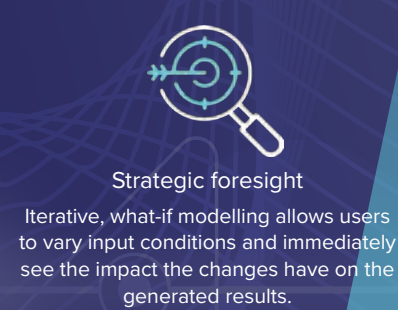Aptitude
Calculate
(AC)

A scalable, highly performant engine that empowers finance business users across industries to perform complex and multi-dimensional calculations, conversions, and allocations.

Aptitude™
SOFTWARE

Aptitude Calculate (AC) is a stand-alone calculation and rules engine that fully supports automated allocations and calculations by entity, LOB, portfolio/cohort, contract or any other dimension required.

Centralized control

Provides a single, transparent point of control for performing calculations and allocations with full audit trail of all rules, results, and changes.

Operational efficiencies

Manual processes can be replaced with 'plug n play,' reusable rule suites to automate common calculations and allocations and ensure consistent application.

Strategic foresight

Iterative, what-if modelling allows users to vary input conditions and immediately see the impact the changes have on the generated results.

Smart compliance

Fully supports allocations and calculations required for regulatory accounting standards, including IFRS 17, with full drill back into source data and results.

Business agility

Flexible Rule and RuleSet structures allow business users to build and change allocations and calculations via a simple, intuitive GUI.

Contents

Filling the gap in
existing architectures

The increase in data, regulatory standards, reporting requirements, and the desire for real time analytics is driving the need for an engine capable of automating the complex calculations and allocations required by banks, insurers, media, software companies and beyond.

Often this capability is not available in existing source systems or solutions, leaving finance teams to manage a complex matrix of calculations and/or allocations in spreadsheets which lack control, auditability and the ability to scale.

80+

One insurer we are working with currently has 80+ allocations based on a complex array of interactive spreadsheets and this will grow considerably under IFRS 17. Already they are struggling to make the changes necessary to meet the compliance requirements.

Challenges
to overcome

Multiple reporting requirements

Often cost and cash flows are treated differently depending on the reporting standard - Solvency II versus IFRS 17 for example - which then requires two allocations be generated from the same cost pool.

Data volumes

Increasing data volumes and source system complexity can result in performance issues when calculations or allocations are performed at scale.
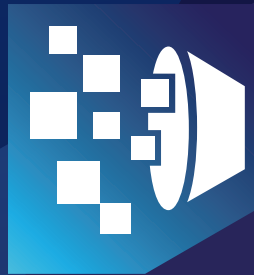
Addressing aggregated allocations

Many reporting standards need allocations at a highly granular level, requiring aggregated allocations to be transformed into Units of Account.

Lack of transparency

When calculations are performed in spreadsheets or in disparate source systems, audit trails are lost, and version control is challenging.

Aptitude
Calculate
(AC)

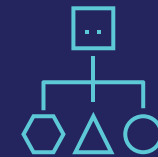## A single point of control and automation for calculations and allocations

Aptitude Calculate provides the elements and processing power required for business users across industries to define and generate allocations, calculations, and conversions. The use cases are many and can include anything that requires a cost, expense, or investment allocation or any supplementary calculation needed to support the finance team in its functional and compliance data preparation and reporting requirements.

Use cases include, but are not limited to:

- Allocation of back office cost to front office
- Allocation of service center costs from lower costs locations
- Revenue Transfer Pricing
- Allocation of investment banking sales credit/review for MI and year end compensation
- Tax calculations
- Automation of allocation methodology application for multi-GAAP reporting
- Supporting local requirements like APRA that require enhanced data granularity

- Modelling results of multiple allocation/calculation methodologies to understand impacts
- IFRS 17 calculation extensions including VFA Tax and expected claims
- Calculation of any supplementary financial, or deterministic calculations
- Calculation of asset pool cover calculations and allocations
- Calculation of US GAAP premium, commission and claim values for Reinsurance

The flexible nature of Aptitude Calculate means there is no limit to the use cases across required calculations, allocations, data transformation, or conversions. The engine can be used for almost any use case that requires complex, detailed, accurate, and repeatable calculations regardless of industry.

