CELENT

Catherine Stagg-Macey and Craig Beattie

Policy Administration Systems for General Insurers in Europe 2011

This authorised reprint contains material excerpted from a recent Celent report profiling and evaluating 40 different policy administration systems. The full report is 250 pages long. This report was not sponsored by TIA in any way.

This reprint was prepared specifically for TIA, but the analysis presented has not been changed from that presented in the full report. For more information on the full report, please contact Celent (www.celent.com or info@celent.com). Reprint granted to TIA.

July 2011

A member of the Oliver Wyman Group

Content

Executive Summary

This report is part of a series of reports on policy administration systems (PAS) in Europe, the United States, and Asia, and profiles many of the general insurance administration systems available in Europe today. An upcoming report will cover European policy administration systems in the life insurance industry.

This report is the fourth in Celent's biennial looks at policy administration systems available to insurers in Europe. Since the first report in 2005, activity level has remained high among both insurers and policy administration system vendors. In the two years from January 2009 to January 2011, over 130 insurers licenced a new policy administration system.

This report profiles 40 policy administration systems in use for general insurance, with 20 full profiles and 20 limited profiles. For a full list of vendors in this report, see Table 1 on page 5.

Several of the profiled vendors have issued a major new release since 2009 that: upgraded their technology platform; broadened their range of functionality; or did both. Essentially all vendors have made a major investment in enabling their solution to work in an insurer's service-oriented architecture (SOA) environment. Many solutions have also made important advances in usability and personalization—with benefits for new and experienced underwriters and service representatives. System administration capabilities for configuring products, rules, workflow, document management, and user interfaces have also improved—although, overall, these changes have occurred at a more modest pace than improvements for end users.

Policy Administration Systems: Definition and Functionality

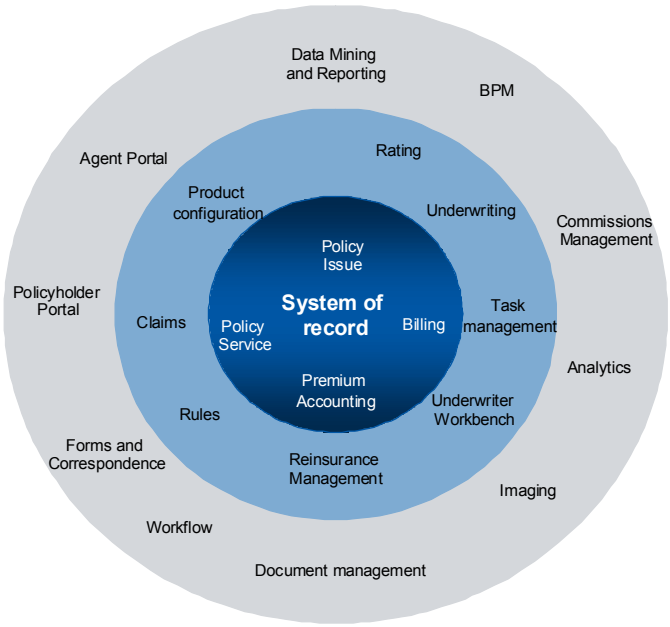
Definition

In one sense, the definition of a policy administration system is very simple: it is the system of record for all policies an insurance company has written. At this most basic level, a policy administration system is a repository of policy-level data related to objects of insurance, coverages, conditions, exclusions, duration of the policy, endorsements, beginning and end dates, and so forth. A permanent policy record is created at the time a policy is issued and includes the complete history of the policy through renewal, termination, cancellation, or reinstatement.

Core Processes

In actual practice, an insurer uses a policy administration system—either by itself or closely integrated with specific point solutions—to execute a number of core processes, and relies on several types of supporting capabilities, as shown in Figure 1.

Figure 1: The Elements of a Policy Administration System



Source: Celent

There are four core processes, as shown in the center section of Figure 1.

