Deloitte.

IT packages for Solvency II
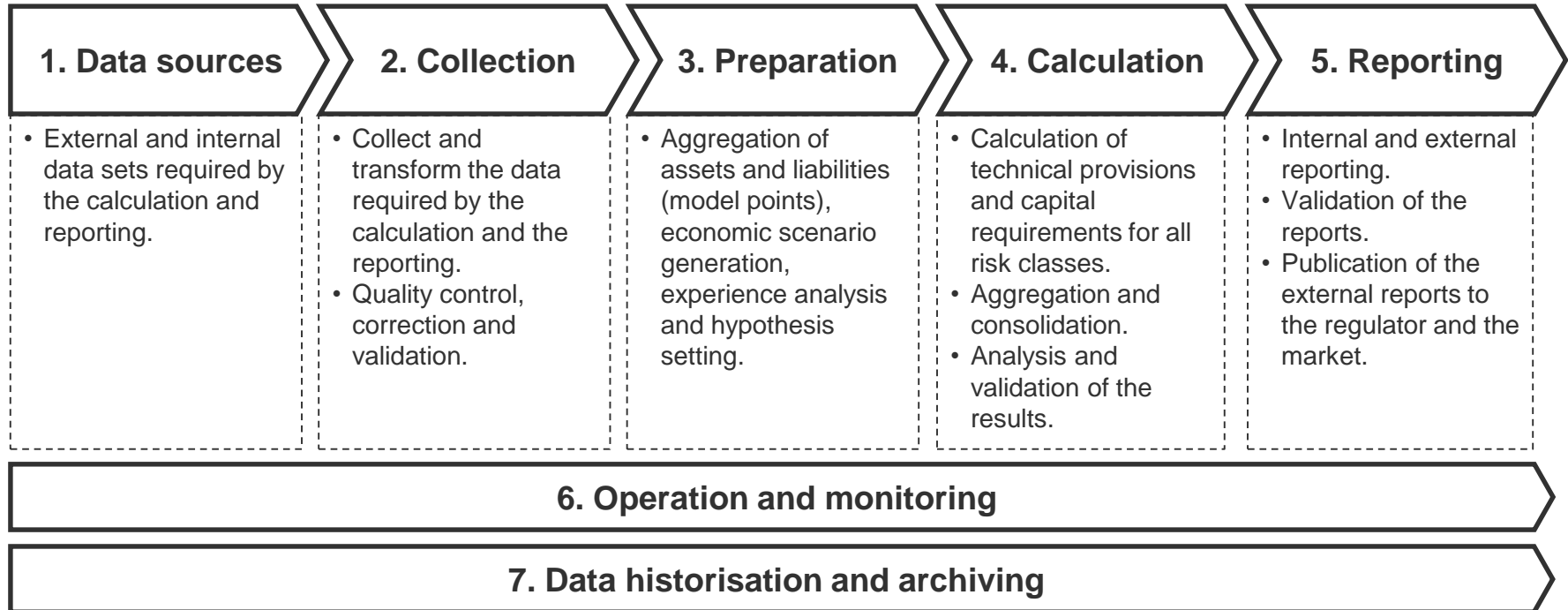## Deloitte 2014 market survey