Key features

Multiple calculation methodologies to support various use cases including mathematical functions, allocations, and weighting matrices
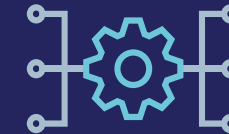
Iterative what-if modelling enables define, run, analyze cycles to support scenario planning and analytics

Intuitive graphical user interface empowers business users to easily build Rules and RuleSets to flexibly respond to business change

Common, reusable processes, rules, filters and weightings ensure consistent treatment across the organization

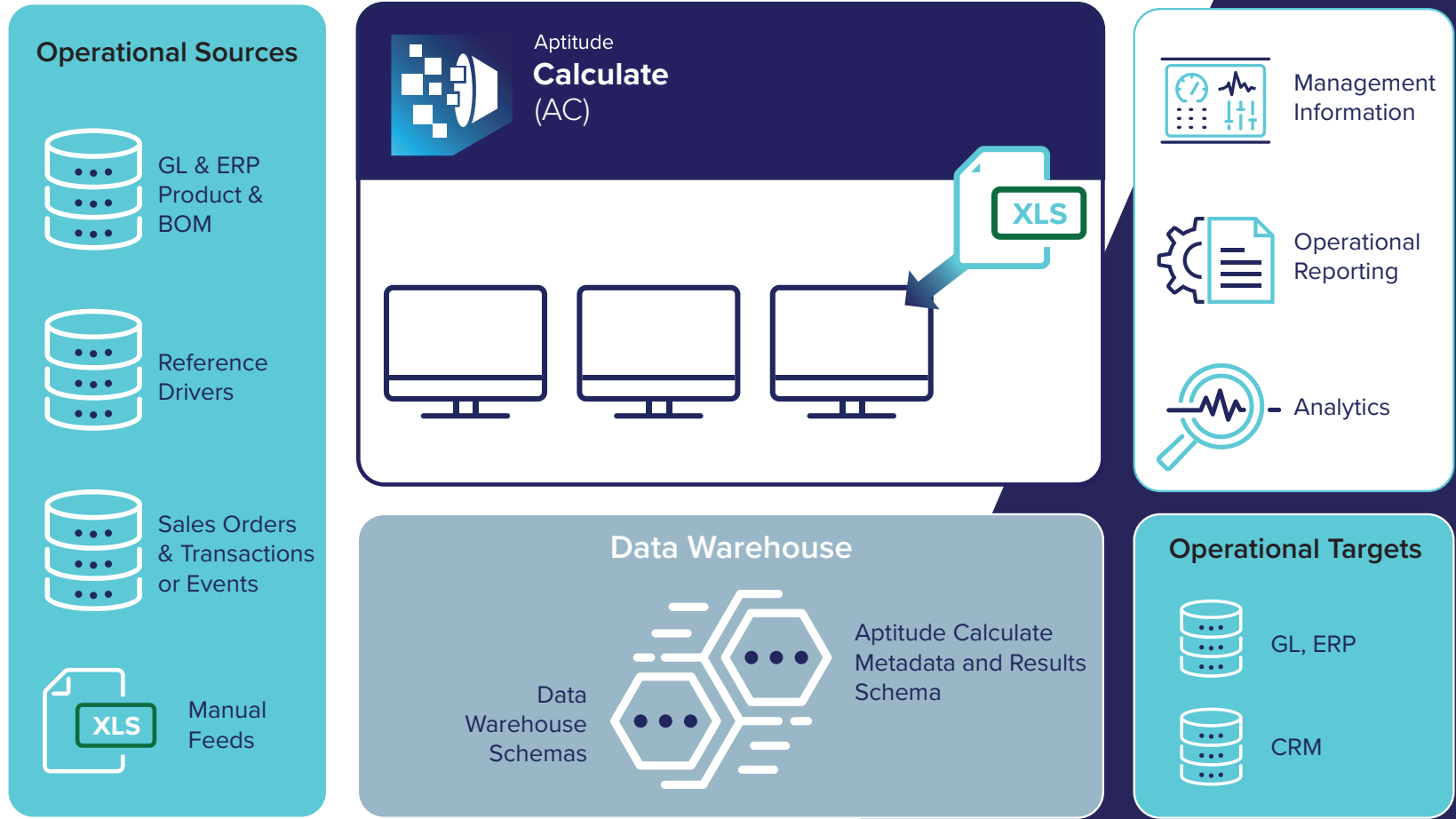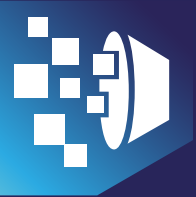Version controlled model elements and role-based approval workflows