- Product configuration: Specifying the rates, rules, and forms associated with a specific product or line of business.
- Rating and underwriting: Rating is the process of calculating the rate that an insurer's pricing algorithms indicate should be charged for a specific submission. (Rating for all but the most complex risks is normally done by a rating engine, which may or may not be a completely integrated element of a policy administration system.) Underwriting includes rating as well as the activities of modifying rates, quoting, negotiating, and issuing or renewing a policy.
- Policy service: These are the activities that begin with issuance of a new or renewed policy and continue through the life of the policy, including endorsements, midterm adjustments, cancellations, etc.
- Premium accounting: Calculating the gross and net written premiums as well as the earned premiums associated with a given policy; for use in financial reports, billing, reinsurance, commissions, and other systems.

Supporting Capabilities

A policy administration system will have also have five supporting capabilities.

- Data exchange and integration: Sending and receiving data to other internal and external systems at any point in the policy lifecycle (from configuration through termination/cancellation). Methods include offering and consuming services through EDI messages and more recently through Web services within an SOA framework, as well as a wide variety of other means including application programming interfaces (APIs) and other connectivity methodologies.
- Rules and workflow: Designing, managing, and executing business rules (attached to products or processes) and workflow (person:person, person:system, system:system) during any activity or process. In a more modern policy administration system, rules (especially) and workflow (perhaps) will be externalized from the core code and from the presentation (user interface) layer.

- Document management: creating, managing, and using a broad variety of documents, including policy content, forms, and correspondence.
- Reporting: Designing, storing, and accessing reports ranging from simple lists to multidimensional calculated variables. In general, reports are used to monitor activities by a user and by all levels of management.
- Analytics: Using various forms of statistical analysis to identify and present patterns of relationship and causation which an insurer can use to improve such functions as pricing, underwriting, and claims.

With the exception of data exchange and integration (which is inherently a requirement of any policy administration system), each of the other four supporting capabilities may be performed by a policy administration system itself; alternatively, the policy administration system may access other point solutions, or it may employ some combination of PAS and other point solutions.

Advanced Functionality

A good modern policy administration system will provide most, although not necessarily all, of the advanced functionality. (Note: Each full profile in this report has a table summarizing whether the policy administration system in question offers these advanced functionalities, and if so, in what manner and in what form.)

- Midterm adjustments: Flagging when an out-of-sequence endorsement is made, and providing the ability to construct and calculate premiums for the corresponding in-sequence set of endorsements.
- Automated underwriting (new business): Using rules and scoring methods to automate some (or more rarely all) of the tasks and activities from submission, quick quote, rate, quote, bind, and issue.
- Automated renewals: Using rules and scoring methods to automate some (or, more rarely, all) of the tasks and activities in renewing a policy.
- Premium and billing accounting: As described above, with the expectation that the policy administration system itself performs the calculations and directly feeds the receiving systems.

Additional End-to-End Components

Celent has limited the definition of a policy administration system to include a set of core processes and key supporting capabilities. But vendors don't limit themselves in the same way, and many have attempted to build out some or all of the end-to-end components that an insurer might need. Some insurers are just looking for a best-of-breed PAS to work with other core systems already installed, but, more commonly in Europe, insurers may be looking for vendors that can offer solutions for parts of their insurance operations.

Some of the additional end-to-end components defined here are also listed as core processes of the policy administration system. This is not a contradiction; a vendor might bundle a component with its PAS (for example, a billing system), but also consider it (and also sell it as) a separate, stand-alone product. Alternatively, a vendor might provide a basic level of functionality in one area, but also have an upgraded, higher cost product or an ISV partnership with a different vendor to provide an advanced solution (e.g., rating).

(Note: Each full profile in this report has a table summarizing whether the vendor in question offers these additional end-to-end components and whether the components are part of the base offering or sold as a stand-alone system.)

