

**Open Source: What Is It Worth?  
Thoughts from an Open Source Risk  
Management Software Provider**



CAS Spring Meeting, 18 May 2011, Palm Beach FL  
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**PillarOne  
Risk Management Meets Open Source**



PillarOne is

- a software solution focused on the insurance industry
- an enterprise software platform to build and run risk, rating and reserving applications
- licensed under the GNU General Public License (GPL v3)
- a community of actuarial and risk management professionals



<http://pillarone.org>

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**PillarOne achievements**



- Development started at the beginning of 2008, it is now a solution which is used by two major, global players and some smaller firms
- It is a true enterprise solution which has been acknowledged by Gartner (Overview of Solvency II Software Market) and other IT review firms
- PillarOne's openly accessible business logic libraries currently cover liabilities for general insurance, reinsurance and simple life insurance
- The community is slowly growing and it enjoys an increasing global awareness

**Open Source solutions can be on par with commercial solutions**

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**PillarOne community** 

Map Overlay Apr 1, 2010 - Mar 31, 2011



14,443 visits came from 140 countries/territories

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**Open Source Spirit** 

- Share what can be shared – and make a business around that
- A community is stronger than an individual person or company

Actuaries are a community and a lot of know-how is already shared.

„The real magic is the community process – it has nothing to do with software.“  
 Bill Hilf  
 Microsoft's general manager for competitive strategy

„The participation age is about the people at the edges of the network telling the center what is going on .“  
 Jonathan Schwartz  
 CEO Sun Microsystems

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**Case study: Open Source Spirit and Process** 

Project Saphir – Standard Approach under Solvency II

Facts:

- PillarOne started with a clear focus to provide a platform for partial-internal and internal models
- Over the last few months the European regulators put more pressure on a professional implementation of the standard approach for Solvency II
- There is no standard application on the software market which provides full support\* for the Standard Approach under Solvency II

\* Full support: compliant data management (auditable, versioning, documentation), process support, regulatory reporting

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**Case study: Open Source Spirit and Process** 

Project Saphir – Standard Approach under Solvency II

Community reaction:

- Community members point out that even though the standard approach is a simple set of formulas, the data management and process requirements are a challenge for many insurers
- Community members collect information from the big providers and come to the conclusion that all of them have the tools to build such a standard application, but none of them seems to have more than slides.
- A community meeting was organized to collect the requirements for a standard application to support the Solvency II process

**3 Months from first community feedback to explicit funding discussions shows the flexibility and speed of a community with a few dedicated, full-time community resources.**

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**Not everything can be shared** 

- Client data
- Client-specific applications
- Client-specific interfaces to other software systems, such as CAT data providers, ESG providers, technical accounting systems
  - PillarOne is built on top of a standard-compliant platform
- Client-specific business logic components
  - PillarOne comes with a state-of-the-art plugin system that makes it easy to extend the open version with client-specific logic

**Even on parts that cannot be shared, Open Source Solutions promote the use of standards**

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**What can be shared?** 

- The application infrastructure
  - How data is stored in a database
  - Multi-user, client-server framework
  - Audit functionality
  - Process support (data documentation, reviewing, etc)
- Data analysis features (navigation in large data sets, data comparison, etc)
- Simulation engine, random number generator
- A large part of the business logic components, e.g. Claims distributions, reinsurance contracts, etc.
- Model templates / sponsored models

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**Is it worth sharing?**

*pillar 1*  
Risk Management | Finance | Claims | Analytics

- A large part of the IT risk management infrastructure is not company-specific
- The majority of the components used for building models are not company-specific

Since so much is in common,

- insurance companies should not build, but buy
- It looks like a perfect environment for a commercial provider. The trouble is insurance risk management is a niche market; hence, large providers are not interested. Most smaller providers have a vested interest (brokers, reinsurers, actuarial consultants)

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**Is it worth sharing?**

*pillar 1*  
Risk Management | Finance | Claims | Analytics

**Open Source is a perfect solution for such an environment because**

- The actuaries can shape the solution without having to build it
- IT experts can build the professional infrastructure without having to implement actuarial content
- Parties with a vested interest (brokers, consultants, regulators, reinsurers) can build custom extensions which show their competence and value proposition, rather than positioning them as a software provider
- Actuaries are a community and the innovation power of the community is bigger than the one from a single company
- The total cost of ownership is attractive

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**An open source business model**

*pillar 1*  
Risk Management | Finance | Claims | Analytics

- Insurance companies want solutions for which services can be bought
- Open Source encourages an ecosystem of professional service providers
  - Training
  - Model building
  - Integration
  - Scaling
  - Maintenance



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[www.intuitive-collaboration.com](http://www.intuitive-collaboration.com)

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**Appendix: PillarOne in a Nutshell** 

<p><b>PillarOne</b></p> <ul style="list-style-type: none"> <li>▪ Standard models, e.g. Standard formula for Solvency,</li> <li>▪ Special purpose models, e.g. Reinsurance analysis,</li> <li>▪ Model templates</li> </ul>	<p><b>Client-specific</b></p> <ul style="list-style-type: none"> <li>▪ Custom models, e.g. internal risk models</li> </ul>
<p>Common business logic libraries</p>	<p>Client-specific business logic libs</p>
<p>Common risk infrastructure, e.g. data management, application framework, result analysis tools</p>	

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