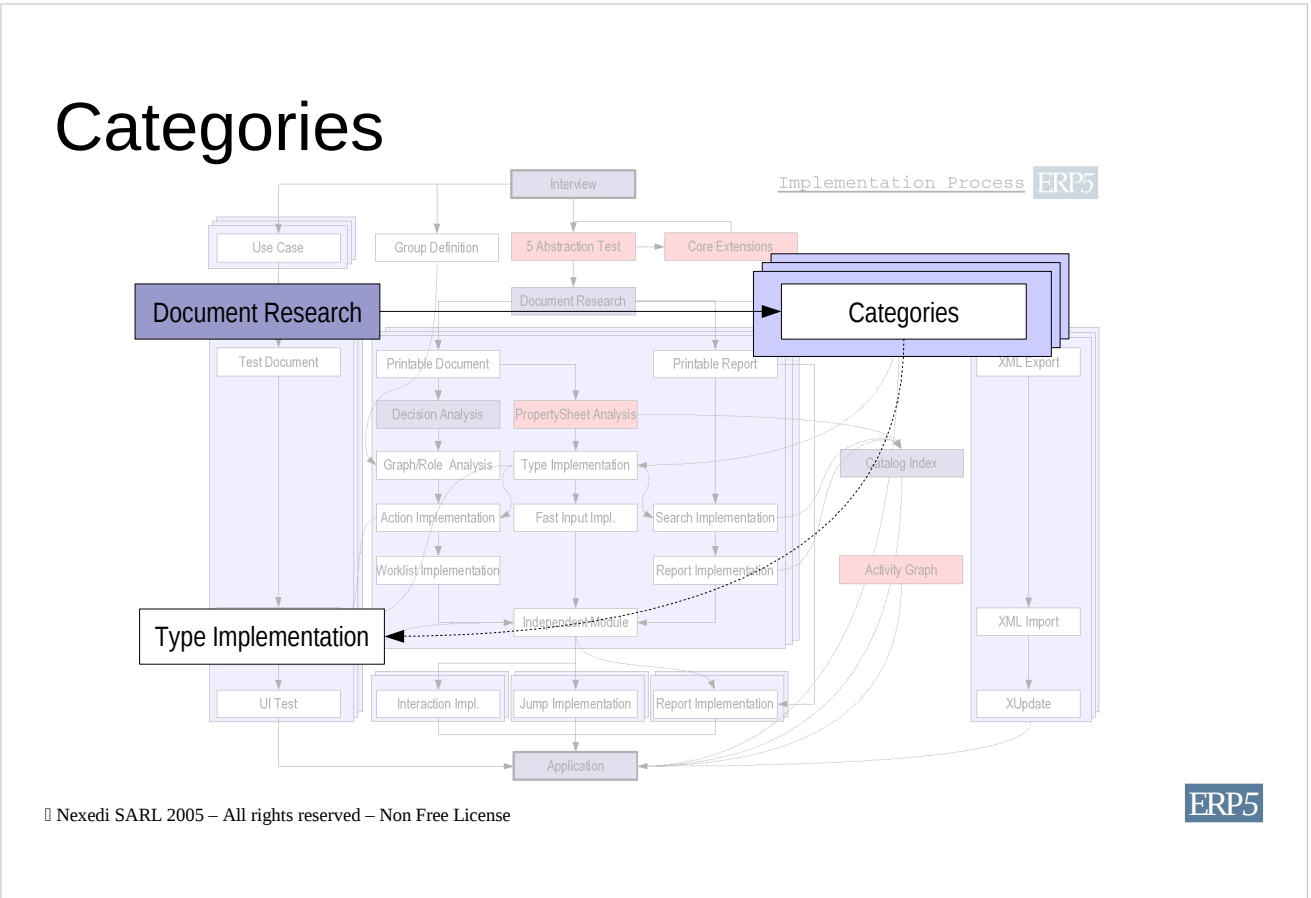
ERP5 is a document oriented ERP based on document workflows. Paper documents are considered as the common language from top management to operational clerks. The **Document Research** step consists in discovering the organisation architecture of a company through the list of operational documents which support this organisation.

In a company with history and experience, the recommended approach is to navigate across sites and services in the company and gather paper documents which implement the existing operational organisation. Documents of the same type should be grouped together.

In a new company, the recommended approach is to provide a paper copy of standard ERP5 documents and ask for comments and improvement suggestions. The result should take the form of a set of relevant document templates.

Some customers may want to provide at this stage process diagrams which they expect to implement with ERP5. Process diagrams represent workflow in a company with a global point of view. For example, customer order process diagrams may cover both quote, order, delivery and invoice.

The sad news is that process diagrams are mostly useless for ERP5 Implementation Process because they are too high level and do not provide enough operational detail. The good news is that process diagrams can be mapped to documents and use cases which are the relevant level of analysis in ERP5. In the above example, the customer process diagrams is mapped to four documents and use cases (quote, order, delivery, invoice).

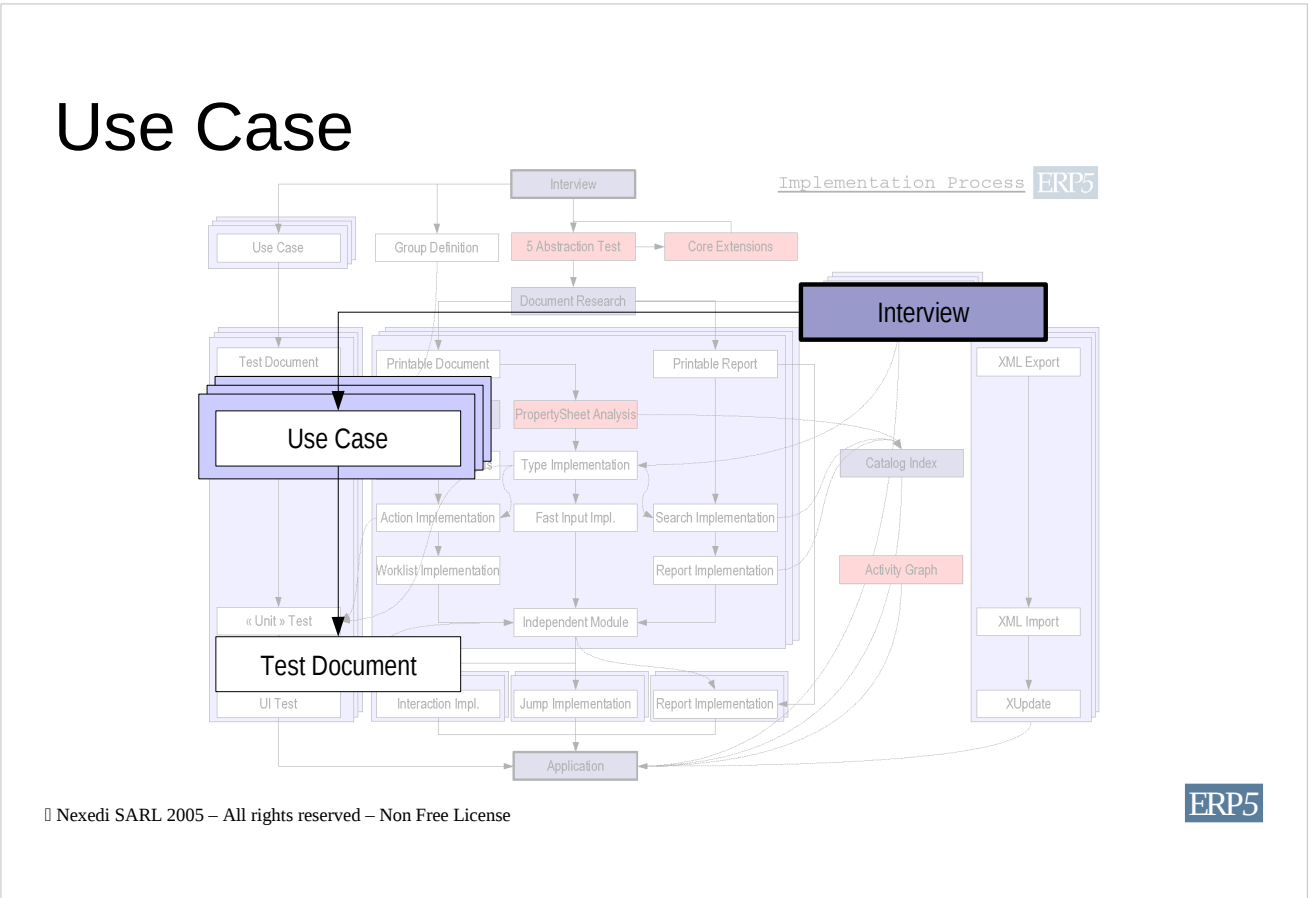


In ERP5, categories implement the structure, documents implement content properties and workflows implement decisions. **Categories** are hierarchies a.k.a. trees a.k.a. classifications a.k.a. nomenclatures.