- Product Configuration: Also a core process of a policy administration system, product configuration as a component might have robust tools for managing content (forms) and rules throughout the lifecycle of a product.
- Rating: A stand-alone rating engine should be capable of handling complex pricing algorithms, and should integrate easily with various policy administration systems.
- Underwriting: Like rating, underwriting has a place both inside and outside of the PAS. Stand-alone underwriting systems give an underwriter a robust underwriting desktop and can manage complicated workflow between multiple systems.
- Billing: A billing component will support a broad set of billing methods, such as direct and agency bill, as well as various present and payment options, and configuration capabilities.
- Commission Management: A commission system calculates, reports, and tracks compensation structures and commissions payable to producers. It needs to integrate with several

systems to handle this effectively, but a true system can manage more complicated commission rules and do better incentive planning.

- Reinsurance Management: Insurers that just need basic tracking and gathering of reinsurance data will typically be satisfied with adding a few fields to their policy administration system. A full reinsurance component should support the reinsurance aspects of underwriting and claims, with a strong premium and commission calculation engine.
- Business Intelligence/Analytics: Most systems have some form of reporting. A true BI/analytics tool allows the management of data marts, detailed ad hoc reporting, customized dashboards, and complex data analysis—not just for the policy administration system but for all an insurer's data.
- Claims Management: A fully functional claims system will record and support all steps in the adjustment process from first notice of loss to final settlement. The claims systems will exchange data with a broad set of internal and external systems as well.

Report Methodology

Criteria for Inclusion

Celent's objective has been to include in this report as many as possible of the leading general insurance policy administration systems being used or actively sold to European insurers. In a few cases, vendors have not been included in this report at their request.

This report contains two types of profiles: full and limited. The topics covered in both types of profiles are broadly similar; however, full profiles are written with more detail and include comments from reference insurers. Additionally vendors with full profile policy administration systems are included in the Celent ABCD Vendor View; limited profile vendors are not.

In total, 48 systems from nearly as many vendors were considered, and those vendors were asked to review the inclusion criteria before responding to Celent's request for information (RFI).

The four key criteria were that each system must have:

- At least one new sale to one European insurance customer within the last 24 months.
- At least two European general insurance customers, at least one of which must be an insurer.
- Support for and live implementations of at least two lines of business.
- Participation by at least one reference customer.

These criteria were designed to maximise the number of systems that can be reasonably expected to remain available (and viable) based on vendor size and strength, maturity of each product, its client base, and other important factors.

Some vendors elected not to participate for competitive reasons, and others determined that they could not meet the eligibility criteria after all.

Twenty profiles are included in the "Limited Profiles" section, since they did not fully meet the criteria for a full evaluation but did provide significant information about their offerings.

Evaluation Process

Celent sent a detailed RFI to a broad set of policy administration system vendors. After receiving completed RFIs, each vendor provided a briefing and demo for Celent concentrating on usability and functionality for everyday users, and rules, tools, and connectivity issues for IT or administrative users.

Celent also asked two to three references provided by each vendor to complete a survey and/or an interview to obtain their view of the system's business and technology value.

Both the RFIs and the reference surveys provided quantitative and qualitative data. Vendors had an opportunity to review their profiles for factual accuracy but did not influence the overall evaluation or the placement in the ABCD vendor view grid. Celent of course has retained final authority over the content of the published profiles. Some of the vendors profiled in this report are Celent clients, and some are not. No preference was given to Celent clients for either inclusion in the report or for the subsequent evaluation.

Not all data gathered from the detailed RFI, vendor briefing and demo, and reference surveys/interviews has been included in each profile. Rather, Celent has attempted to capture key points and values about each vendor at an appropriate level. Unpublished information remains in the Celent knowledge base and is available to Celent's subscription or consulting clients.

About the Profiles

Each of the profiles presents information about the vendor and solution; professional services and support capabilities; customer base; functionality and lines of business deployed; usability, reporting, and analytics, technology, implementations, and cost; and some summary comments.

Concerning fees, Celent asked vendors to provide first year licence and first year other implementation costs (work by the insurer, vendor, or third parties) for two hypothetical insurance companies:

- National Insurance Company—a single licensed company that writes in the United Kingdom, for eight lines of business, producing annual GWP of €250 million.
- European Insurance Holding Company has four companies, writes in five countries (UK, Spain, France, Italy, and Germany), across 24 personal, commercial, and specialty lines of business, and has GWP of €2.5 billion.

