

Intent: Allow a Business Analyst to dynamically draw from diverse data sources in order to understand the risk posed by possible supplier failures, and to investigate alternative suppliers.

Solution Story Example: **Drug Development Supply Chain Risk**

A major pharmaceutical company has a number of drugs under development at any one time. Each development process is supported by a wide range of vendor companies, any one of which could fail (due to bankruptcy, acquisition or change of business focus on the part of the supplier). The large company wants to understand the impact of this risk – what services do these small business provide, and what are the options, should one actually fail? Because of the diversity of data sources needed to answer this question, it was estimated that a data warehouse solution would take roughly six months.

The screenshot displays the 'Risk Assessment and Comparison' application in a Mozilla Firefox browser. The main interface is divided into several sections:

- Companies at Risk:** A table with 15 results, sorted by Risk factor. The table includes columns for Label and Risk factor. The data is as follows:

Label	Risk factor
Hippo crat	9
Pills and Things	8
Freudian Slips	8
Quack Diagnostics	8
Organic inc	7
Darwin Creatives	7
Conch Labs	7
Subjects R Us	5
Charles E. Tan	4
Bullet Labs	3
ADME Chem	3
Galen Anatomical	3
ACME Services	2
Welby, Kildare and Young	1
Experimental Testing Laboratory	1
- Similar Companies:** A table with 4 results, showing competitor and similarity. The data is as follows:

competitor	similarity
Charles E. Tan	2
Galen Anatomical	2
Organic inc	2
Subjects R Us	2
- Pills and Things (Left Panel):** A detailed view for the selected company. It shows:
 - label: Pills and Things
 - risk factor: 8
 - provides: [Absorption monitoring](#), [Clinical trials](#), [Efficacy testing](#)
 - locale of operations: [California](#), [Delaware](#), [Florida](#), [Idaho](#), [Iowa](#), [Kansas](#), [Louisiana](#)
- Pills and Things (Right Panel):** A detailed view for a selected alternative company. It shows:
 - label: Pills and Things
 - risk factor: 8
 - provides: [Absorption monitoring](#), [Clinical trials](#), [Efficacy testing](#)
 - locale of operations: [California](#), [Delaware](#), [Florida](#), [Idaho](#), [Iowa](#), [Kansas](#), [Louisiana](#)

The solution was constructed in a matter of days using a dynamic RDF mash-up of the data and a flexible user interface made up of simple re-usable components, shown in the figure. A list of supplier companies (upper left) considered to be at risk, are sorted by associated risk factors. When a company is selected, a list of alternative companies (rated by number of matching relevant services) is updated (upper right). When a candidate is selected from "Similar Companies", the two companies (the one at risk, and the alternate) are shown side-by-side at the bottom, including all relevant fields (in this case, services provided and locale).

Business Benefits/Results:

Business analysts gained insight into the real risks posed by possible failure of supplier companies, and were able to seek alternatives in advance of actual failures. The solution was produced in a timely and cost-effective way allowing business analysts to ask follow-up questions that were answered within a single day, rather than starting another half-year project.

Applicable Technologies and Products:

RDF provided a means to mash-up data from multiple sources needed to answer the complex business questions. TopBraid Live™ provided a platform for provisioning federated datasets and queries, while TopBraid Ensemble™ provided a fast prototyping environment to display the results of the complex queries in a digestible form. The TopBraid Query Generator (not shown) was used to develop the complex queries needed in this application.