

Investigative Architecture

The Conceptual Diagram

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Abstract

Formal UML-based notation provides a powerful tool for architecture design and communication. There is also a compelling need for crisp, clear and marketing-friendly architecture diagrams for use in executive presentations. The creation of polished, clear and well-scoped renditions of an architecture can be more art than science. We propose a diagram that balances the appropriate level of accuracy with enough flexibility for targeted marketing. This same view also provides a clear "at a glance" representation of an architecture, setting the scope for more detailed, formal views.

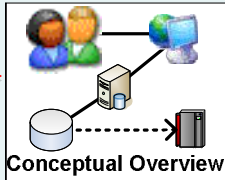
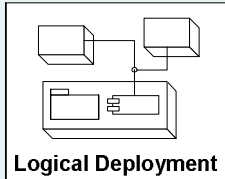
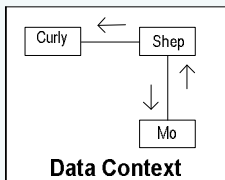
The Challenge

- Mission of enterprise architecture is to align technology design with business interests – visual modeling is the key tool for this:
 - Key challenge when modeling *for technical stakeholders* is proper scope and accuracy
 - Key challenge when modeling *for business executives* is marketing & selling a solution

The Solution

- A formal conceptual diagram approach that results in a work product that is:
 - Pretty enough to catch attention in the board room or the sales pitch
 - Formal enough to guide an architect to the right design
 - Lightweight enough to quickly draft as a way to introduce stakeholders to the design
 - Refined enough to serve as a foundation for moving forward (can map to UML diagrams)

Investigative Architecture Core Diagrams

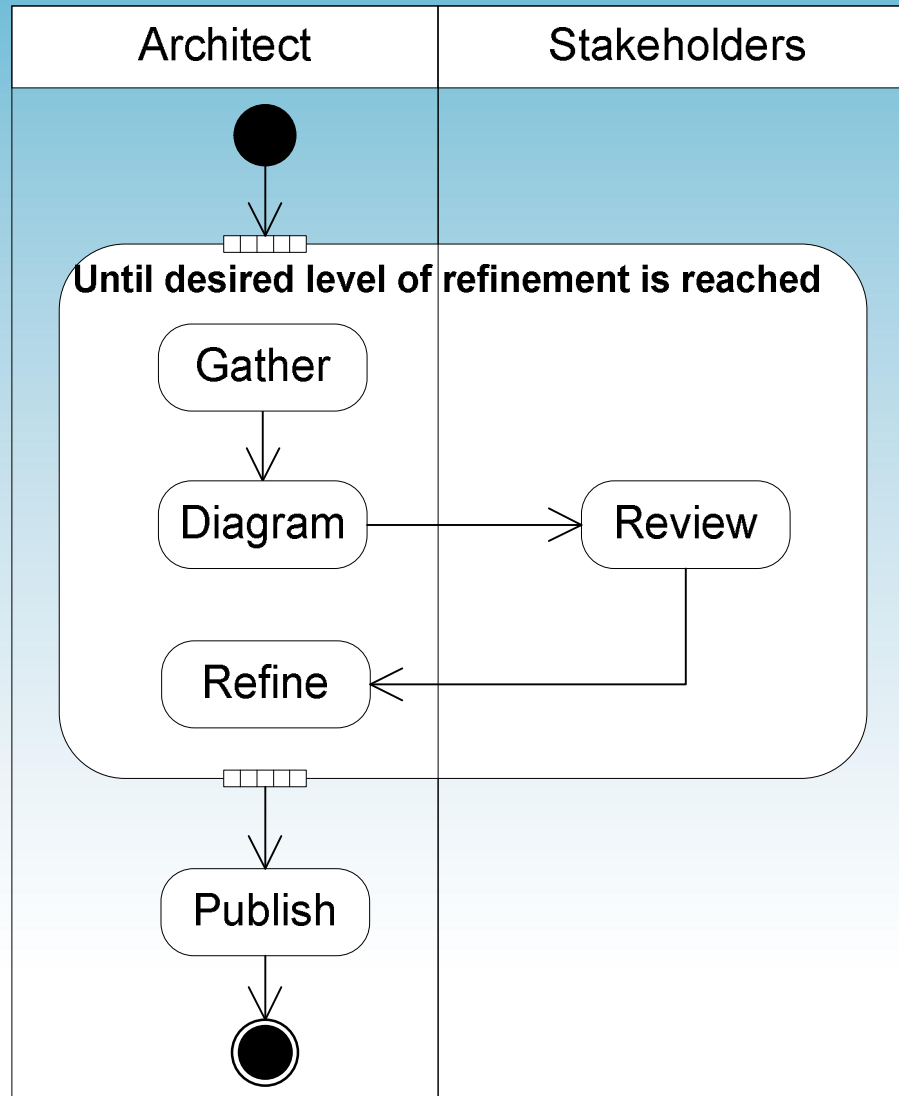
Diagram	Scope	Notation
 <p>Conceptual Overview</p>	PowerPoint View	Icon-based w/guidelines
 <p>Logical Deployment</p>	System View	UML Component Diagram
 <p>Data Context</p>	Data View	UML Collaboration Diagram

You are here



See [Leveraging UML as a Standard Notation for Enterprise Architecture](#) and [Investigative Architecture – Making Sense of your Enterprise](#) for additional information.