Integrates with enterprise schedule and source and target systems like actuarial, General Ledgers, and reporting tools

Supports Multi-GAAP requirements through the ability to generate multiple versions of calculation logic

Aptitude Calculate

Core offering

Operational Sources
- GL & ERP Product & BOM
- Reference Drivers
- Sales Orders & Transactions or Events
- Manual Feeds (XLS)

Aptitude **Calculate** (AC)

XLS

- Management Information
- Operational Reporting
- Analytics

Data Warehouse
- Data Warehouse Schemas
- Aptitude Calculate Metadata and Results Schema

Operational Targets
- GL, ERP
- CRM

Integration → Processing Logic → Integration

> " *The combination of Aptitude Calculate and the Aptitude Accounting Hub will enable us to calculate and post multiple valuations in parallel. This will not only result in substantially shorter close periods; it also simplifies the current processes – allowing the business to focus on more value-adding tasks.*"

- Finance IT Transformation Program Lead

Using Aptitude Calculate to meet
insurance requirements

There is no shortage of challenges associated with the insurance Standard, IFRS 17. The data, systems, judgement application, and business process complexity of the Standard has been well documented.

Recently, however, we have seen several less documented challenges arise at some of the global IFRS 17 projects we have live today. These issues include filling calculation gaps not addressed in existing actuarial and source systems and managing the cost allocations necessary for compliance.

This is particularly driven by the requirements to apply allocation rules to data like expenses, risk adjustments, and even certain cashflows to ensure the granularity of data meets the IFRS 17 calculation and disclosure requirements. In addition, many insurer's source systems are not flexible in their output nor automated which means additional supplementary calculations need to be performed. These can include generating fulfilment cash flows from payment pattens for the LIC or converting accident year data into underwriting year data.

To address these challenges, many Insurers are using Aptitude Calculate to fill the missing link in their IFRS 17 architectures by using allocations and calculations to get data into the format required for IFRS 17 processing and addressing gaps in existing solution capabilities.

Multiple/What-if methodologies

Using IFRS 17 portfolios and policies to perform a General Ledger cost allocation using two different driver methodologies – equal-split expense allocation and apportioned expense allocation.
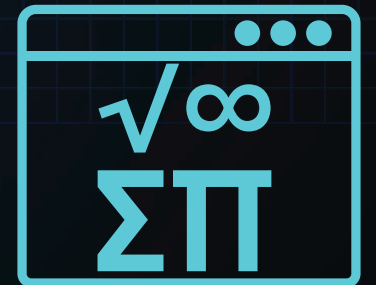
Sensitivity analysis

Using different allocation methodologies, generate results to see the effects on General Ledger costs allocated and contract-level allocations.

Cost risk adjustment apportionment

Using policy level splits, inputs and drivers from actuarial systems, Aptitude Calculate can automate the run of four required calculation models.

Mathematical calculations

Build complex calculations as a single RuleSet that can be automatically applied as required.

Aptitude
Calculate
(AC)

Business
benefits

Aptitude Calculate is flexible, scalable and integrates seamlessly with existing systems to meet a wide variety of use cases.