September 2014

The IT perspective of Solvency II

Solvency II calculations and reporting require to process significant amounts of data from multiple data sources. Even if their size and level of ambition vary significantly, almost all insurers are looking to their IT architecture to improve the robustness, performance and flexibility of systems and data flows supporting actuarial, risk and finance processes.
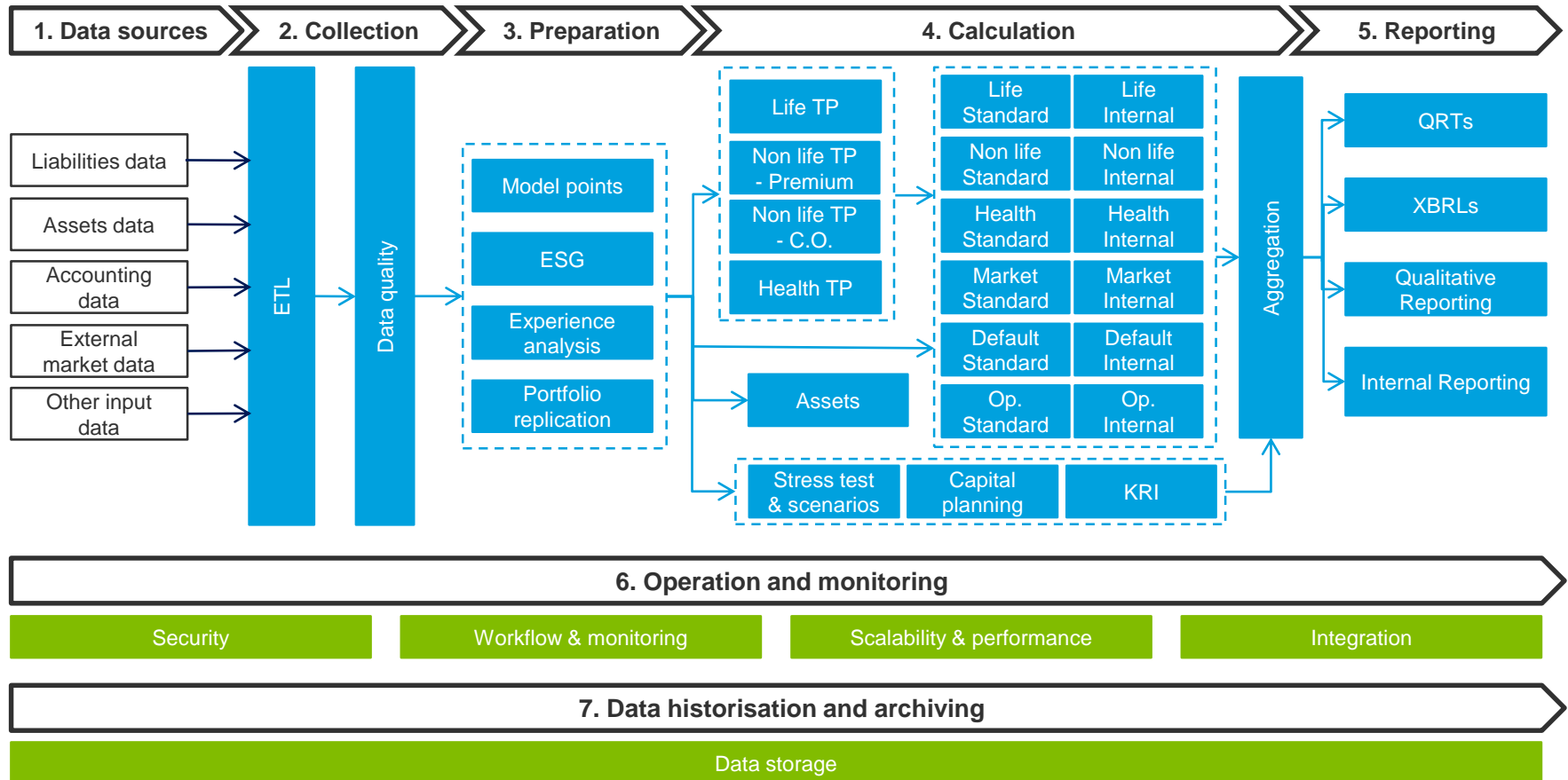
Subsequently, make or buy decisions and potentially package selections take place in order to reach the Solvency II objectives. In order to support the insurers in these activities, Deloitte surveyed packages available on the market to assess their capabilities to support the different steps of a Solvency II process, which, from an IT perspective could be summarized as follows:

1. Data sources	2. Collection	3. Preparation	4. Calculation	5. Reporting
• External and internal data sets required by the calculation and reporting.	• Collect and transform the data required by the calculation and the reporting. • Quality control, correction and validation.	• Aggregation of assets and liabilities (model points), economic scenario generation, experience analysis and hypothesis setting.	• Calculation of technical provisions and capital requirements for all risk classes. • Aggregation and consolidation. • Analysis and validation of the results.	• Internal and external reporting. • Validation of the reports. • Publication of the external reports to the regulator and the market.