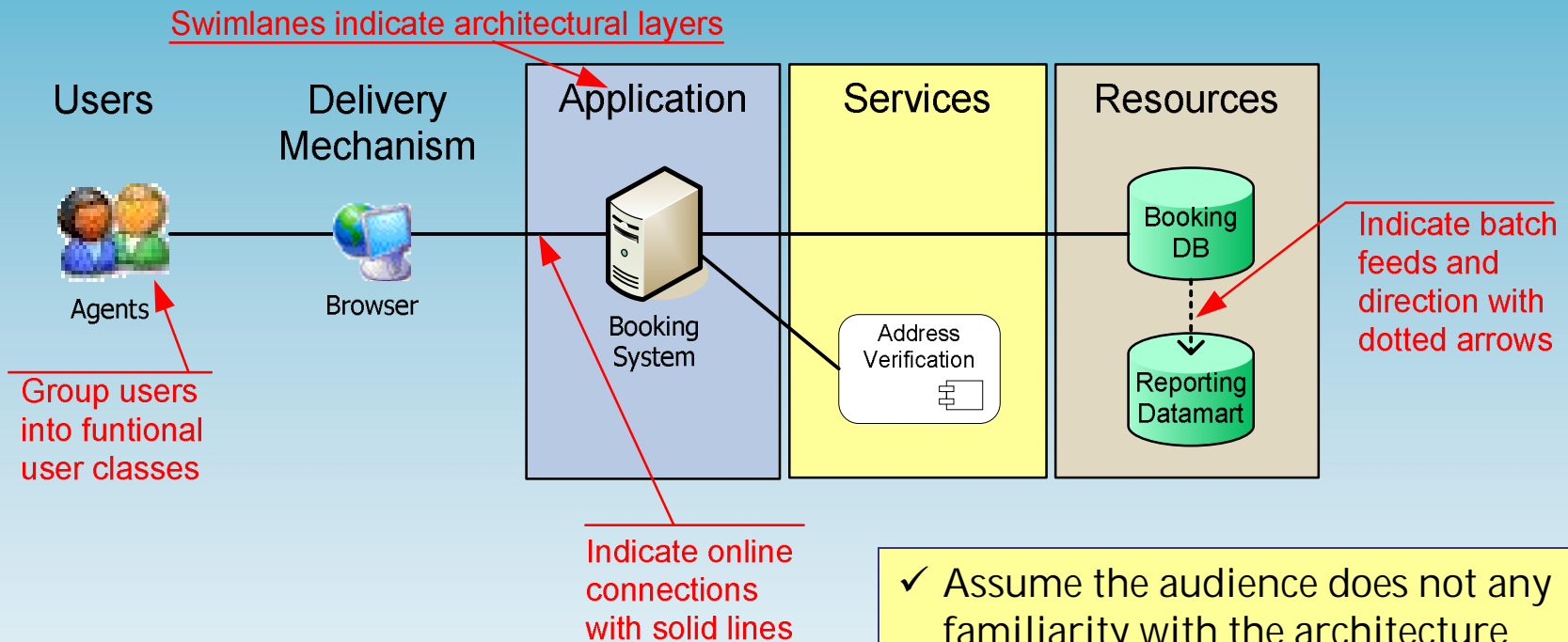
Investigative Architecture Process



Investigative Architecture Sources

Information Source	What to Expect	Target Diagram
Vendor	Product Documentation	Logical Deployment
<i>Support Engineer</i>	<i>Operations Manuals</i>	<i>All</i>
Server Engineer	Server Documentation	Logical Deployment
DB Administrator	Database Information	Logical Deployment, Data Context
<i>Business Line</i>	<i>Requirements Artifacts</i>	<i>Conceptual Overview, Data Context</i>
Network Engineer	Network Topography	Logical Deployment
<i>Company Intranet</i>	<i>Links to above information</i>	<i>All</i>
<i>EA Repository</i>	<i>As-is visual models</i>	<i>All</i>
<i>Google, Wikipedia, etc.</i>	<i>Stray pieces of the puzzle</i>	<i>All</i>
CMD.EXE (or csh)	Network information	Logical Deployment

Conceptual Diagram Quick Start



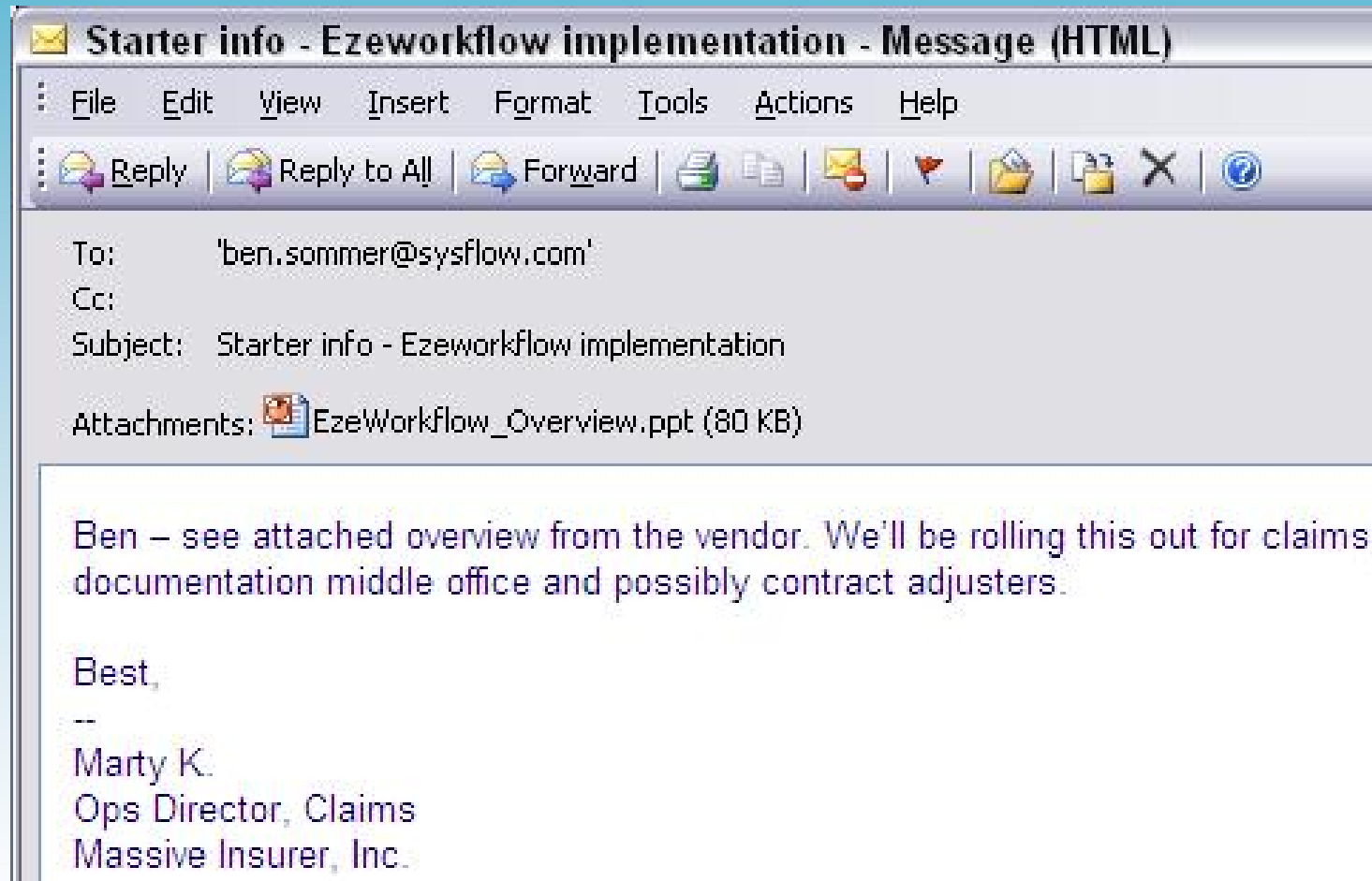
- Left to right depiction of user driven architecture
- Uses standard set of icons
- Designed to fit on one presentation slide

- ✓ Assume the audience does not have any familiarity with the architecture
- ✓ Keep the focus high level and conceptual
- ✓ Do not get distracted by inaccurate details - target "big picture" accuracy
- ✓ Target the diagram to your need
- ✓ Rescope to multiple diagrams to fit

Investigative Architecture Case Study

The Company	<i>Massive Insurer, Inc.</i>
The Vendor	<i>EzeDoesIT, Inc.</i>
The Product	<i>EzeWorkflow</i>
The Project	In disarray
The Task	Produce a Conceptual Diagram of the target solution

Source #1 – Email from Business Line



Case Study
(continued)

Stub Users

Users

Delivery
Mechanism

Application

Services

Resources

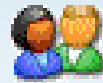


"...possibly contract adjusters"



Adjusters

"..rolling this out for claims"