Example of categories include regions (ex. africa, americas, asia, europe, oceania, etc.) and their subregions (ex. americas/north, americas/south) or countries (ex. europe/west/france, europe/west/germany), units (ex. length, length/meter, length/centimeter, weight, weight/kilogram, weight/gram, etc.), sites in a company (ex. site/france, site/france/noyon, site/france/paris, site/spain, site/spain/barcelona), subsidiaries and business units in a company, roles, functions, skills, etc.

Category analysis derives from an analysis of the **Document Research** and is required to configure modules at the **Type Implementation** step. Document Research is usually enough to determine the base categories requiredin a project (ie. the number of nomenclatures). Additional consulting may be required to define the whole range of category values It is quite common that ERP project managers experience difficulties in describing in detail how their company is structured both from a subordination point of view, from a geographical point of view, from a product line point of view and from configuration options of all products which are sold. Initial results are often scarse or unprecise.

In case of difficulty, the priority should be given to 3 base categories which are required before implementation: group, site and function. Other categories may be defined in detail later in parellel to the implementation process.



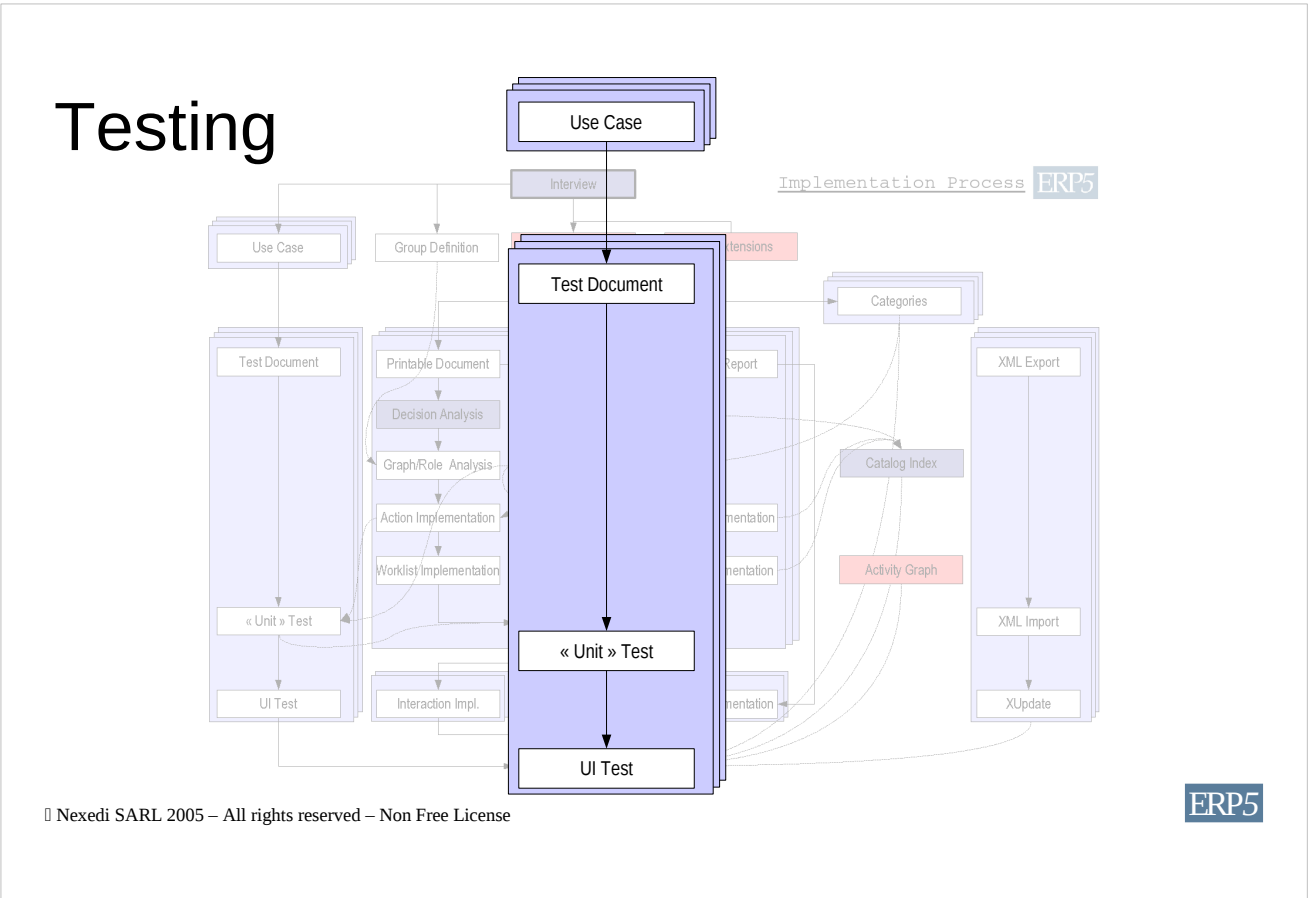
The couterpart to Document Research is **Use Case** analysis.

Use Cases provide a detailed analysis of processes in an Organisation, from an operational point of view rather than from a global point of view. Multiple Use Case analysis can be conducted in parallel.

A Use Case defines one ore more actors as well as one or more scenarii. An actor is for example a Purchase Clerk or a Purchase Manager involved in a purchase order. A purchase order use case may then define two scenarii: successful and unsucessful. The successful scenario is is a sequence of steps such as “Purchase Clerk enters quantity and price of each purchased item” or “Purchase Clerk submits order” or “Purchase Manager approves order”. The unsuccessful scenario differs from the successful scenario by its last step which could be for example “Purchase Manager rejects order”. Each step defines which actor does what. Security information may specified on each step to define permissions for access to and modification of the Purchase Order document.

Use Cases are normally associated to at least one Document. There should also be at least one Use Case for each Document. Use Cases which are associated to no document either mean that some documents were missing during the Document Research phase or that the Use Case relates to so-called reports and alarms in ERP5. Documents which are associated to no Use Case are usually pure static information and should follow a standard information validation use case.

The collection all Use Cases provides a complete overview for ERP5 configurators as well as a base to create **Test Documents** and testing scripts.



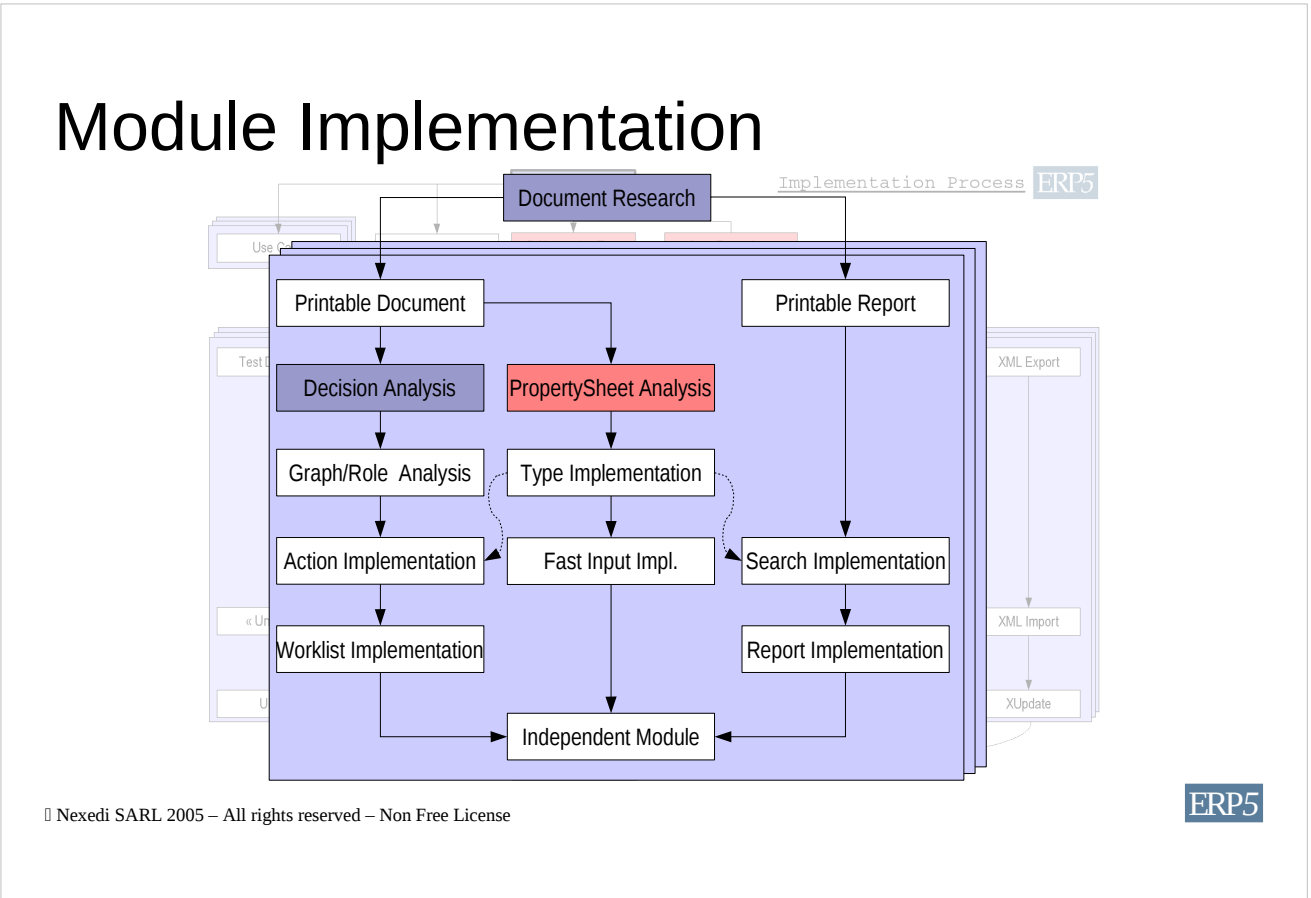
Testing is an integral part of the ERP5 implementation process.