When discussing insurance customers of the various solutions, the profiles use the terms very small, small, medium, large, and very large insurers. Very small insurers (Tier 5) have under €100 million in annual premium; small (Tier 4) have €100 million to €500 million; medium (Tier 3) have €500 million to €1 billion; large (Tier 2) have €1 billion to €5 billion; and very large (Tier 1) have over €5 billion.

The profiles also discuss how many of the advanced policy administration features a given solution provides. As discussed in “Policy Administration Systems: Definition and Functionality” on page 4, these features are:

- Out-of-sequence endorsements
- Automated underwriting (New Business)
- Preconfigured ordering and receiving third party data
- Automated renewals
- Premium and billing accounting
- Statistical reporting

TIA Technology A/S: TIA Solution

Company and Product Background

Founded in 1997 as a management buy-out from Topdanmark, TIA Technology is a privately owned company headquartered north of Copenhagen, Denmark. The PAS solution offered by TIA Technology is called The TIA Solution, which first came to the market in 1991. The first client was Prosporo, now Allianz in the UK. The latest version of the TIA Solution is 6.2, and it was released during Q4 2010. The next major version of the TIA Solution, Version 7, focuses on improving the user experience (UX) for internal end users, by releasing a replacement of the Oracle Forms presentation layer with Oracle ADF. The total revenue attributed to the product in 2010 was €12.5 million. R&D spending for the PAS solution has been €5.5 million over the past two years.

TIA Technology considers the following factors to be differentiators of the product.

- The TIA Solution is by default a "multi" application due to its capabilities to operate multicountry, multicurrency, multilanguage, multichannel, and multicompany.
- The TIA Solution is role centred and offers integrated, business-oriented Best Practices processes towards B2B and B2C consumers.
- The TIA Product Editor handles deployment of any type of product within P&C, P&I, L&P, and specialty lines.

Professional Services

TIA is unique among its peers to focus itself on being a software development specialist. TIA Professional Services supports the implementations which is delivered through an extensive partner network, including firms such as Accenture, Deloitte, IBM and iGate Patni. TIA certifies their partners in a formal certification program.

TIA Technology has 66 corporate employees with 35 employees working in software development and 15 in a dedicated professional services team. The nature of these services is ancillary to those of the partner implementation services and includes quality assurance, train-

ing and technical specialist services during implementation and support and guidance for upgrade projects. They have on average five years of experience.

Customer Base

TIA Technology has 41 deployments of the TIA solution in Europe, with the most deployments in Denmark (7), followed by UK (5), Finland, Poland and Norway have 4 each. A majority of the clients are small insurers with annual premium of under €100 million.

TIA Technology has seven customers outside of Europe. Four of the six new clients since January 2009, have purchased the solution in Europe. TIA Technology describes its target market as comprising of insurers ranging from small Tier 3's to Global Tier 1's, all operating on the global insurance market.

Table 1: Number of European Clients by Country

Country	Live Clients
Denmark	7
UK	5
Finland	4
Norway	4
Poland	4
Sweden	3
Netherlands	2
Russia	2
Czech Republic	1
Estonia	1
Faroe Islands	1
Latvia	1
Lithuania	1
Cross Nordic	1
Switzerland	1