Claims Agents

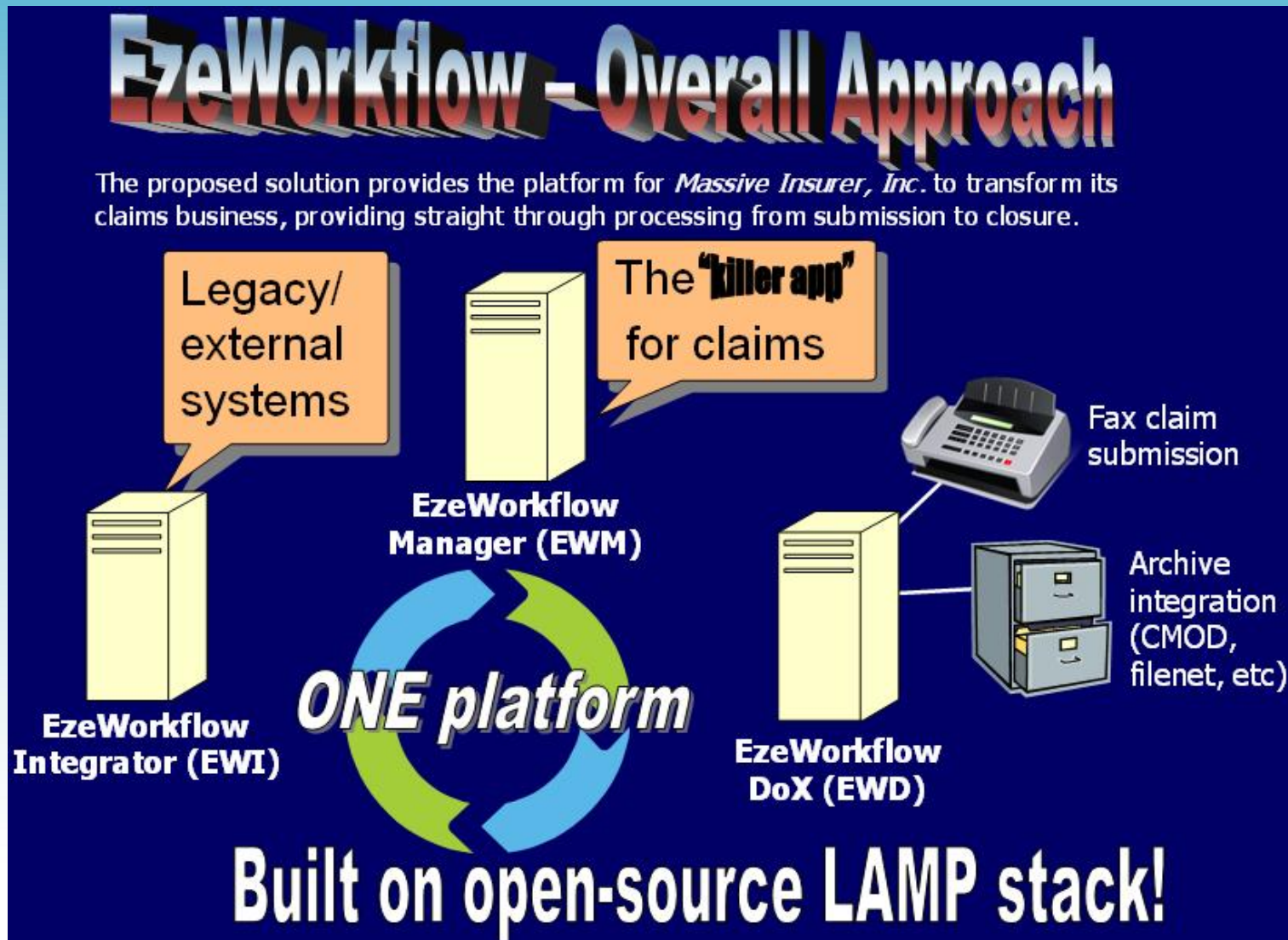


Documentation
Specialists

Case Study
(continued)

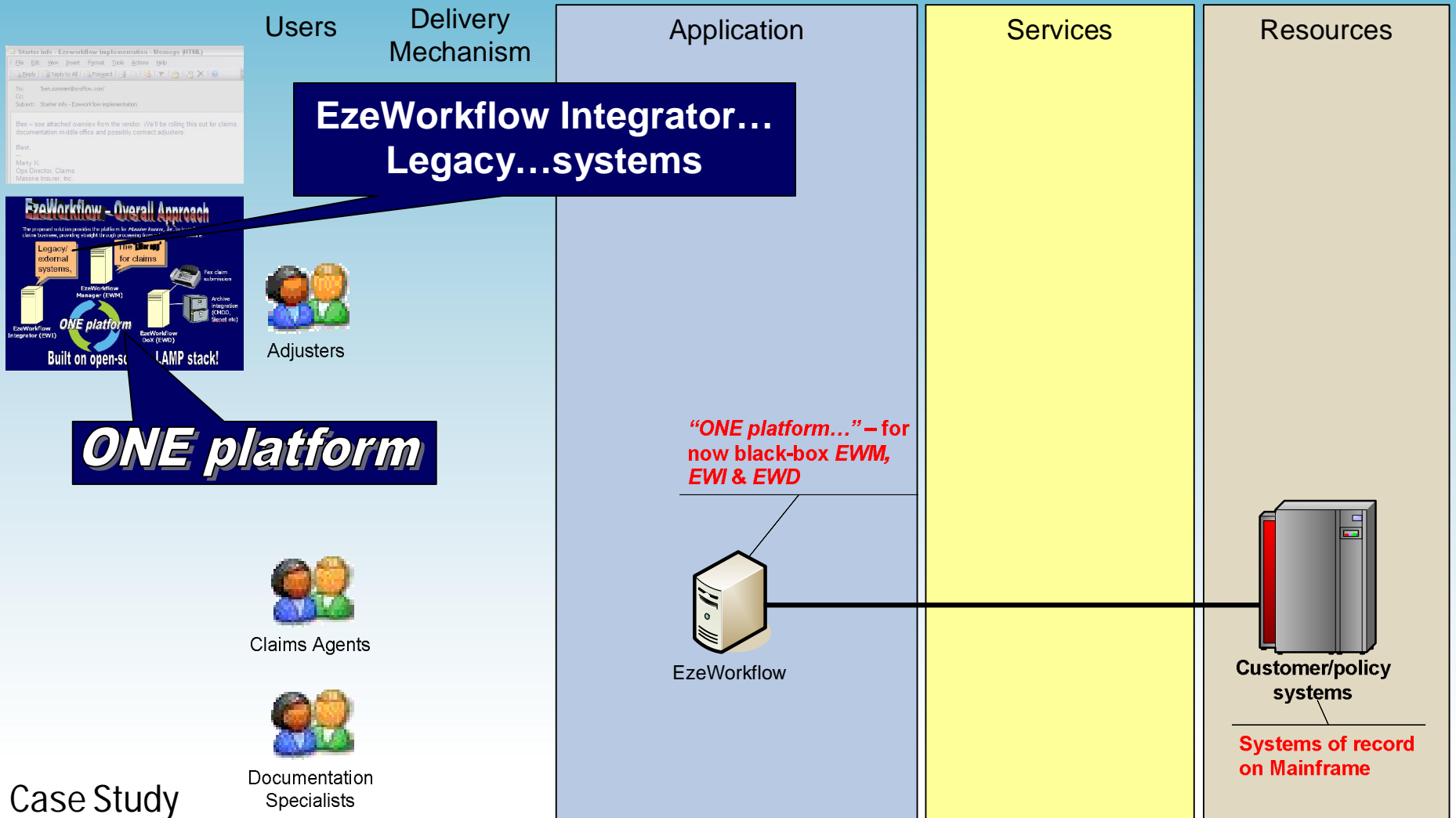
"...documentation middle office"

Source #2 – Vendor “Marketecture”



Case Study
(continued)

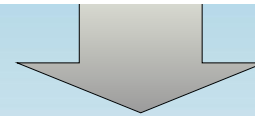
Application & Legacy Systems



Source #3 – Google Sleuthing

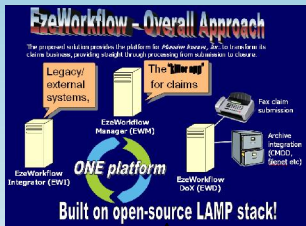
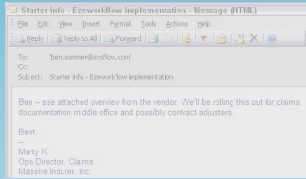


Good old
Wikipedia...