The main benefit of testing for customers is to prevent regressions during software upgrades. The main benefit for integrators is to prove that all customer requests are implemented without going over again through long user acceptance cycles. Multiple Tests can be implemented in parallel.

The Testing process in ERP5 derives from **Use Cases**. First of all, every use case should be instanciated into a collection of **Test Documents** which describe a single Use Case scenario with specific values (ex. John Foobar instead of Purchase Clerk). This document can be written in any language which can be understood by programmers.

The next phase is to create a testing script, a.k.a. **Unit Test**, which automates the steps descibed in the Test Document. This phase is achieved by a programmer in python language using the ERP5 unit testing framework. This testing phase is the most important one and should be given highest priority.

The next phase is to test the user interface. This phase is automated by a programmer using the Selenium framework which is under integration into ERP5. It can also be achieved manually through user acceptance test reports. This phase is less important than Unit Tests since most of the user interface is independent of customer ERP5 implementation. It should not be given a high priority if budget or time does not permit. This phase may be useful though to prevent regression on critical customer specific user intefaces such as so-called *fast input* forms. It may also be useful to produce automatically user documentation with screenshots.



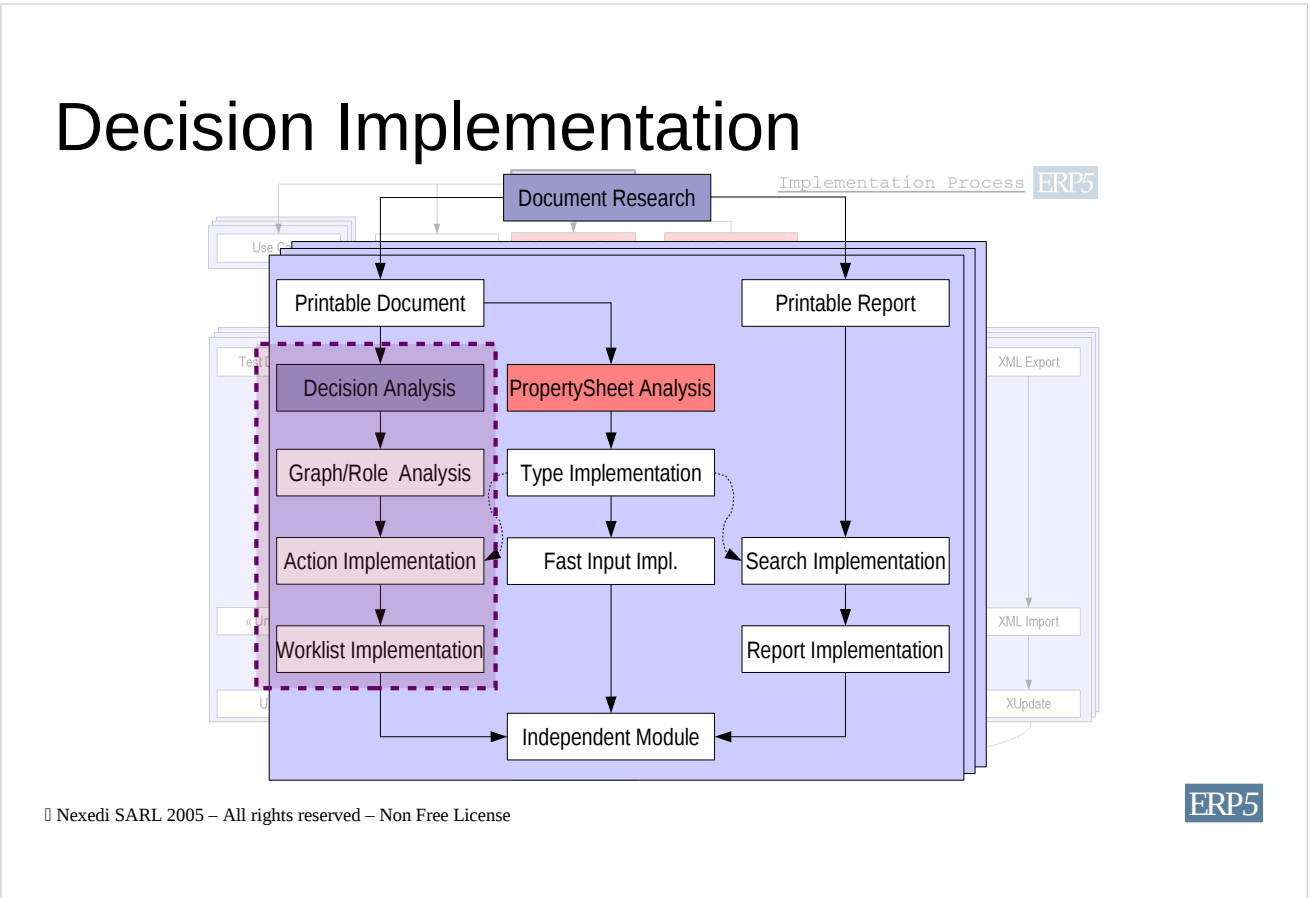
Document Research produced a collection of documents of the same type. **Module Implementation** takes one group of documents and goes through a detailed implementation process which mostly consists in configuration. Multiple module implementations can be conducted in parallel.

Implementation starts with a detailed analysis of the operational documents and reports. A simple way to conduct this analysis is to design the **Printable Documents** and **Printable Reports**. This phase can be conducted by a business analyst. Although it may sound a bit strange to start by this step, it is probably one of the best ways to make sure the customer gets what he or she expects and that ERP5 configuration meets this expectation.

Whenever design of printable documents and reports can not be conducted upfront for some reason, it should be replaced by an detailed analysis of existing documents and reports.

Both the design and analysis of documents and reports is supported by two built-in ERP5 modules named Document Analysis and Lexicon Module.

After this phase, three implementation process are run in parallel: decision implementation, document implementation and search & report implementation. Their completion leads to the implementation of so-called ERP5 module.