Control
Highly flexible and configurable, giving finance full control

- Provides a single point of control for performing allocations and calculations

- Full transparency and persistence of results and rules

Strategic foresight
Harness data to drive actionable business insights

- Enables what-if modelling to support scenario planning and analytics

- Reduces reliance on IT, putting data in the hands of decision-makers faster

Smart compliance
Drive compliance with regulatory and management reporting requirements

- Fills the calculation, allocation and data prep gaps in regulatory solutions

- Supports Multi-GAAP accounting requirements

Operational intelligence
Gain operational and cost efficiencies and improved productivity

- Full automation of calculation and allocation processes

- Highly scalable to accommodate large volumes of data

Business agility
Use as a standalone solution or alongside other Aptitude products

- Flexible building blocks allow business users to create and change rules easily

- Aptitude Calculate works with other Aptitude solutions or as a stand-alone engine with a typical implementation time of 80-100 days.

Why **Aptitude Software**

Aptitude Software's vision is to empower finance communities to transform business with smart compliance, operational intelligence, control, and strategic foresight.

We understand finance

Aptitude Software is dedicated to developing finance management software. Aptitude solutions are designed by finance experts who speak the language and understand the challenges today's CFO faces.

Regulatory compliance expertise

Aptitude Software has been delivering finance solutions to address regulatory compliance needs for over 20 years. We have deep, specific expertise in IFRS 17, IFRS 16/ASC 842, IFRS 15/ASC 606, IFRS 9 and LDTI.

Low risk and speed of deployment

Aptitude's solutions come pre-packaged with IP-rich, industry-specific project accelerators such as finance templates, pre-defined business event data models, and disclosure templates. The accelerators are continually enhanced as best practices are captured by Aptitude's Centre of Excellence (CoE). This enables efficient implementation, reduced risk, and faster time to benefit.

Our delivery team is made up of over 120 consultants located across the globe with deep technical and finance expertise. Together with a vast, global partner network of certified specialists and our Centre of Excellence providing guidance and oversight on projects, Aptitude's delivery teams have implemented over 75 instances of our solutions across four continents.

Proven enterprise scalability and performance

Aptitude Software has proven expertise in delivering solutions for small and mid-size businesses to global organizations. Our solutions easily scale to match the size of the business.

Future ready solutions

Aptitude is 100% committed to the ongoing development of finance management solutions built on modern IT architectures. This gives organizations the ability to embrace emerging innovative technologies with the agility to respond to fast changing regulatory and market challenges and opportunities. Aptitude is continually evolving its products, skills, and delivery processes, and invests 34% (2019) of software revenue into research and development.

Strong pedigree

Aptitude Software has an enviable global customer base with combined revenues approaching $1 trillion. Aptitude has a strong, proven track record across industries with specific, in-depth domain expertise in Financial Services (Insurance and Banking), Telecoms, Media, and Technology and has been helping companies with their digital finance journey for over 20 years.

To learn more about the Aptitude Calculate solution using the resources below:

SPEAK TO AN EXPERT

To learn more contact a member of our team via our website via the contact us form or simply email us at **info@aptitudesoftware.com**

RESOURCE LIBRARY

To access more resources about our products and expertise, visit our online resource library —simply use the link below and select your topic and/or product of interest from the drop-down, filter further using the industry and type menus to narrow your search

https://www.aptitudesoftware.com/resources/

Aptitude Software provides software solutions that enable finance professionals to run their global businesses, forecast decision outcomes, and comply with complex regulations. Uniquely combining deep finance expertise and IP rich technology, Aptitude gives finance leaders the tools they need to transform their business and achieve their ambitions.

Aptitude is proud to have served the offices of finance for over 20 years, delivering financial control and insight to create a world of financial confidence for our global clients.

Aptitude Software supports businesses with combined revenues approaching $1 trillion and over 500 million end customers. Headquartered in London, Aptitude Software is an operating company of Aptitude Software Group plc.

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