6. Operation and monitoring

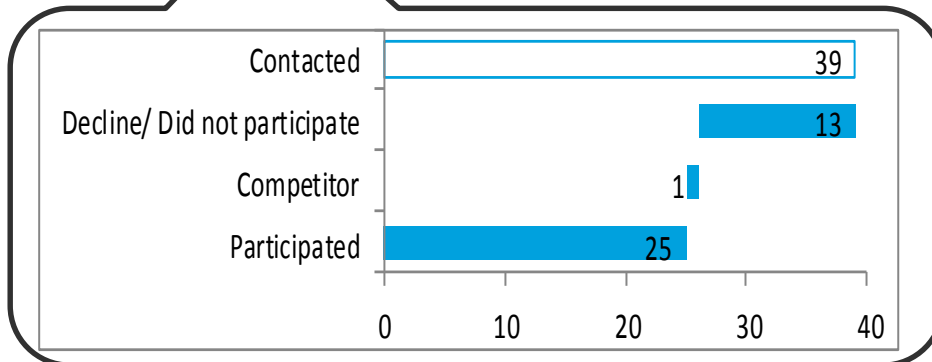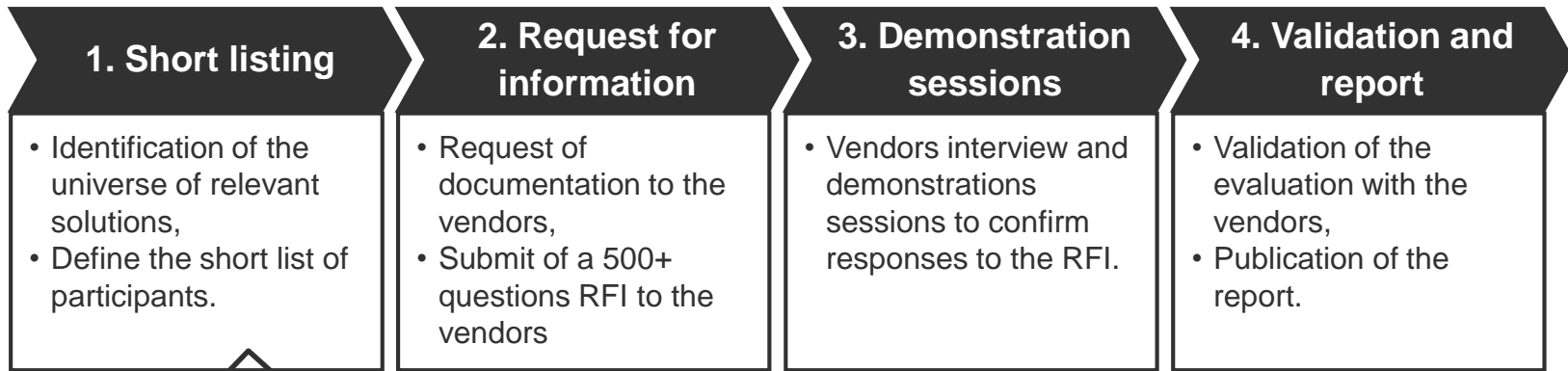## 7. Data historisation and archiving

Scope of the market survey

The scope of the study is limited to Risk Management. All other IT domains of the company are excluded (policy administration, accounting, referential, asset management, etc.).