"Apache Web Server"...smells
like a web app...

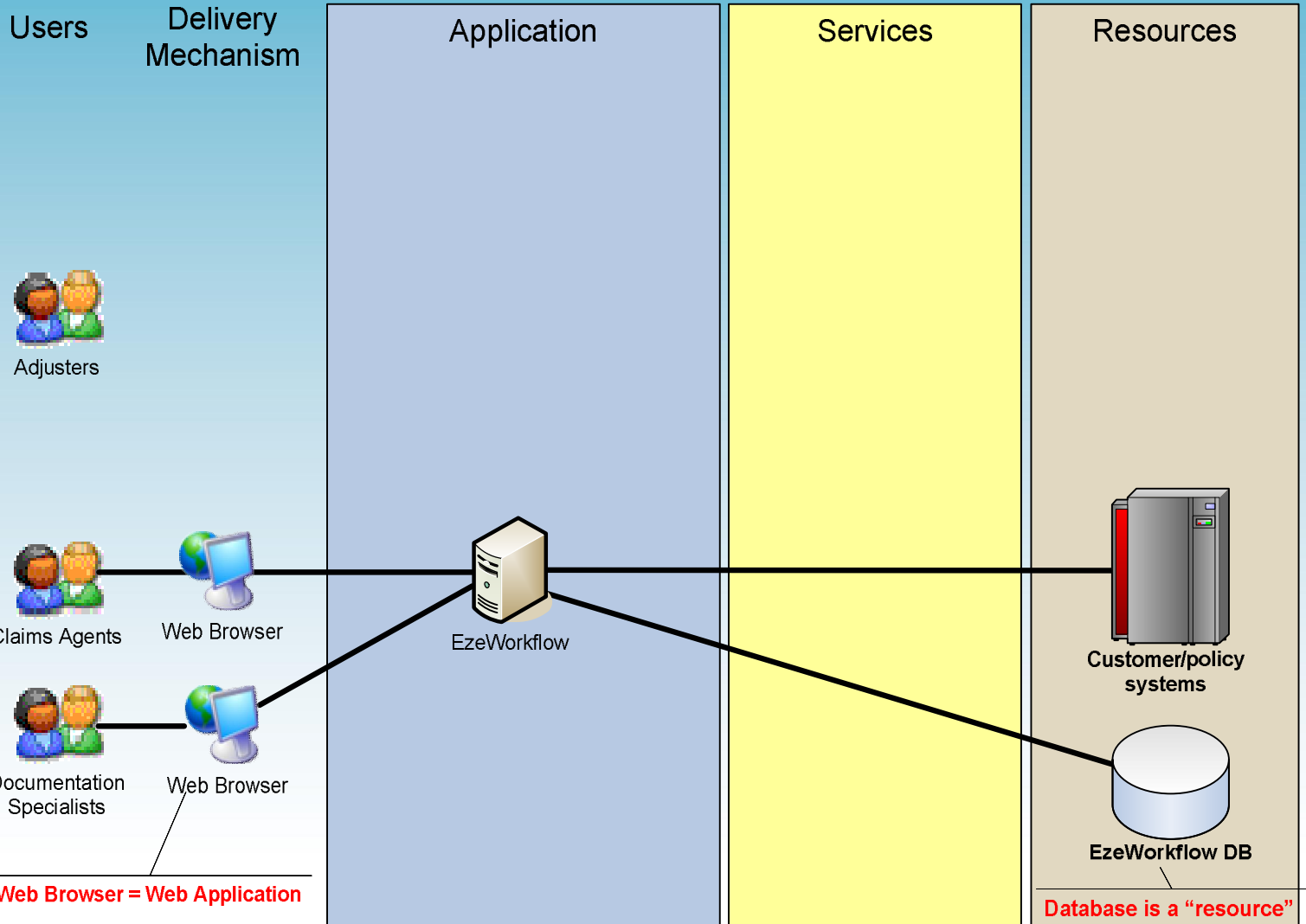
...and a database



Built on open-source LAMP stack!

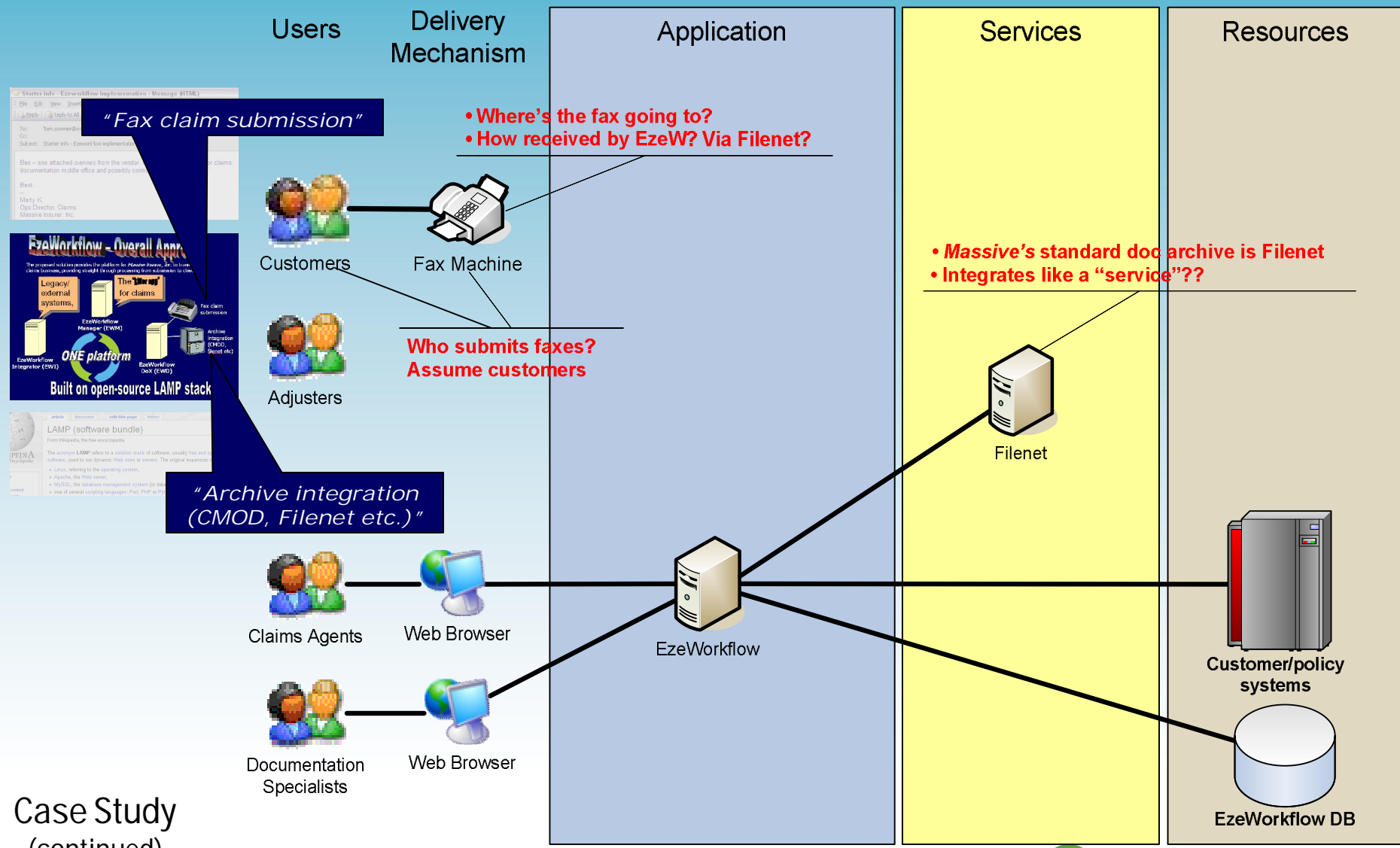
Case Study
(continued)