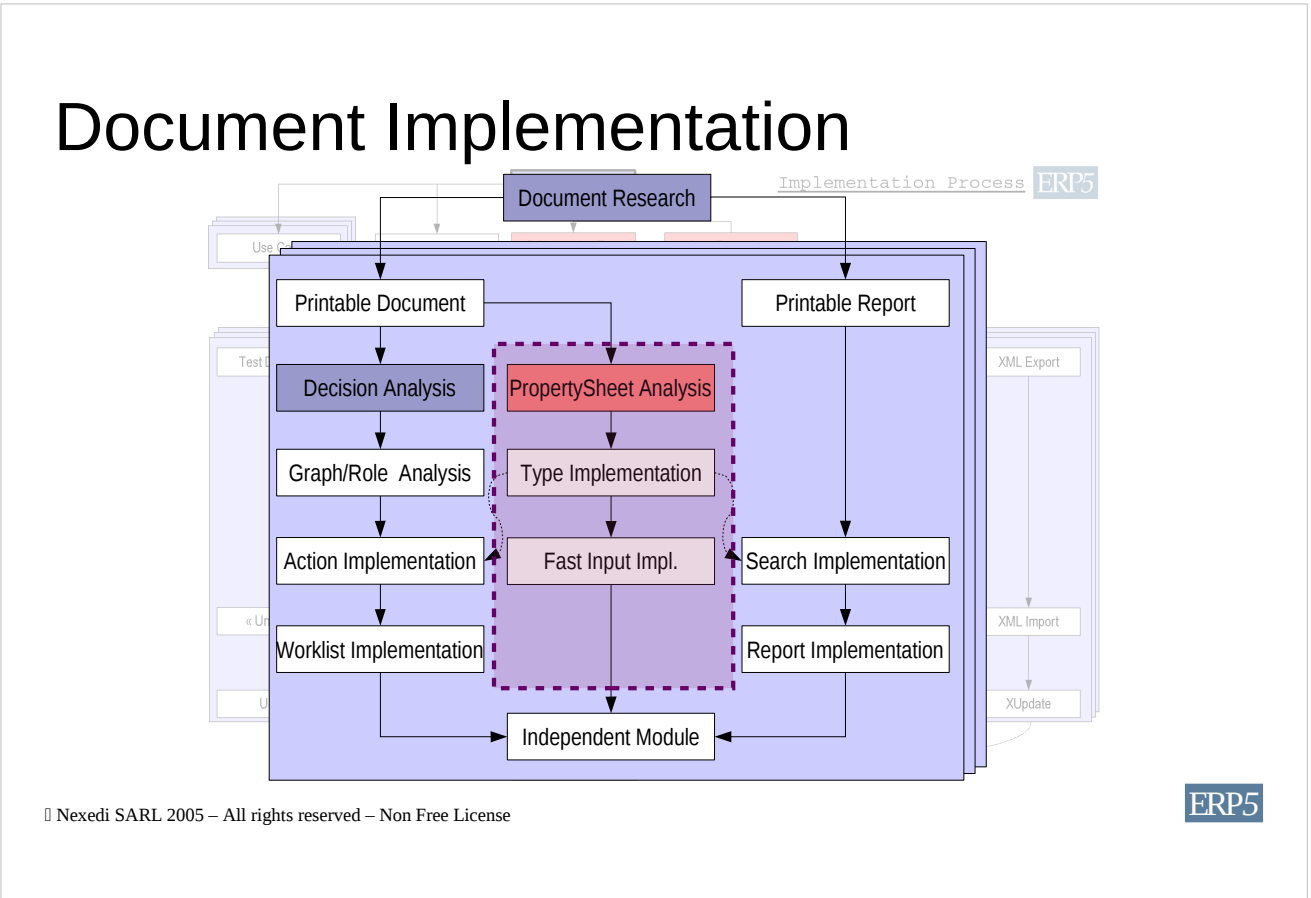


The purpose of Decision Implementation is to configure ERP5 workflows which fit the customer requirements as described in use cases and documents. In consists in 4 steps: decision analysis, graph/role analysis, action implementation and worklist implementation.

Decision Analysis consists in identifying decision traces found in document. Major management processes do leave a trace on operational documents in the form of signatures, review history, status, etc. Those traces are the essence of what should be captured by worklows configured in ERP5. They define the states in a Document Workflow.

Use Cases are another source of decision elements, mostly useful to define transitions between states in a document worklow as well as roles in charge of handling those transitions. The result is a **Graph / Role Analysis**. It should be notes that not all steps in a Use Case should be converted into workflow states in order to preserve simplicity.

The graph / role analysis can drawn on paperboard or with dedicated software. It may then be required to get this analysis approved and signed by the cutsomer. Once this is obtained, it is also possible to enter it directly in Zope/ERP5 worklow engine. **Action Implementation** consists in defining user transitions and guards which control abstract transitions. **Worklist Implementation** consists in defining how states in a workflow map to tasks in a company.

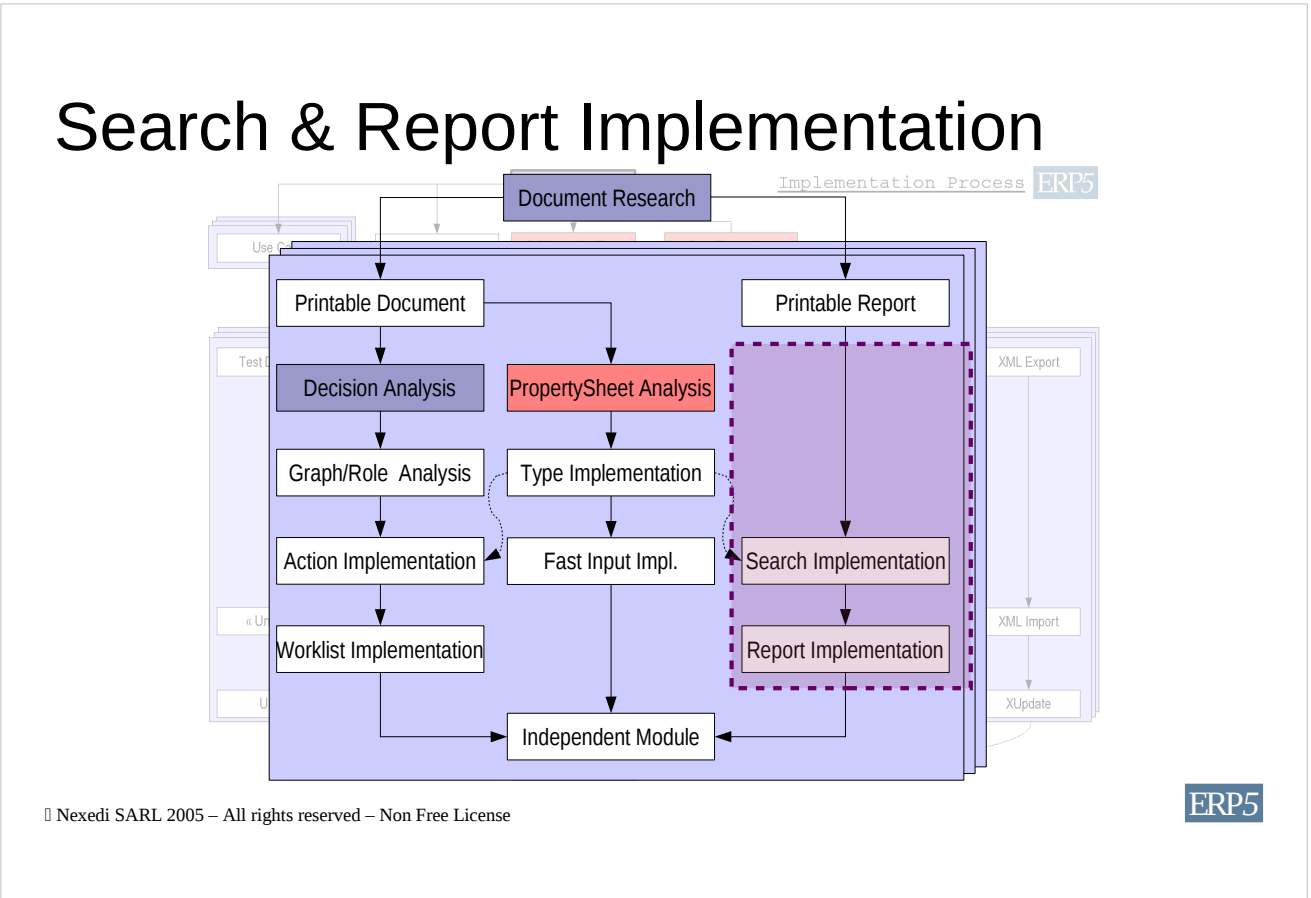


Document Implementation consists in configuring ERP5 propertysheets and forms and eventually optimising data input. It consists in 3 steps: propertysheet analysis, type implementation and fast input implementation.

PropertySheet Analysis consists in mapping properties in a printable document to properties in existing ERP5 propertysheets. It also consists in mapping items in a document to the 5 ERP5 core concepts (Movement, Resource, Node, Item, Path) and to one of the existing Document classes already implemented in ERP5 (ex. Invoice). This step requires the support from a very experienced ERP5 business analyst or core developer.

Type Implementation consists whenever needed in customising forms, adding custom propertysheets, adding custom menus, views, etc.

Fast Input Implementation consists in optimising data input for critical business processes. It consists in designing a custom, and often complex, form which allows for entering much data with minimal number of ERP5 transactions. Fast Input Forms often consist in massive lists of fields. In some rare cases, complex user interface based, for example, on AJAX technologies, can be designed to provide features such as point of sales, planning board, etc.