Source: Vendor RFI

Customer Feedback

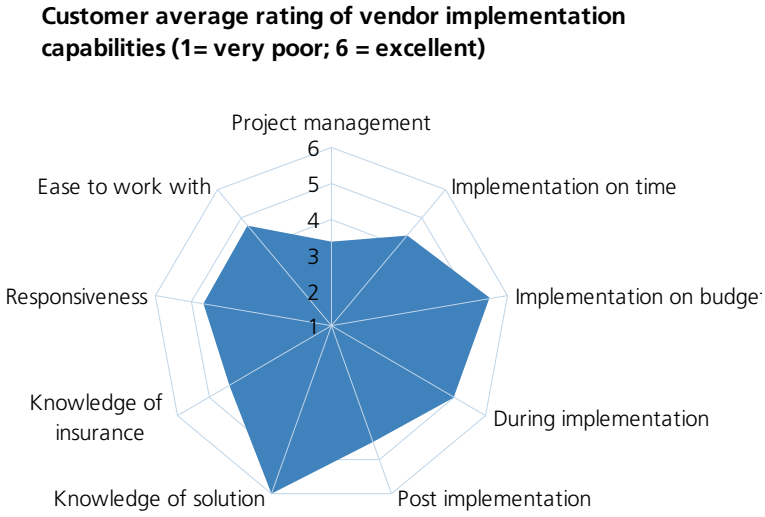
Three customers provided feedback for this report and are using the solution for a mix of personal and commercial lines. Customers are using a full range of features and functions. Underwriting, premium accounting, and rating were rated as very good. Product definition and workflow is rated as good. Document automation was rated as average.

Customers reported varied experiences in integration of the solution using web services—scoring from average to excellent. Customers reported that creating a new product from scratch based on standardized components took less than a month, and creating/changing rules in the workflow takes a few months.

Experiences in where the responsibility lay for systems changes varied from the business users doing most of the changes to all changes require IT involvement.

Feedback on customer implementations are provided in the chart below. It is important to note that TIA does not implement the solution themselves but relies on their partner network. As such, this chart reflects customer experiences of the TIA partner network.

Figure 2: Customer Feedback on Implementation Capabilities



Source: Customers

Functionality and Lines of Business

The TIA Solution offers all of the advanced policy administration functions. Most of the components can be installed as stand-alone components such as rating, underwriting, billing, commission management, reinsurance management, claims management, while components for update service and content management are available only bundled with the PAS solution without any additional cost.

Table 2: Availability of Additional End-to-End Components

Component	Availability
Update service for industry standard rates, rules, and forms	Available only bundled with the PAS (no additional cost)
Rating	Can be licensed as stand-alone component (without PAS solution)
Underwriting	Can be licensed as stand-alone component (without PAS solution)
Billing	Can be licensed as stand-alone component (without PAS solution)
Commission Management	Can be licensed as stand-alone component (without PAS solution)
Reinsurance Management	Can be licensed as stand-alone component (without PAS solution)
Business Intelligence / Analytics	Available through ISV partner
Claims Management	Can be licensed as stand-alone component (without PAS solution)
Content Management	Available only bundled with PAS (no additional cost)

Source: Vendor RFI

Most of the policy administration functions in the RFI can be configured by business users. In the answers below scripting typically refers to writing Oracle PL/SQL code as upgradable business functions.

Table 3: Advanced Policy Administration Functions

Function	Availability
Product Configuration	Available through configuration by a nontechnical business user
Product repository	Available through configuration by a nontechnical business user
Ability to design product-specific rules	Available through scripting
Ability to design product-specific forms	Available through programmers adding/modifying the solution's code base
Policy Print and Issue	Available through configuration by a nontechnical business user
Out of sequence endorsements (MTAs)	Available through configuration by a nontechnical business user
View of what's changed in policy details over time	Available through configuration by a nontechnical business user
Automated underwriting	Available through configuration by a nontechnical business user
Pre-configured ordering and receiving third party data	Available through a separate component
Automated renewals	Available through configuration by a nontechnical business user
Premium Accounting	Available through configuration by a nontechnical business user

Source: Vendor RFI

Table 3: Advanced Policy Administration Functions

Function	Availability
Specification of billing parameters (to be transmitted to separate billing component)	Available through configuration by a nontechnical business user
Specification of commission parameters (to be transmitted to separate compensation and billing components)	Available through scripting
Statistical reporting	Available through a separate component

Source: Vendor RFI

The TIA Solution offers a graphic design environment for workflow management. These features are available through a separate component. The TIA Solution comes with integrated application workflow that consists of user diary, programmable navigation, workload management and monitoring. Business rules management and rules repository are available through nontechnical configuration, while reusable and sharable rules can be configured with scripting in upgradable business functions by programmers. The TIA Solution also has forms and correspondence features. The TIA Solution works well with document tools such as Oracle DocuMaker, Oracle Reports, Crystal Reports and Papyrus. Process support using a nontechnical configurable question wizard, including hiding and showing questions based on previous answers is also available.

