

# Reserving with PillarOne

PillarOne – Risk Management meets Open Source



Workshop at the Annual Meeting of the SAA, August 28, 2009  
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PillarOne is

- Driven by a community – **open source**
- It is an **enterprise software suite** for actuarial applications, e.g. reserving, risk modeling/management and pricing/profit testing
- A **community** which encourages the exchange of concepts, methods and implementations around enterprise risk management



Software Platform

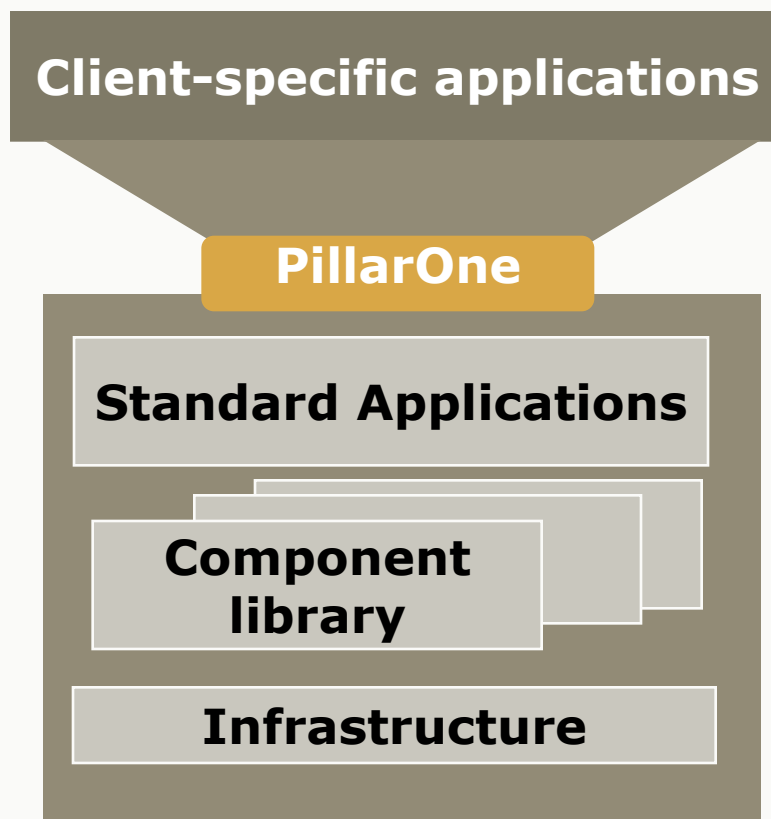
The diagram consists of three main elements: a top orange oval labeled 'Software Platform', a central grey rectangular box containing the PillarOne logo and tagline, and a bottom orange oval labeled 'Community'. A large white arrow points downwards from the 'Software Platform' oval to the 'Community' oval, passing through the central box. The central box also contains a large red number '1' and a white arrow pointing downwards.

Community

The concepts are the same for all market participants, but their implementations differ.

→ A common risk infrastructure provides a high level of flexibility on top of which the company-specific models/tools can be implemented without starting every time from scratch.

→ standard, economical approach





## **Strongly types data -> operational safety**

- Reserving data is more than just numbers, e.g. attribute of accident or underwriting year has an influence on methods an aggregation
- Allows automation of error-prone tasks which are in most tools done by exporting to Excel, reformatting the data and importing it again, e.g. data with different start dates or different time resolution

## **Data diagnostics -> efficiency**

- Hooks to add data diagnostic algorithms -> Avoid tedious search for possible trouble spots in the data
- Sensitivity and run-off analysis



## Targets

- Ultimates, including pay-out patterns
- Calendar year volatility of the development
- Historical reliability of a method

## Projection methods

- Link ratio family (Chain Ladder, Regression, etc)
- Additive model
- Definition of user-defined, composite methods (e.g. Bornhuetter / Ferguson)
- Tail patterns (not only tail factors)



- **Segmentation, aggregation and consolidation**

- Very flexible definition of business segmentation, e.g. by currency, legal entities, geographic region, lines of business
- Possibility to generate pdf reports
- Calculate projections on aggregate level and compare them with aggregate projection\*
- Aggregation along different hierarchies and according to user-defined tags (such as internal or auditor)\*

\* Scheduled for v0.5

## **Fall 2009 – PillarOne.Reserving v0.4:**

- Features as presented on the previous slides and in software demonstration
- Clean-up back-end
- Performance improvements

## **Spring 2010 – PillarOne.Reserving v0.5:**

- Custom aggregation
- Data tagging
- Reporting