App – Front-end & Back-end



Case Study
(continued)

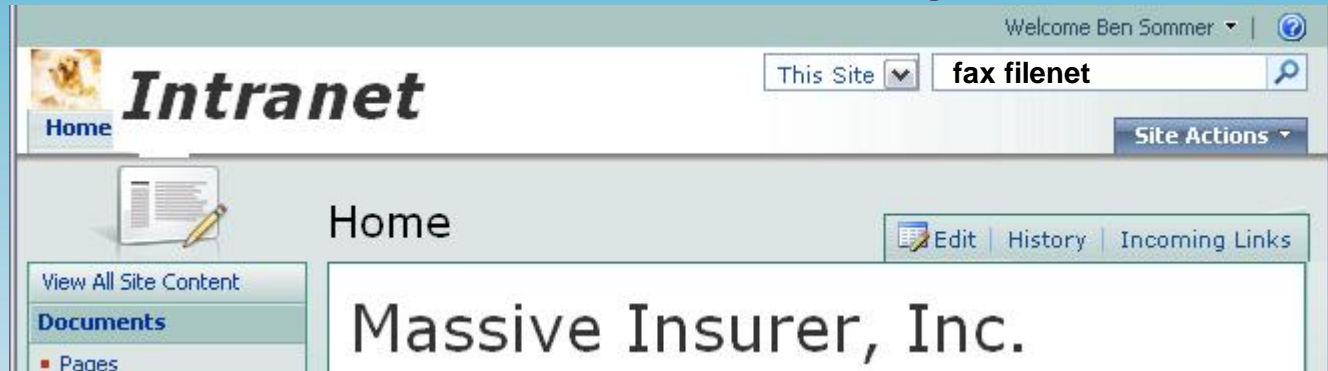
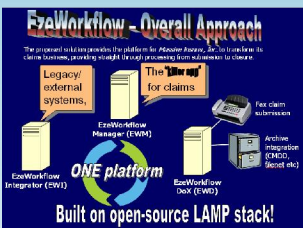
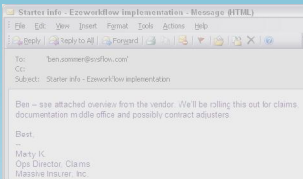
"EzeWorkflow Dox™"



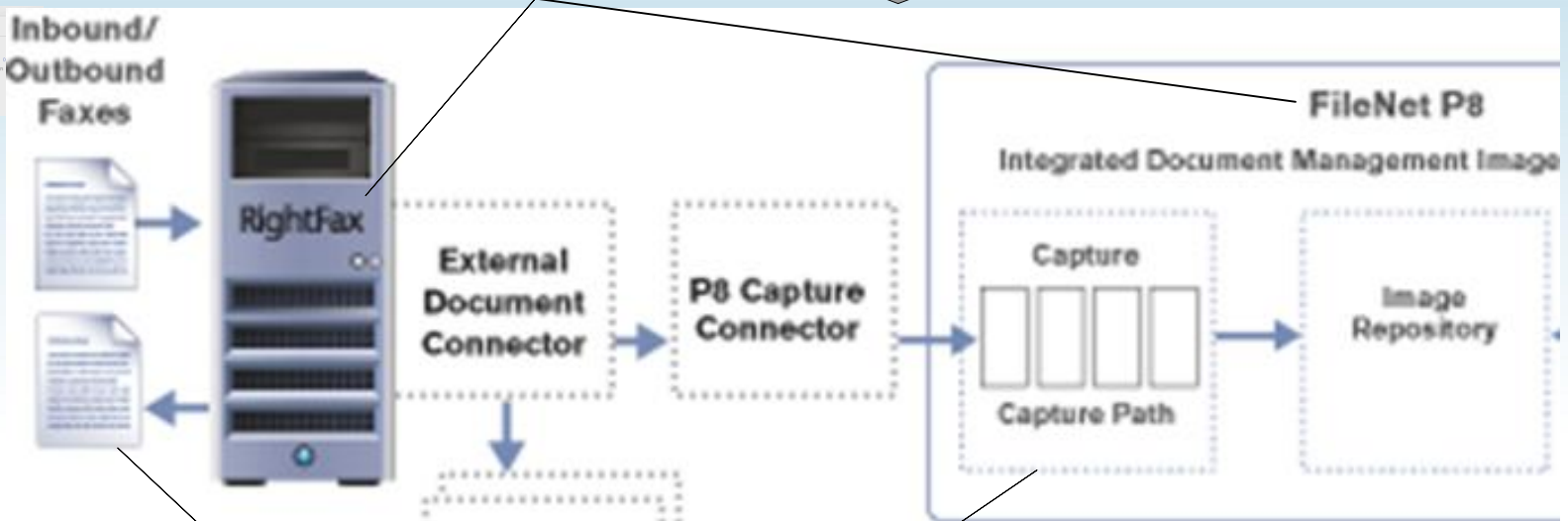
Case Study
(continued)

Fax & Archive?

Source #4 – Intranet Sleuthing



Internal documents suggests that RightFax is standard fax integration app. FileNet + RightFax – Bingo!