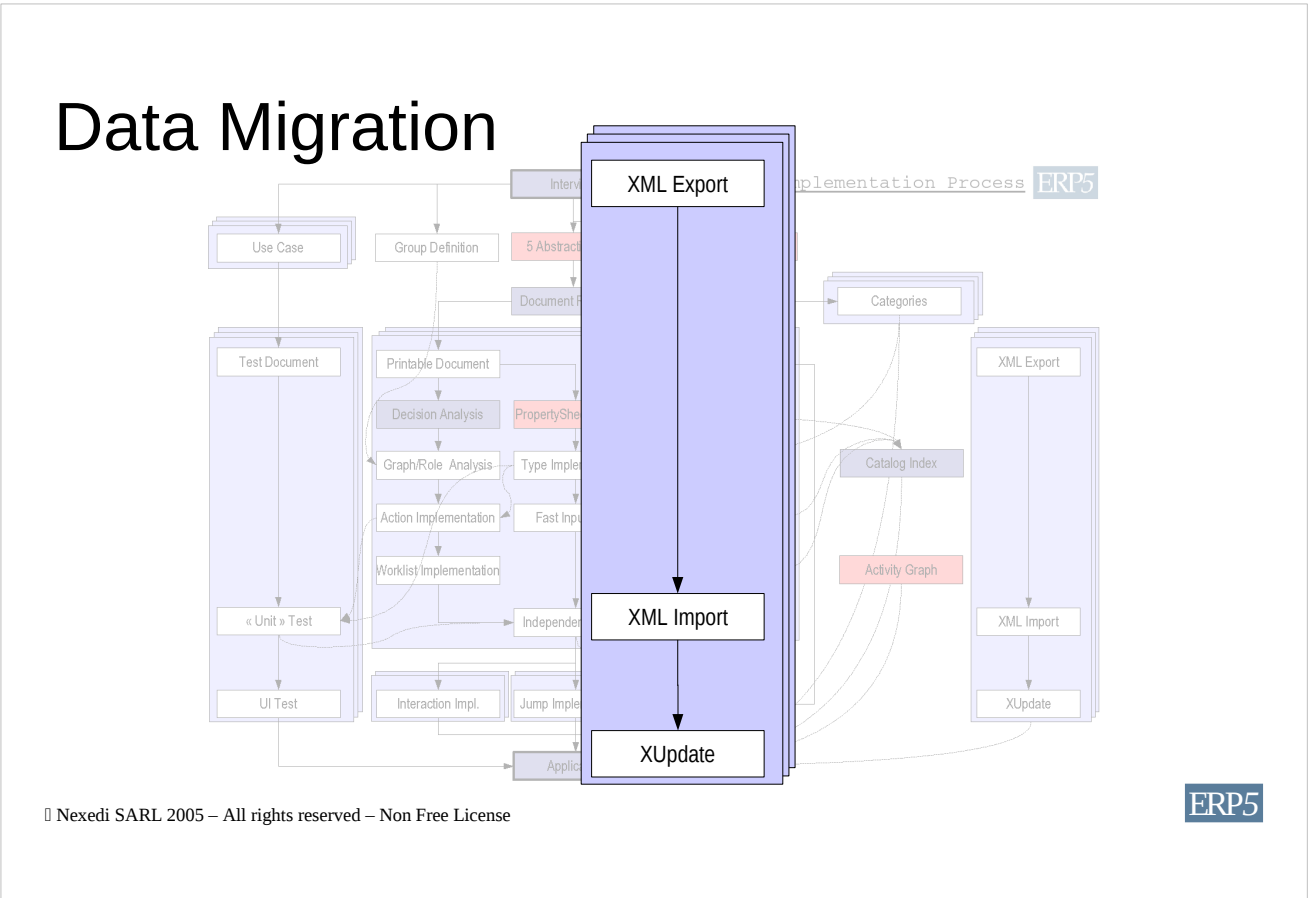


Search & Report Implementation consists in search implementation and report implementation.

Search Implementation consists in designing an ERP5 dialog form and associated SQL parametric query which searches for selected set of documents. Search implementations are intended to go beyond the standard search feature in tabular mode provided by ERP5 user interface. A single ERP5 module may require multiple search forms and queries.

Report Implementation consists in extending search implementation with statistics or custom rendering. Statistics, such as inventory or average price. may be calculated for every document returned by a search query. Custom rendering consists in using one the 3 standard reporting engine in ERP5 to present data in such way it can be printed, imported in spreadsheet or exported in any format.

Search & Report is usually implemented last whenever it is not mission critical. Initial implementation consists in using ERP5 standard PDF rendering of forms. Whenever custom visual design is required, time can be invested to produce very high quality reports.



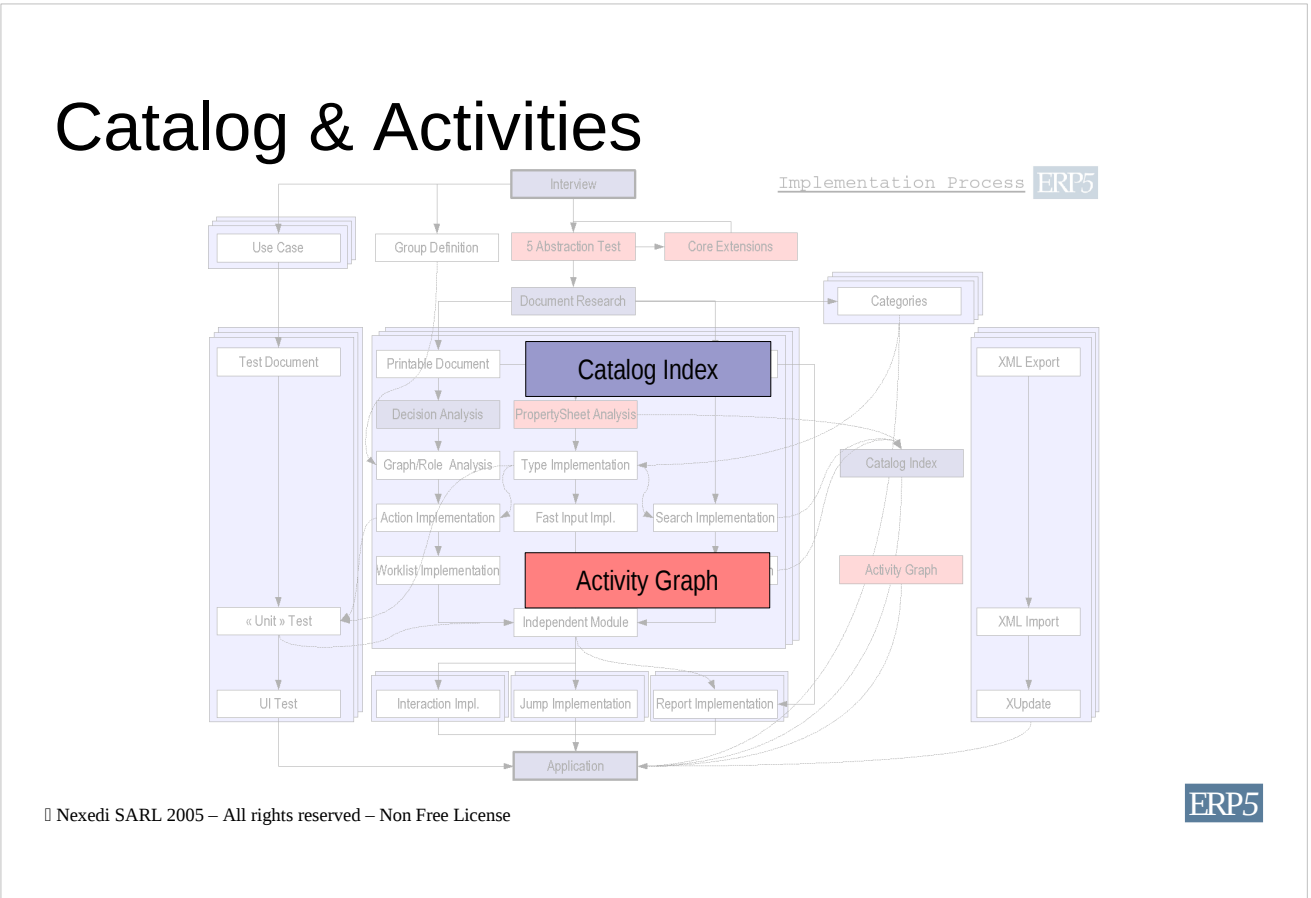
Import / Export is an integral part of any ERP implementation in a company with history. It is is required for data migration from a legacy ERP to ERP5 or to interface with other systems. Its cost is sometimes as high as module implementation. We shall review here the data migration process.

ERP5 approach to data migration is based on XML technology and synchronisation. The expected goal is to be able to prove that a given data migration is successful without waiting for a couple of months to let users find out that part of the imported data was corrupted.