All systems being able to support data collection, preparation, calculation, reporting, monitoring and control as well as storage are considered in scope of the survey (data sources part is out of scope).
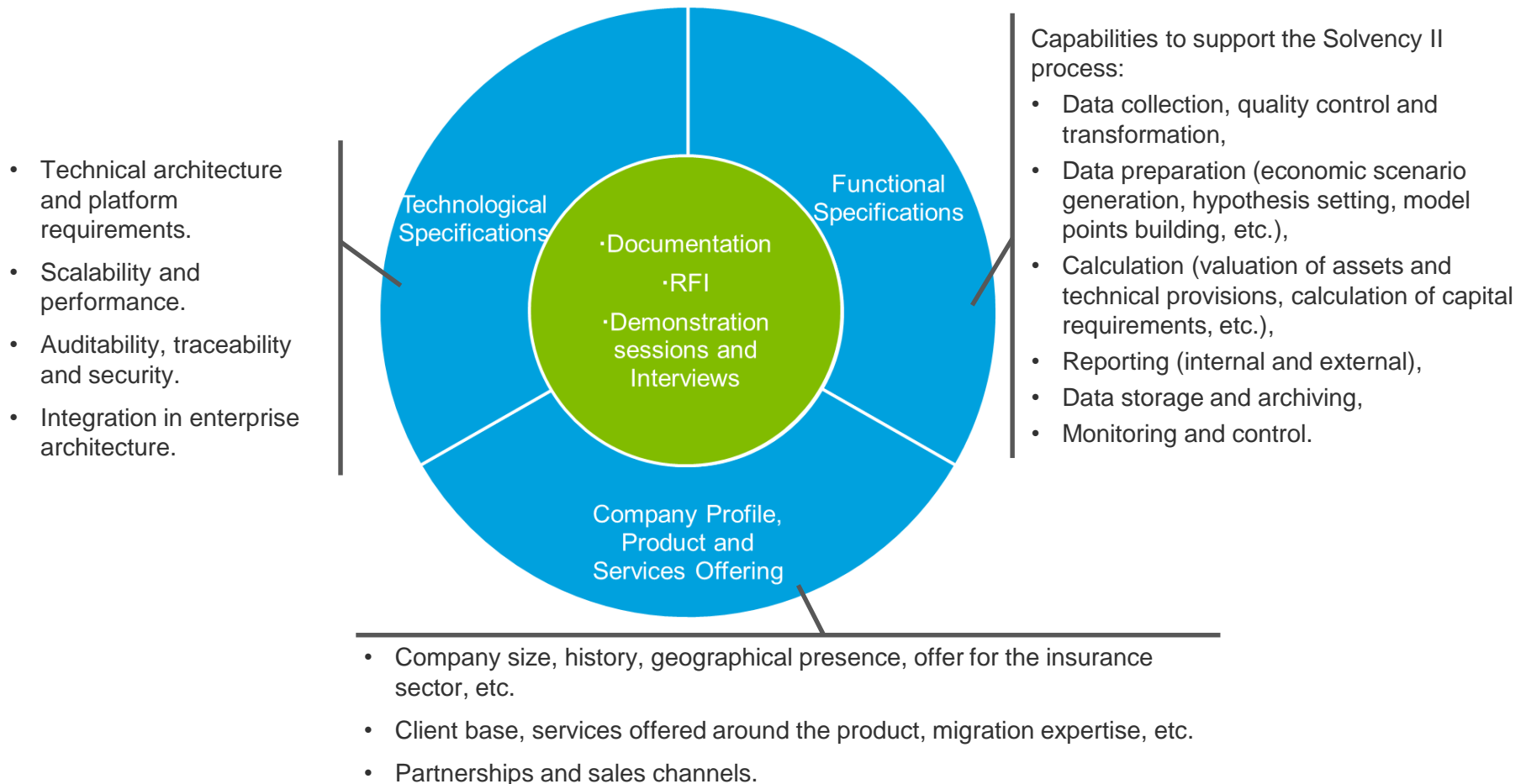
1. Data sources	2. Collection	3. Preparation	4. Calculation	5. Reporting