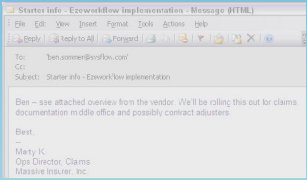
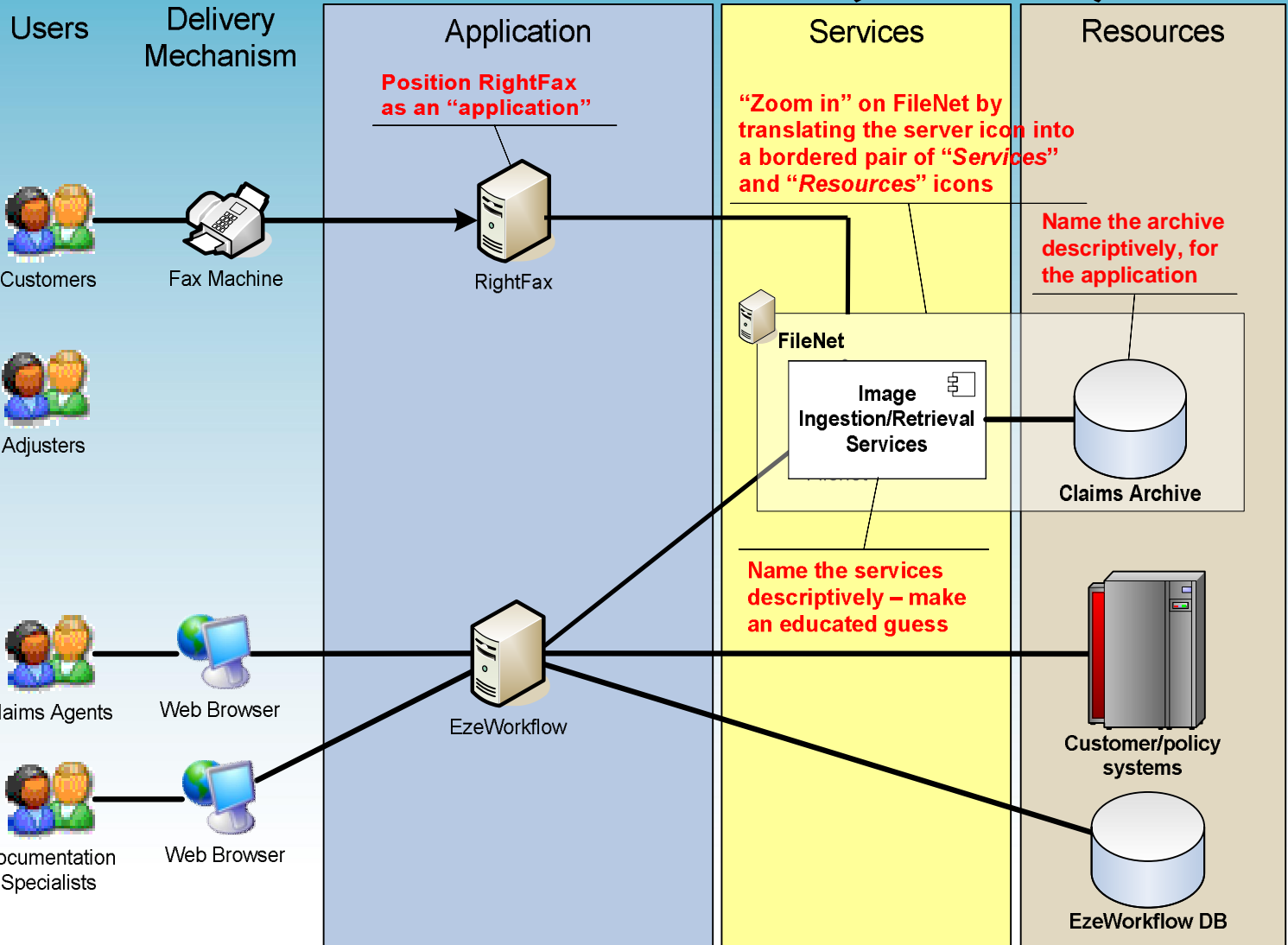
Case Study (continued)

Faxes coming in...

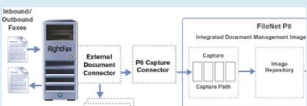
...capture & archive going out



"EzeWorkflow Dox™" (cont'd)



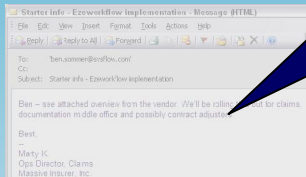
LAMP (software bundle)
The acronym LAMP refers to a collection of software: Linux as the operating system, Apache as the Web server, MySQL as the database, and PHP as the scripting language.



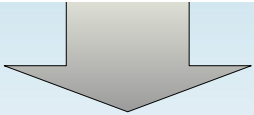
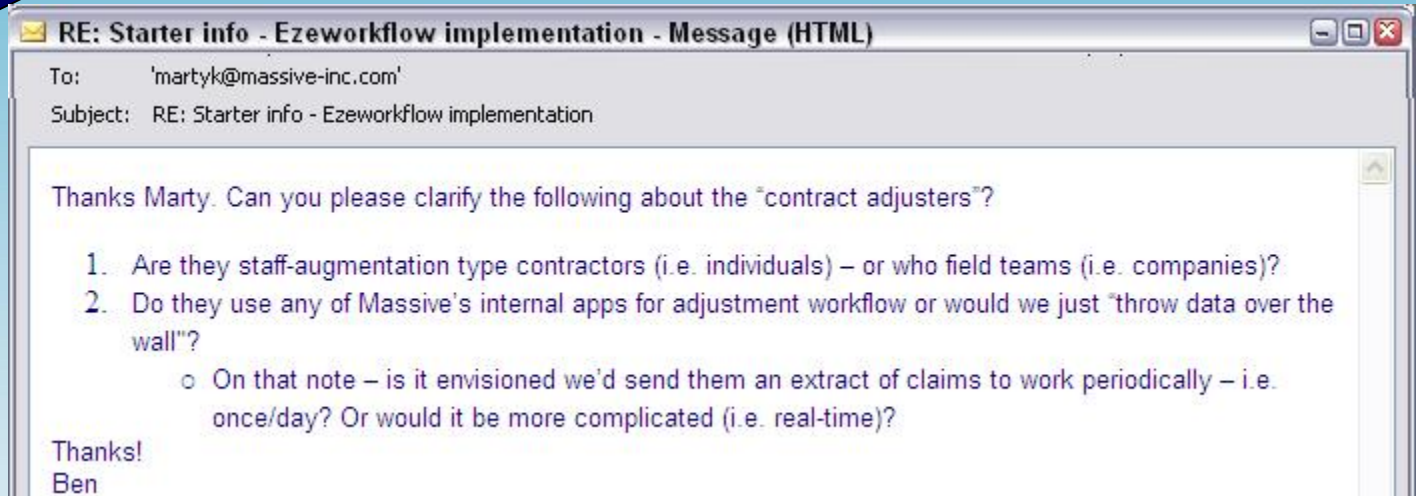
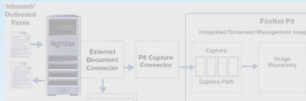
Case Study
(continued)

Source #5 – Follow-up Email to Business

“...possibly contract adjusters”



LAMP (software bundle)
near 90% of sites, the best of webapps
The acronym LAMP refers to a collection of software: usually free and open source software, used to develop web applications. It has originated as an acronym for:
• Linux, operating system, typically
• Apache, the Web server
• MySQL, the database management system, or
• a mix of those things eg. PostgreSQL, MySQL or, Sybase DB



Case Study
(continued)