The ERP5 approach consists in designing an **XML Export** conduit which converts ERP5 data into a common XML representation. Designing this export conduit allows for validating that all data present in the common XML representation has counterpart in ERP5. Whenever some data is missing in ERP5 model, additional PropertySheet Analysis may be required at Document Implementation.

Once the export conduit is designed, an **XML Import** conduit is implemented to convert XML common representation into ERP5 data model. This conduit should be able to import new data as well as update existing data.

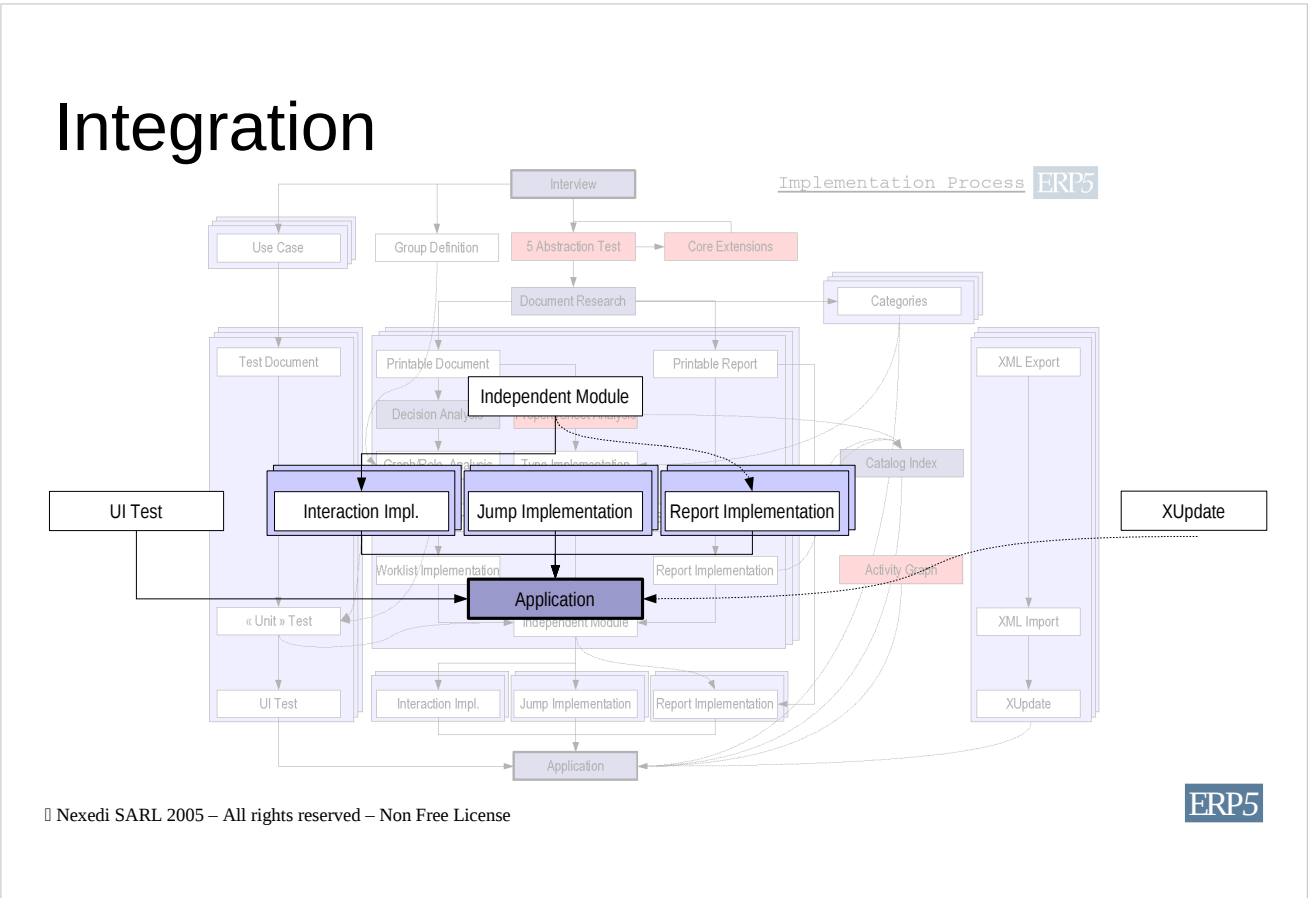
Data migration or interfacing then simply consists in using ERP5 built-in SyncML engine to synchronise XML common representation with ERP5 data model through a sequence of **XUpdate** queries. The fact, that after this synhronisation process, no more XUpdate queries remain proves that data migration was successful.



ERP5 implementation requires two support activities: Catalog Index design and Activity Graph design. Catalog Index must be designed in most ERP5 complex implementations. Activity Graphs design is required for complex interfacing or very complex implementations of ERP5.

Catalog Index design consists in defining which properties, methods or scripts should be captured in ERP5 built-in datawarehouse engine to implement online analysis and reporting (OLAP). For example, ERP5 standard catalog indices include a so-called stock table which provides online real time inventory analysis and multi-dimensional analytical accounting. Complex OLAP requirements may need to design additional index tables. This taks requires some ERP5 experience.

Activity Graph design consists in representing the synchronisation between activities in ERP5. ERP5 uses an active object model which allows for distributing calculations and transactions over the nodes of a cluster of servers. The asynchronous nature of active object programming requires to define in which order transactions should be executed and make sure no deadlocks will happen. It is the role of the Activity Graph to provide a global view on synchronisation of transactions. This taks may require much experience in ERP5 or concurrent programming.



Integration consists in turning a set of independent modules into a integrated application. It consists of 3 independent and parallel tasks: Interaction Implementation, Jump Implementation and Report Implementation.

Interaction Implementation consists in implementing behavioural relations between independent modules. For example, if the invoicing of a customer should also change the state of a trade condition related to that customer, it should implemented through han interaction workflow. The philosophy of interaction workflows is to encapsulate interactions between modules in a single placeholder rather than extending module workflows with side effects. Interaction Workflows should prevent the infamous spaghetti effect in large ERP implementations.

Jump Implementations consists in adding actions to every module so that users can quickly jump from one document to related documents. For example, list all invoices related to a customer, list all packing lists related to an order, etc.

Report Implementation consists in implementing at the application level search and reports which could not be implemented at the module level.

Implementation Plan

	Date	Nexedi	Partner / Client
Pre-project	September September October	Interview 5 Abstraction Test Plan Proposal	Interview
Initial training	January	1 Week Technical Training	1 Week Technical Training
Implementation	January February March April May June	Generic Module 1 Generic Module 2 Generic Module 3 Generic Module 4 Generic Module 5 Generic Module 6	Custom Module 1 Custom Module 2 Custom Module 3 Custom Module 4 Custom Module 5 Custom Module 6
Production	July August-December	Optimisation Support	Hardware upgrade

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ERP5

Let us now study the typical plan of a small ERP5 project derived from a real case with little budget, little resources and little time. The column Nexedi refers to a resource with much of very much experience in ERP5. The column Partner / Client refers to a resource with little or no ERP5 experience.

The **pre-project** phase takes 3 months and consists in Interview, 5 Abstraction Test and and Plan Proposal. Use Case is reduced to its minimal oral expression with no document research. Import / Export is not needed because data is renewed by human input over the period of project implementation.

A **technical training** is conducted to make sure the implementation team is skilled enough before starting the implementation.

The **implementation** is based on pair configuration (or programming). It consists of 6 main modules which are roughly configured by Nexedi and configured in detail by the Partner / Client. Other modules are taken as is from standard ERP5 business templates. During the implementation process, know how is transferred from Nexedi to the client / partner. While the client / partner finalises the detailed configuration, Nexedi implements critical testing and module integration.

Production phase can then start. The client / partner upgrades hardware. Nexedi implements performance optimisations and supports the client / partner during 3 months.

This example shows that some parts of the ERP5 implementation process must be implemented in one's mind rather than formally, partly rather than completely whenever constraints are high. It also shows that the core of implementation is module implementation and that optimisation issues are often discovered

Implementation Plan (2)

	Date	Nexedi	Nexedi	Partner / Client	Partner / Client
Pre-project	September September October November	Interview 5 Abstraction Test Plan Proposal Use Case	Document Research	Interview Use Case	Document Research
Initial training	December	1 month technical training	Analysis	1 month technical training	1 month technical training
Implementation	January February March April May June	Import 1 Import 2 Import 3 Integration Integration Optimisation	Test 1 Test 2 Test 3 Test 4 Test 5 Test 6	Module 1 Module 3 Module 5 Module 7 Module 9 Module 11	Module 2 Module 4 Module 6 Module 8 Module 10 Module 12
Production	July August-December	Optimisation Support	Support	Hardware upgrade	

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ERP5

Let us now study the typical plan of a large ERP5 project derived from a real case with fair budget, available resources and rather short time, and compare it with the previous case.