1. Data sources
- Liabilities data
- Assets data
- Accounting data
- External market data
- Other input data

2. Collection
- ETL
- Data quality

3. Preparation
- Model points
- ESG
- Experience analysis
- Portfolio replication

4. Calculation
- Life TP
- Non life TP - Premium
- Non life TP - C.O.
- Health TP
- Assets

Life Standard	Life Internal
Non life Standard	Non life Internal
Health Standard	Health Internal
Market Standard	Market Internal
Default Standard	Default Internal
Op. Standard	Op. Internal

- Stress test & scenarios
- Capital planning
- KRI

Aggregation

5. Reporting
- QRTs
- XBRLs
- Qualitative Reporting
- Internal Reporting

6. Operation and monitoring

Security	Workflow & monitoring	Scalability & performance	Integration

7. Data historisation and archiving

Data storage

Overview of the evaluation process

The survey started in January 2014 and ended in august 2014.

1. Short listing	2. Request for information	3. Demonstration sessions	4. Validation and report
• Identification of the universe of relevant solutions, • Define the short list of participants.	• Request of documentation to the vendors, • Submit of a 500+ questions RFI to the vendors	• Vendors interview and demonstrations sessions to confirm responses to the RFI.	• Validation of the evaluation with the vendors, • Publication of the report.

Contacted	39
Decline/ Did not participate	13
Competitor	1
Participated	25

All aspects of IT solutions have been evaluated thanks to a 500+ questions RFI and demonstration sessions

- Technical architecture and platform requirements.
- Scalability and performance.
- Auditability, traceability and security.
- Integration in enterprise architecture.

Technological Specifications

Functional Specifications

·Documentation
·RFI
·Demonstration sessions and Interviews

Company Profile, Product and Services Offering

Capabilities to support the Solvency II process:

- Data collection, quality control and transformation,
- Data preparation (economic scenario generation, hypothesis setting, model points building, etc.),
- Calculation (valuation of assets and technical provisions, calculation of capital requirements, etc.),
- Reporting (internal and external),
- Data storage and archiving,
- Monitoring and control.

- Company size, history, geographical presence, offer for the insurance sector, etc.
- Client base, services offered around the product, migration expertise, etc.
- Partnerships and sales channels.

Evaluation of ADDACTIS Modeling

Product

ADDACTIS Modeling is a modeling platform providing an end-to-end support of the Solvency II process for all lines of business.

- **Year First released/Current Version:** 2009/V1.7.3
- **Target Geographic Market:** Worldwide
- **Target Insurance Segments:** All
- **#clients using:** 29
- **#employees working on product in R&D/Sales/Integration:** 40/30/50
- **Services offered around the product:** Maintenance, support, specific enhancements, consulting, training.

Company profile

- **Main activities:** Actuarial consulting, software provider
- **HQ/Foundation Year:** Paris (France) / 2010 for ADDACTIS Worldwide
- **Office Locations:** Belgium, France, Netherlands, Spain
- **#employees worldwide / Europe:** 155 / 155
- **2012 revenues:** €3.7m
- **Other insurance software:** IBNRS, Pillar 3, Workflow, Prévoyance office, PM Expert, Closing

Strengths

- The system provides full coverage of the standard formula plus predefined models for life, non life, health and market risk calculation.
- The system is natively build on a distributed architecture and provides optimized calculation performance and memory management (e.g. projections can be done policy by policy).
- Advanced integration with Pillar 3, ADDACTIS' tool dedicated to reports production.
- The system allows to easily model the complete structure of a group, including the capital flows between entities as well as reinsurance.
- The system provides complete portfolio replication capabilities.
- Integrated ESG and possibility to import scenarios from external tools.

Challenges

- Even if the system provides functionalities for valuating the best estimate for provisions for claims outstanding, the vendor recommends to use its other dedicated tool, IBNRS.
- The system proposes ETL and data quality related functionalities but ADDACTIS recommend to perform the preparation of input data beforehand in case of large models (for example via ADDACTIS Workflow).

Legend:
- ☐ Not in scope of the survey.
- ☐ Not in scope of the system.
- ☐ Partially supported even with customization.
- ☐ Fully supported with significant customization.
- ☐ Fully supported.

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