All workflow, rules, content, transactions and correspondence are completely auditable by using the best practices for business processes and role definitions within the solution. In addition, an extensive TIA Wiki is available to assist different types of users in performing their tasks and to support implementation partners in configuring the TIA Solution in accordance with the TIA best practices.

The solution has a broad range of personal and commercial products in production today:

Table 4: Lines of Business

Line of Business	Availability	European Insurers Using the System for This LOB
Personal Motor	In production today	25+
Homeowners / Renters	In production today	25+
Commercial Motor	In production today	10+
Commercial Property	In production today	10+
Commercial Liability	In production today	10+
Workers Compensation	In production today	5+
Medical Malpractice	Supported but not in production	0

Source: Vendor RFI

Table 4: Lines of Business

Line of Business	Availability	European Insurers Using the System for This LOB
Other Professional Liability	In production today	5+
Commercial Packages	In production today	10+
Surety	In production today	2
Excess and Surplus	In production today	1

Source: Vendor RFI

Usability, Reporting, and Analytics

The TIA Solution provides policyholder portal for inquiries and transactions for in-force policies, which is available through a separate component. Producer and prospective customer portals are available through a separate component. Any type of front-end can access TIA services and utilize the TIA tables for presenting data, creating and updating records.

The internal business user interface is Oracle forms based. This is presented in a browser window and is using a standard browser java plug-in, copying many of the windows client features such as pop-up windows and the menu function. The interface looks dated and offers a steep learning curve to novice users, although TIA reports that their existing customer base is very happy with the interface. TIA also shared with Celent their new user interface that will be available in 2012. This is much clearer whilst still managing to display much of the information in the equivalent current screens. The new interface is a modern web based interface with a mix of portal and workflow style screens. TIA also demonstrated how portal technologies such as edgeConnect from edge IPK expose the TIA Solution functionality to web users through the use of business event driven web services.

Configuration is also achieved in part through the Oracle forms interface. For complex changes the insurer must write custom Oracle PL/SQL to meet their specific requirements not covered by the standard solution. TIA also provides customer driven enhancements as a commercial offering to ensure upgradability.

A management report dashboard is available, which is available through a separate component. A financial reporting data store is also available through a separate component. TIA's architecture enables extract of any data available.

Underwriters workstation for structured access to all policies and associated tasks is provided with the TIA Solution. Policy service workstation is available through a nontechnical configuration.

The TIA Solution uses a proprietary data model which is IAA aligned. TIA will make the data model available to insurers on request. The solution provides tools that allow technical staff to extend the model. The TIA Solution comes with a large number for flex fields that are already defined in the data model that can be used freely.

The TIA Solution supports multiple currencies in a single policy and also supports double byte character sets and multiple languages and currencies in a single instance. The multicurrency support is maintained in a dedicated exchange rate table. The system supports multiple simultaneous languages, so end-users can operate the same instance in their preferred language.

Technology

The code for everyday business users is written using Java and PL/SQL/Oracle Forms. The same programming languages are used for development and configuration for insurer's staff. Linux and Unix are the preferred operation systems. OS/390, mainframe OS supported by Oracle and Windows are also supported as additional options. Oracle is the only database that is supported. Oracle WebLogic Server and Oracle OC4J are the preferred application servers, and JBoss, WebSphere are supported as additional options.

Integration with the insurer infrastructure can take place through any of the RFI options, with SOA/Web Services being preferred options. ACORD Standard XML, MQSeries, JMS, Custom API, WebSphere, EAI and ESBs are additional options.

The primary business user interface is through an entirely browser-based interface with Rich Internet Application (RIA). For internal developers and configurers, the primary interface is browser-based using RIA and a thick client.

External systems are able to call into TIA Solution system using SOAP over HTTP or MQ, or other formats over MQ.

