

EA Case Study

Industrial Technology Research Institute

Case ITRI

Industrial Technology Research Institute (ITRI) which is established since 1973 is the largest industry research institute in Taiwan. ITRI will strive to strengthen technological innovation and value creation ability and can be the technological pioneer, forging a path for all technological industries. By technology innovation and integration applications, ITRI create leading product and brand value for the industries. After the development of Research Result Information Platform in two years, ITRI go lives the platform in 2009 to create more valuable research results. We are pleasure to announce the platform and start the technical transfer and consultant worldwide.

Solution Overview

Company

The Information Center of Industrial Technology Research Institute (ITRI)

The software implementation and services

Research Result Integration Platform

Software Tools

Enterprise Architect 7.5

MS Visual Studio .NET 2005

Implementation Duration: Year 2008 - Year 2009

The Goal of EA Implementation

- The original development process, RUP (Rational Unified Process) is too heavy to create artifacts and software development for a small development team. Hope to find the lite tool and essential solution for development team.
- Hope to keep the asset correctly and guarantee the artifacts are the same with the situation of the systems.
- Hope to help project manager can track the scope / team situation easily.

The introduction of Research Result Information Platform

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The open innovation model becomes more important for the global business and related decisions which includes the dynamic information support of the industries, products, technology, market and related vendors. It helps the enterprise use external resource for research and development together. The Research Result Information Platform classify the research results of the universities and the research institutions, such as research reports, thesis, patents into the suitable industry technology structure by the classification method of the industry and product technology structure. The profits provide as follows:

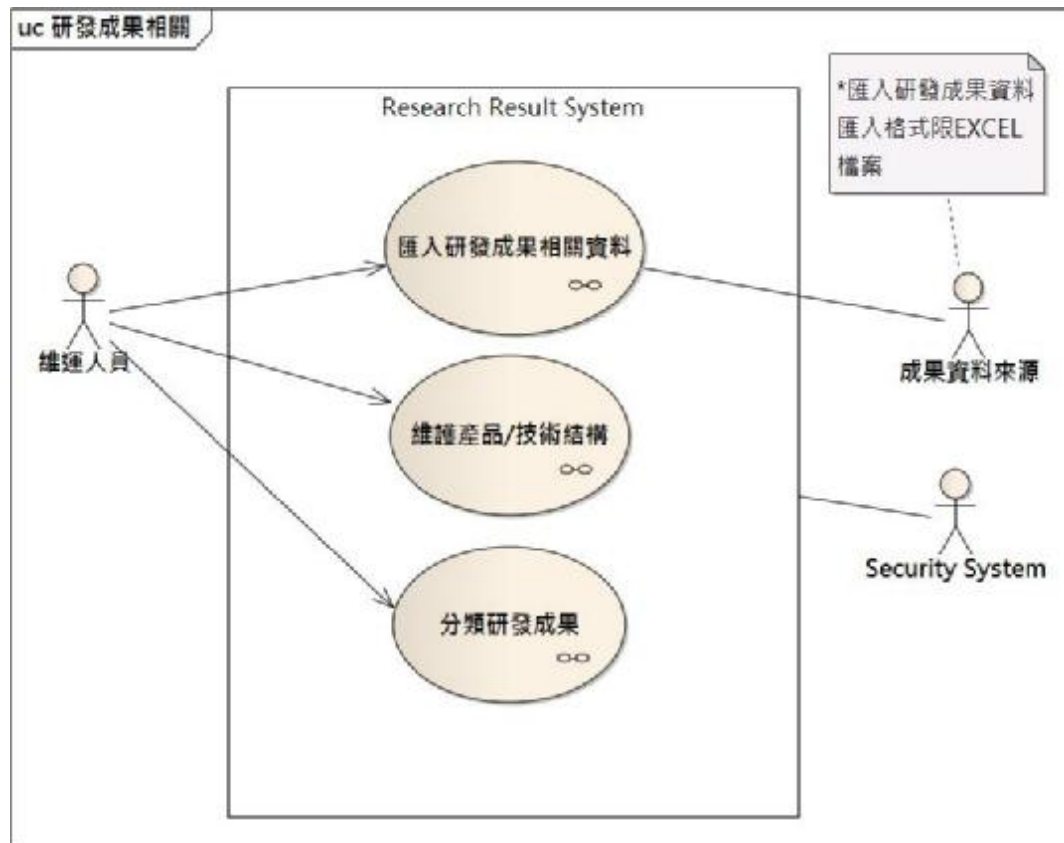
1. The vendor for each industry can use their industry terminology to capture, use and refer to the research results.
2. It provides the simply graphic diagrams and tables for the relationship information matrix. It can help the enterprise in decision making, improving the weak information linkage between markets, products and industries quickly.

ITRI Information Center spends two years to build the basic infrastructure and functions of the platform from nothing. The development team use Essential Unified Process, Unified Modeling Language (UML) and Enterprise Architect 7.5 to aid in project management, system analysis and design, team communication and collaboration. It contributed to non-obstacle communication and increased the software implementation efficiently.