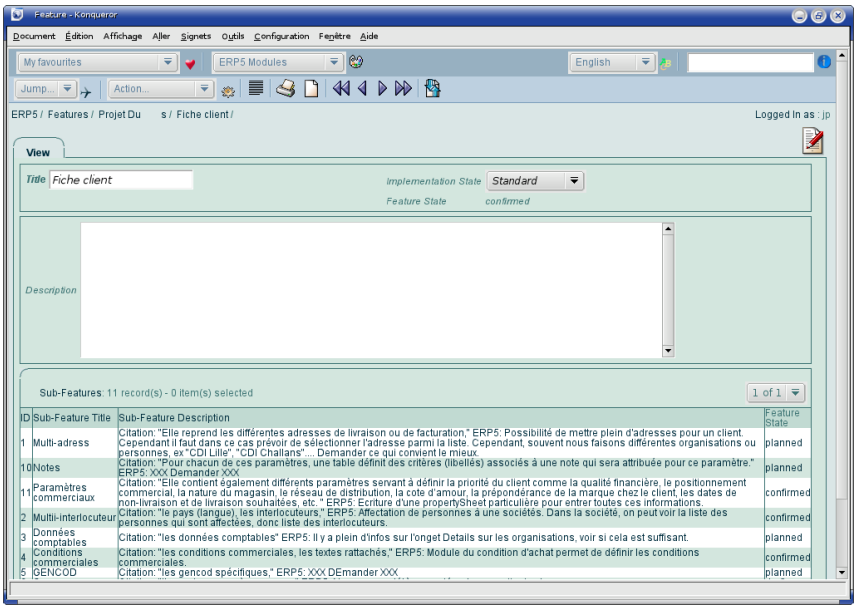
The **pre-project** phase now includes a complete document research and use case analysis which takes one month full time. The pre-project should also provide a ready-to use Group Analysis as well as critical categories.

Module **implementation** is conducted by the client / partner, which provides him more autonomy in the end but may take more time afterall. More technical and less functional matters such as tests, import and integration are conducted by Nexedi. Catalog indices and activity graphs are updated as a background task by Nexedi resources.

Optimisation can start during the implementation process so that **production** starts more smoothly. Support and optimisation are still required during production because not everything can be tested or determined in advance within a reasanobale budget and timeframe.

This example shows that some formalism helps building larger teams and implement preventive actions before production. However, one must keep in mind that excess of formalism or of testing may also have negative consequences on time and budget.

Feature Module



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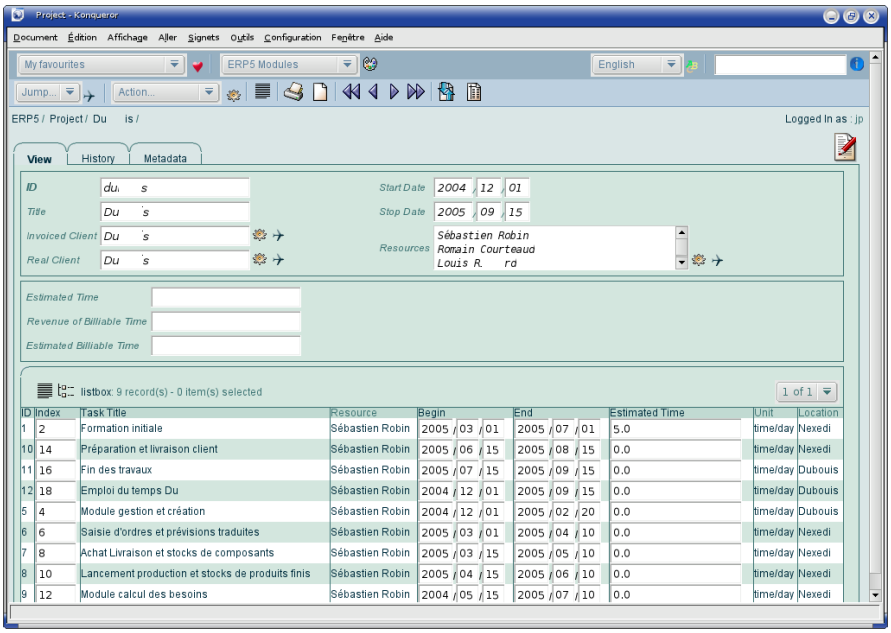
ERP5

ERP5 implementation process is supported by the ERP5 consulting business template.

The first module in this business template is the **Feature Module**. This module allows for entering all feature requirements of a customer in tabular mode. The example above shows how a 6 pages interview in French (equivalent to 5 pages in English) was transformed into small excerpts to define individual feature requirements. Some customers already provide their requirements in tabular mode. In this case, all requirements should be entered in ERP5 Feature Module.

Features can be grouped in feature families to simplify navigation. Thanks to the traceability process of the ERP5 consulting module, it is possible for every feature to know whether it is covered by the project design and whether it has been implemented or not.

Project Module



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ERP5

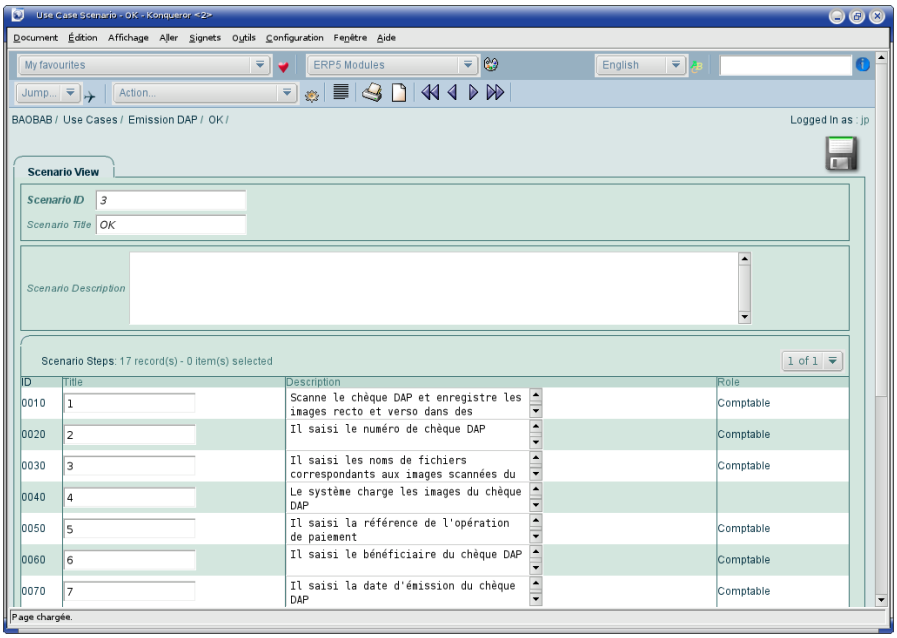
Once all features are known, it is possible to design a project with the ERP5 **Project Module**.

Projects are entered as a list of tasks and sub tasks with associated resources and time. Each tasks or subtask is associated with one or more features it implements.

It is possible to produce a project design report in OpenOffice format and include it the commercial proposal of ERP implementation. Project definition also allows for calculating the price of a project.

Project definition should start with a first rough estimation with reduced depthed. Once a project has been approved by a customer, final project design consists first in definition subtasks more precisely then to schedule tasks and eventually split them.

Use Case Module



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ERP5

The Analysis phase of a project is supported by the Use Case Module and the Document Analysis Module.

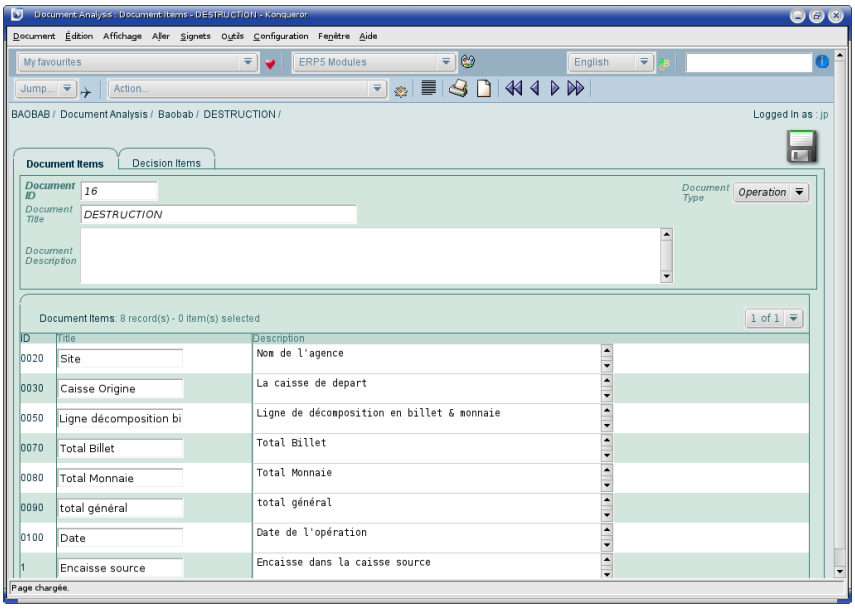
The **Use Case** module supports the Use Case phase in the ERP5 implementation process. It allows for every use case to define involved actors and scenarii.