TIA Technology states that the system is highly scalable. The TIA Solution is built on the Oracle technology stack. The way it is designed, it is Oracle which defines limitations to performance, scalability and availability. There is therefore no known limit. Current customers of the solution operate 24/7, thousands of simultaneous users and channels, and 20–30 million policies. At the system's largest deployment, it supports over 5000 concurrent users running about 30 million policies.

One customer runs over 100 million policy lines in one instance of the TIA Solution, makes 40,000 monthly payments and renews 27 million policy lines on a monthly basis.

Implementation and Costs

A typical project takes four to six months from initiation until the first line of insurance is live, with subsequent lines taking one to three months. The installation team size varies between 5-20 employees, depending on the project's complexity and size. The typical split among employees would have 60% from the insurer and 39% from other professional services contractors (most likely from the S/I's certified by TIA). Typically, very few of TIA's staff work on installation, except for occasional QA. TIA Technology works with third party systems integrators.

A large chunk of the first year costs typically goes towards initial set-up and configuration (80%), followed by software licensing (16%), annual maintenance (3%) and training (1%). TIA offers two models:

- Standard model with higher initial license and lower annual license.
- Shared risk with lower initial license and higher annual license.

Both models are being offered as perpetual, term, SaaS licenses. The main difference is that the standard model only allows for increasing licenses while the shared risk model has annual license being dependent on the performance of the company.

TIA does not have a preference, and the split between the models is approximately 50/50 in existing clients. The important parameters that form a basis for the license fee are number of functional modules, number of lines of business, policy volume and premium volume.

For a national insurer as outlined in the RFI, the typical initial license fee could vary between €500,000 and €1 million. The total implementation costs vary between 2-5 times the initial license cost equaling €1 million to €4 million and would need around 10 FTE from the insurer. For the pan-European insurer as outlined in the RFI the initial license fee (including any initial maintenance fee) would be €2-3 million. The total implementation cost in this case would be €5 million to €10 million. The pan-European insurer would typically commit 30 FTE to the project. The annual average cost in terms of maintenance fee represents 20% of the initial license.

Summary

TIA has successfully established a strong truly pan-European presence and an increasingly global customer base. The large install base is both a credit to the company and its partners as well as its Achilles heel. Continued investment in a solution requires keeping the existing install base satisfied while capturing new ones. This is a fine balance between marketing and operational commitment. TIA solution is an option for insurers looking for an all-in-one policy admin system.

Copyright Notice

Prepared by

Celent, a division of Oliver Wyman, Inc.

CELENT

For more information please contact info@celent.com or:

Catherine Stagg-Macey
cstagg-macey@celent.com

Craig Beattie
cbeattie@celent.com

North America

USA
200 Clarendon Street, 12th Floor
Boston, Massachusetts 02116
Tel.: +1.617.262.3120
Fax: +1.617.262.3121

USA
1166 Avenue of the Americas
New York, NY 10036
Tel.: +1.212.541.8100
Fax: +1.212.541.8957

USA
Four Embarcadero Center, Suite 1100
San Francisco, California 94111
Tel.: +1.415.743.7900
Fax: +1.415.743.7950

Europe

France
28, avenue Victor Hugo
75783 Paris Cedex 16
Tel.: +33.1.73 .04.46.20
Fax: +33.1.45.02.30.01

United Kingdom
55 Baker Street
London W1U 8EW
Tel.: +44.20.7333.8333
Fax: +44.20.7333.8334

Asia

Japan
The Imperial Hotel Tower, 13th Floor
1-1-1 Uchisaiwai-cho
Chiyoda-ku, Tokyo 100-0011
Tel: +81.3.3596.0020
Fax: +81.3.3596.0021

China
Beijing Kerry Centre
South Tower, 15th Floor
1 Guanghua Road
Chaoyang, Beijing 100022
Tel: +86.10.8520.0350
Fax: +86.10.8520.0349

India
Level 14, Concorde Block
UB City, Vittal Mallya Road
Banglalore, India 560001
Tel: +91.80.40300538
Fax: +91.80.40300400

A member of the Oliver Wyman Group