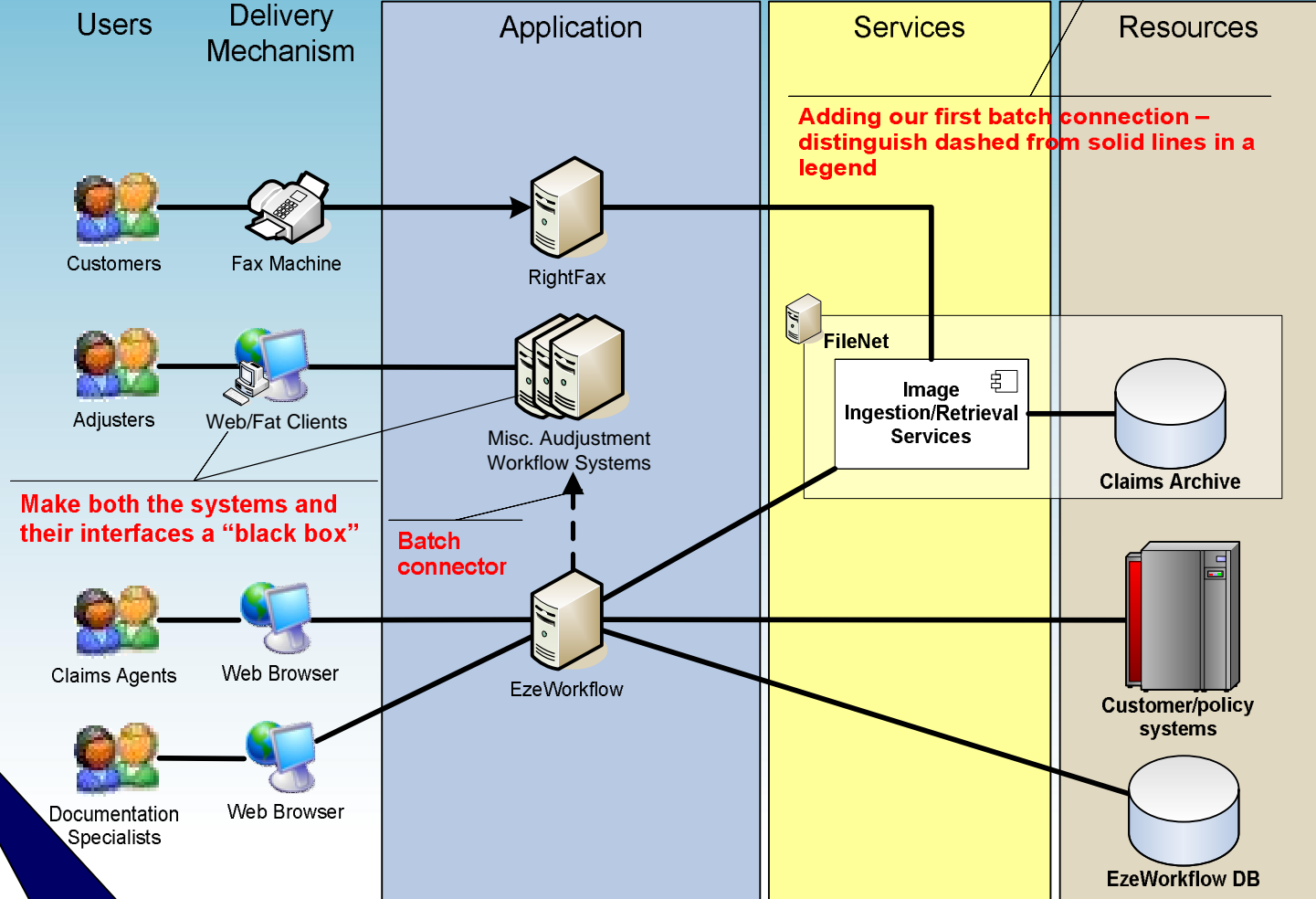
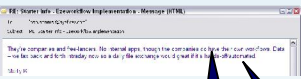
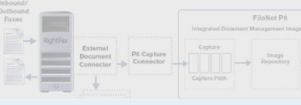
Model "Contract Adjusters"

LEGEND

———— Online Connections - - - - Batch Transfers



LAMP (software bundle)
 near 90% of sites, the best of breed
 The acronym LAMP refers to a collection of software: open source web servers, database servers, and scripting languages. The acronym LAMP is used to refer to a collection of software: open source web servers, database servers, and scripting languages. The acronym LAMP is used to refer to a collection of software: open source web servers, database servers, and scripting languages.



Make both the systems and their interfaces a "black box"

Batch connector

Adding our first batch connection - distinguish dashed from solid lines in a legend

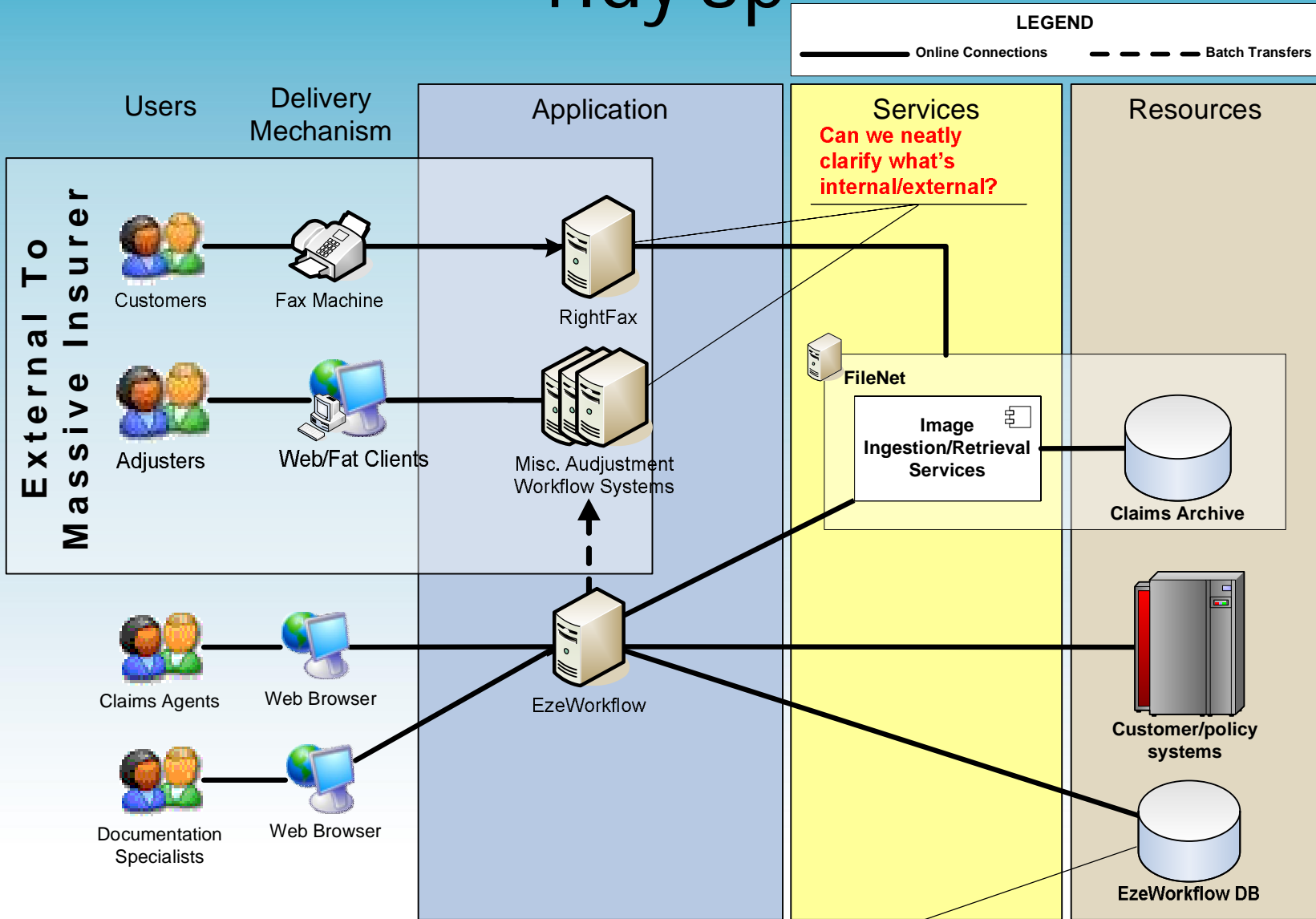
"...daily file exchange..."