Actors are described and mapped to ERP5 5A security model (Assignor, Assgnee, Author, Auditor, Associate).

Each scenario consists in a list of steps with their description. The condition of application of a scenario is defined for every scenario. Scenario steps may refer to features whenever relevant.

Use Case reports can be exported as a self-contained Open Office document and included in a detailed design document for reference for the customer or the project team.

Document Analysis Module



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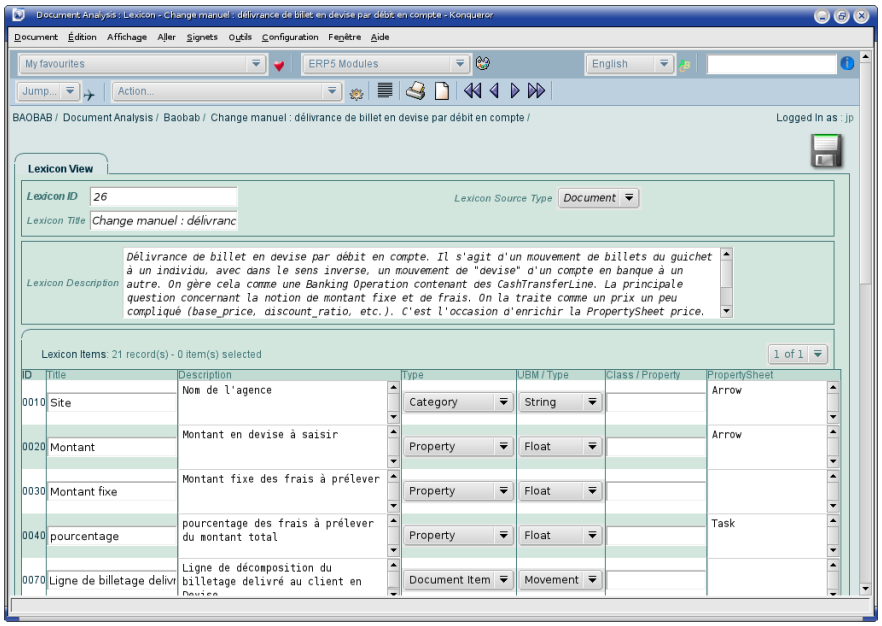
The **Document Analysis** module supports the Document Research phase and part of the Decision Analysis phase in ERP5 implementation process. The main purpose of document analysis is to identifty and name documents and document items, both from a property point of view and from a decision point of view.

The result of Document Analysis is a description of items in a document and a list of document families.

Items in a document are the rough building blocks in a document. For example, if a document contains 10 properties grouped in 3 frames and one table with 5 columns, there is a total of 4 items. Each frame correponds to one item. A line of table is the fourth document item. An item may for exemple represent the customer (with its name, address, country which consist overall in 3 properties). A line of table may represent of quantity of products to be invoiced.

Document Analysis should also search for traces of decisions in a document: signatures, decision histories, status, etc. A specific tab is dedicated to Decision Items.

Document Lexicon



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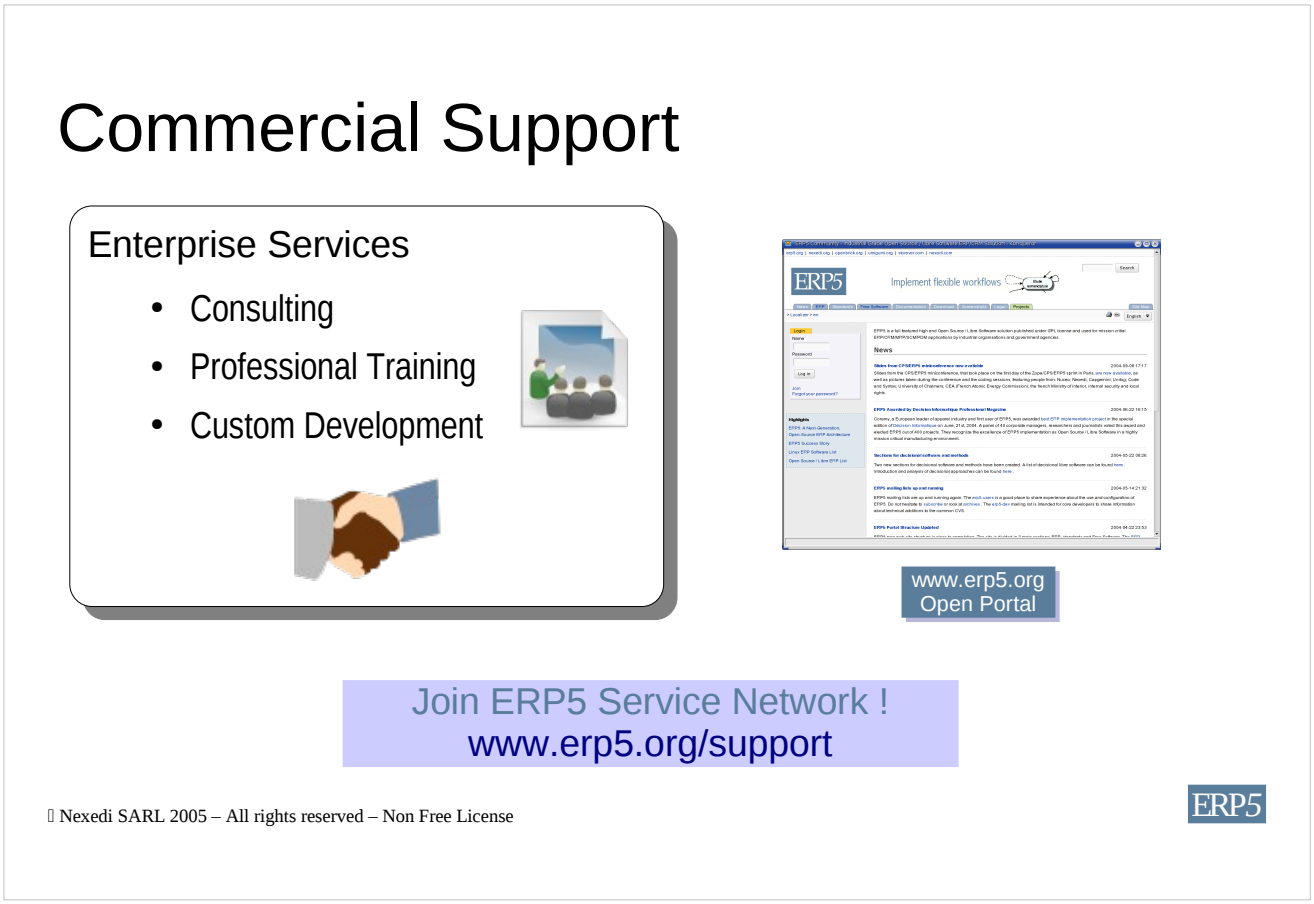
ERP5

The **Lexicon Module** supports PropertSheet Analysis in the ERP5 implementation process.

Lexixons are either based on document analysis and Use Cases related to a given module. A useful lexicon should identify any properties defined in a document item or in a Use Case and map them to existing propertysheet or class in ERP5. Some properties may be stored, others calculated dynamicaly.

Very often, properties defined by ERP5 PropertySheets are quite generic use names completely different with the names which are used for management in an industry or activity. For example, the property quantity is used to store debit and credit values in accounting.

The main interest of Lexicons is to force a team to define all names which are then manipulated by ERP5 and to accelerate the mapping of such names to the existing ERP5 framework through a review workflow on Lexicons.



The ERP5 project is coordinated by Nexedi. Certified Consulting and Development services are provided worldwide by a network of partner companies.

Just like any ERP, ERP5 is complex system which requires experience in order to provide complete satisfaction to clients. Configuring ERP5 requires much more effort and experience than simply installing ERP5 software components alone.

Companies interested in joining ERP5 professional services network are encouraged to contact Nexedi. Nexedi provides complete training and certification services. Nexedi can assist ERP5 service providers in providing optimal presales, implementation and aftersales service to enterprise clients. Nexedi is looking forward to assist consulting or software companies to build a sustainable, profitable and independent business.

For more information, please refer to www.erp5.org/support.