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Harmonize project development process based on EA tool

We adopt the Enterprise Architect 7.5 in software development to harmonize the design artifacts by different roles, monitor and control the consistency between artifacts efficiently. It is very complexity to create platform implementation. It is very useful with EA for project manager, analyst, designer, architect, developer. The EA tool allows us to practice the methods and theories of the object-oriented analysis and design. It becomes more understand and modify easily and consistently, perceived directly for all artifacts. The advantages of using EA are as follows:

- EA is the acid tool for project management.

The "Relationship Matrix" by EA helps project manager to resource allocation, risk management, the estimation of the project scale and complexity, workload and the change management of system.

- EA is the system analysis tool.

The standard method by "Use Case Model" helps system analyst to quickly capture

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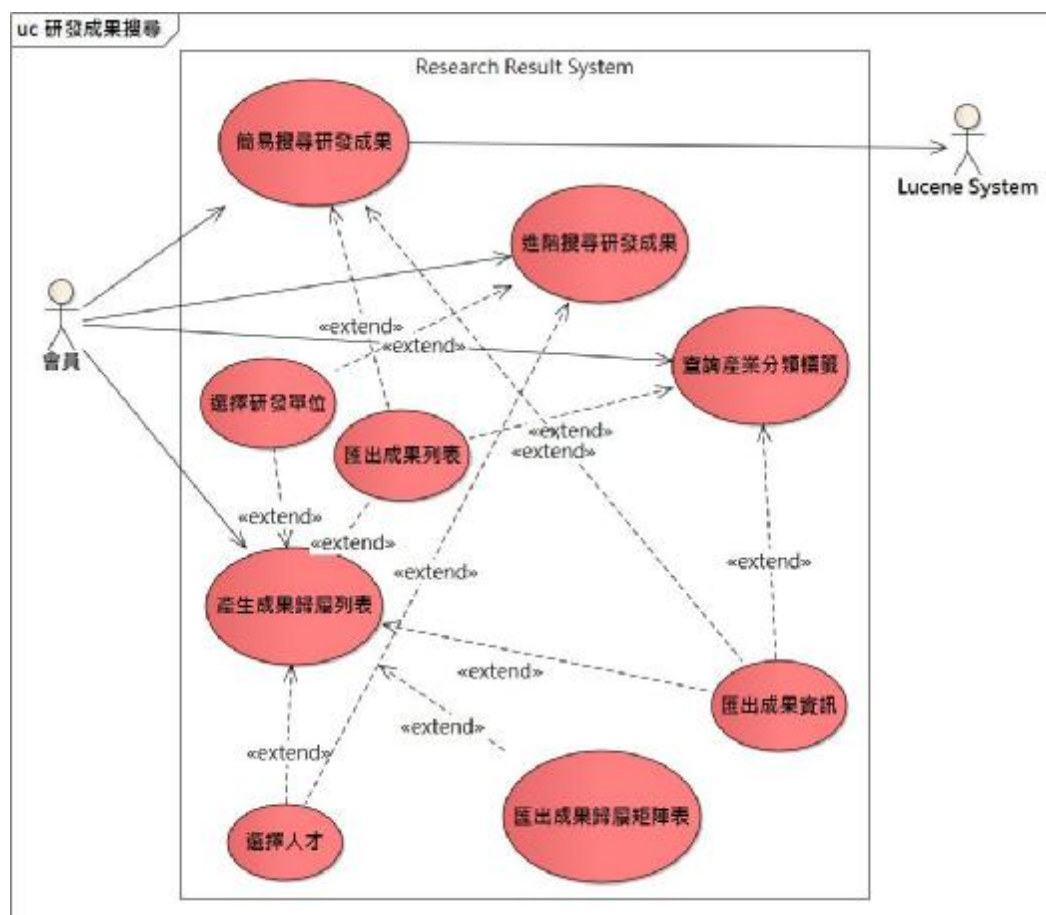
the business and system requirements, generate completed specification by “Document Generation”. It increases the efficiency to communicate with customers and make the consistency between documents and software development result.

- EA is the system design tool.

All of the team members can understand the different views of the design model by architects clearly. At the same time, it can express the interaction between objects and sub-systems completely.

- EA is integrated with the development tool.

The programmers can transform the model into runnable applications. EA can support multiple programming language, which includes C、C#、C++、Delphi、Java、PHP、Python、VB .Net、Visual Basic、Action Script to generate the code framework by “Generate Source Code” and build the transformation template by ourselves.



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Conclusions:

It is necessary to have a professional UML tool in the collaboration development in project team. It can assure to the quality of the artifacts as the assets of the organization and guarantee the consistency between artifacts and systems. Enterprise Architect (EA) will be the best valuable cost-benefit choice which has flexible, extensible and high performance software development tool.

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