"...have their own workflows..."

Case Study (continued)

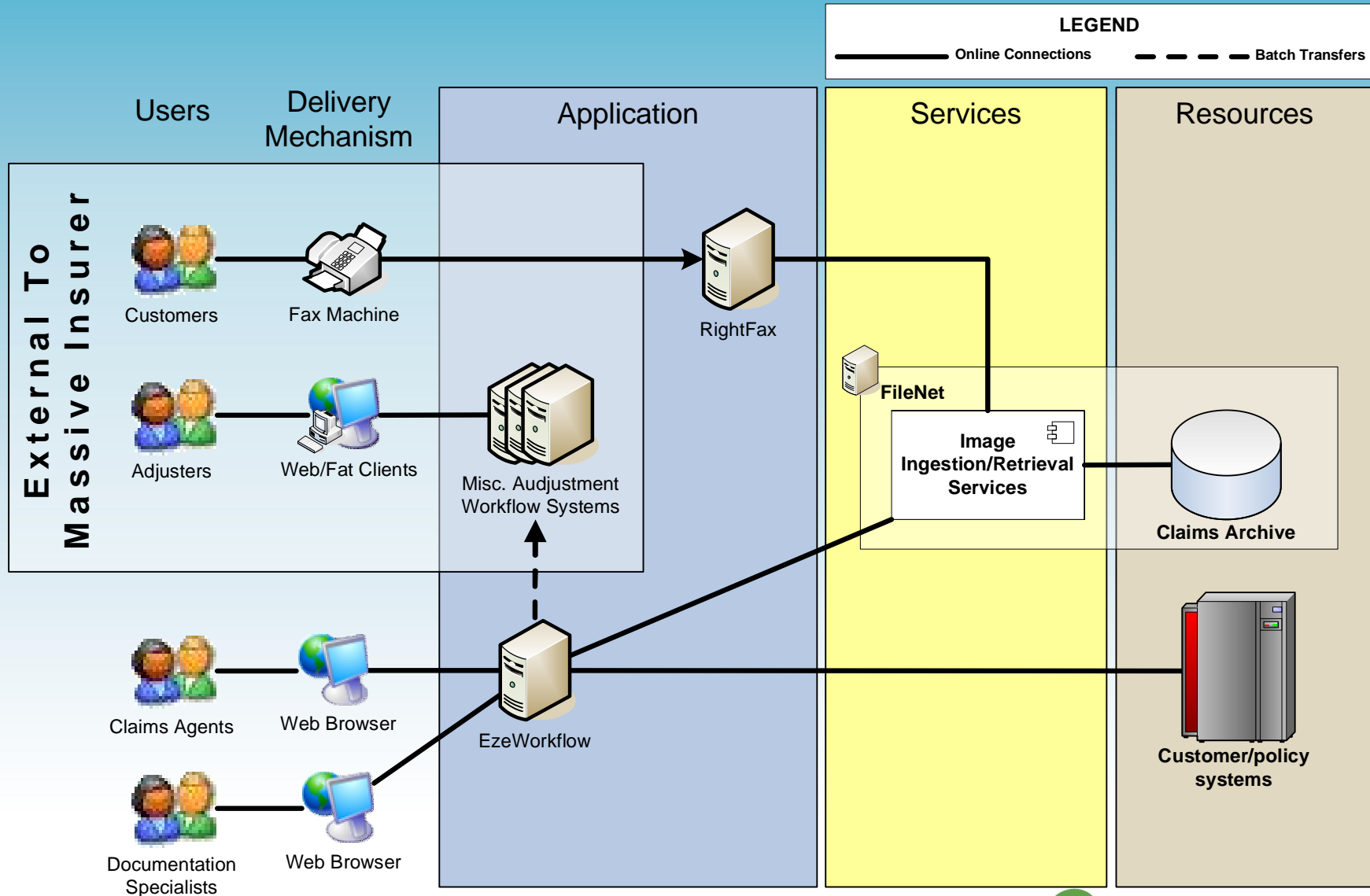


Tidy Up



Case Study
(continued)

Final Product



References

- [Systems Flow Whitepapers](#), including:
 - Investigative Architecture – Making Sense of Your Enterprise
 - Leveraging UML as a Standard Notation for Enterprise Architecture

Ben Sommer (ben.sommer@sysflow.com) is a senior consultant with Systems Flow, Inc, www.sysflow.com, where he helps organizations dramatically improve their competitive advantage through the practical, effective application of best practices in enterprise architecture and software development. Ben is currently consulting at Citizens Bank, providing architectural leadership for strategic IT projects. His career has spanned network engineering, systems administration, and software development - running the gamut from tools to automate network and systems tasks, to web-based CRM applications, to Identity Management and Provisioning systems, to real-time music synthesis applications. His industry experience includes education, education finance, interactive marketing and banking. Ben is a trained composer and musician.

Dan Hughes (daniel.hughes@sysflow.com) is a principal consultant with Systems Flow, Inc. He is currently engagement lead at Citizens Bank where he guided the launch of the enterprise architecture practice and is now the lead architect for Citizens Bank's Basel II implementation. Dan has 16 years of software engineering experience spanning a broad range of technologies and techniques. Startup to enterprise, he has launched, managed, and executed all aspects of both product and enterprise life cycle for clients in industries ranging from industrial automation to banking and insurance. He maintains a blog on software engineering at xengineering.com. He holds a Bachelor of Science in Computer and Systems Engineering from Rensselaer Polytechnic Institute.

James Hosey (james.hosey@sysflow.com) is a senior consultant with Systems Flow, Inc. is currently engaged at Citizens Bank as an enterprise architect providing strategic architectural guidance and project-specific support across the bank's technology portfolio. Over the course of his 16-year career, Jim has managed and executed all phases of the software life cycle and has delivered a wide variety of technology solutions for both commercial resale and internal use in domains that include banking, insurance, warehousing & distribution, marketing, communications, and management training & development. Having worked with organizations of all sizes, Jim can tailor his approach to the specific driving forces within each type of environment. His experience managing his own consulting practice for ten years has provided him with the entrepreneurial experience necessary to work with stakeholders at all levels to achieve results.

QUESTIONS?