

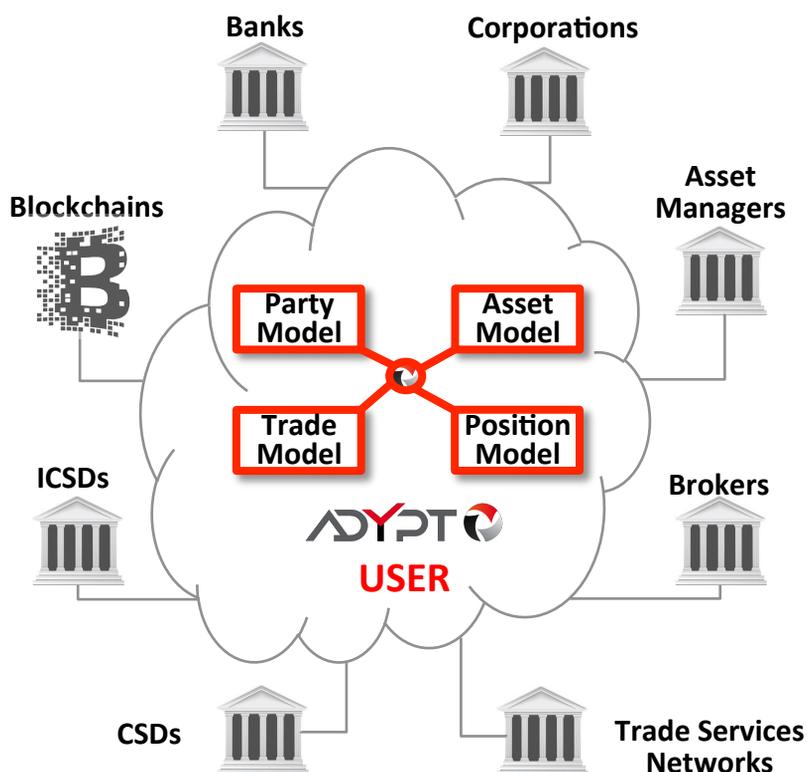


Flexibility for Post-Trade Processing:
Xtreme Modelling™

Introduction

The financial services industry has underinvested in IT for decades so systems are fragmented and difficult to change, cost to income ratios are stubbornly high and business operations are very inefficient.

Rapid change is now imperative because of increased competition, regulation and volumes as well as innovations in products, business models and fintech.



"We must standardise our systems and procedures, decommission legacy software, standardise and enhance our data, and improve our reporting"
John Cryan, CEO Deutsche Bank

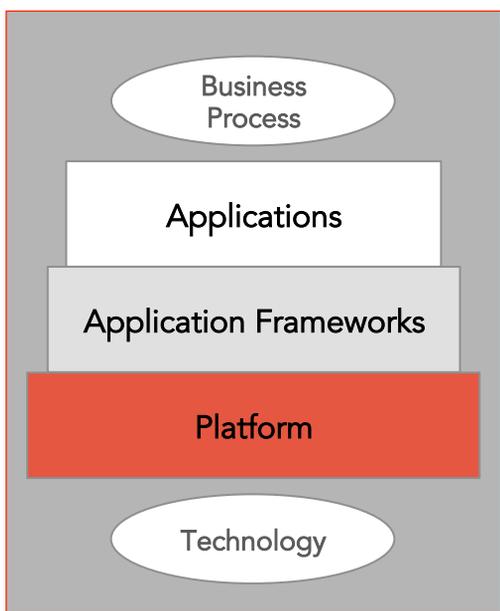
This brochure explains how ADYPT CLOUD uses *Xtreme Modelling* to enable organisations to:

- be more responsive to business changes
- reduce processing costs
- accommodate new distributed ledger business models (blockchains)
- respond with more agility to regulatory demands and deadlines for greater transparency and control
- reposition, thrive and win.

With *Xtreme Modelling* all aspects of the business processes, business applications and underlying technology are modelled to maximise flexibility.

ADYPT CLOUD

Introduction



ADYPT CLOUD's overall architecture of Applications, Application Frameworks and Platform decouples *Business Process* changes (e.g. adding a new product, workflows or business unit) from *Technology* changes (e.g. program code or database).

The Application Frameworks include a library of standard, extensible and dynamic models which describe common behaviours in financial services.

To develop new behaviours and process paths, functional blocks describing various possible steps in a workflow are combined and adopted using *Xtreme Modelling*.

ADYPT CLOUD has exceptionally high levels of security and control built into the Platform. Every change to every attribute of every field is journalled for full and transparent auditing of use and performance metrics.

ADYPT CLOUD's business benefits

Supports Innovation:

- Built for the Cloud
- Enables innovations such as blockchain clearing

Provides Cost Efficiency:

- Processes all financial instruments
- Enables the lowest cost of operations
- Supports the lowest cost of changes

Provides Agility:

- Supports the fastest implementation
- Scalable to the volumes of global banks

Control and Compliance:

- Provides high security
 - Enables all activities to be audited in real time and in context
 - Uses open standards throughout
-

FEATURES

ADYPT CLOUD uses *Xtreme Modelling* to process a wide variety of business processes but is particularly well suited to those we encounter in financial services, with lifetimes of a few milliseconds to several hours, days or years, and with many complex interactions involving other processes, systems, and users

ADYPT CLOUD provides the highest levels of flexibility and business support. ADYPT CLOUD's design makes the system changes necessary to expand into new business areas quick and straightforward to achieve. With *Xtreme Modelling* processes and data are adapted using user-defined rules and graphical displays instead of traditional programming.

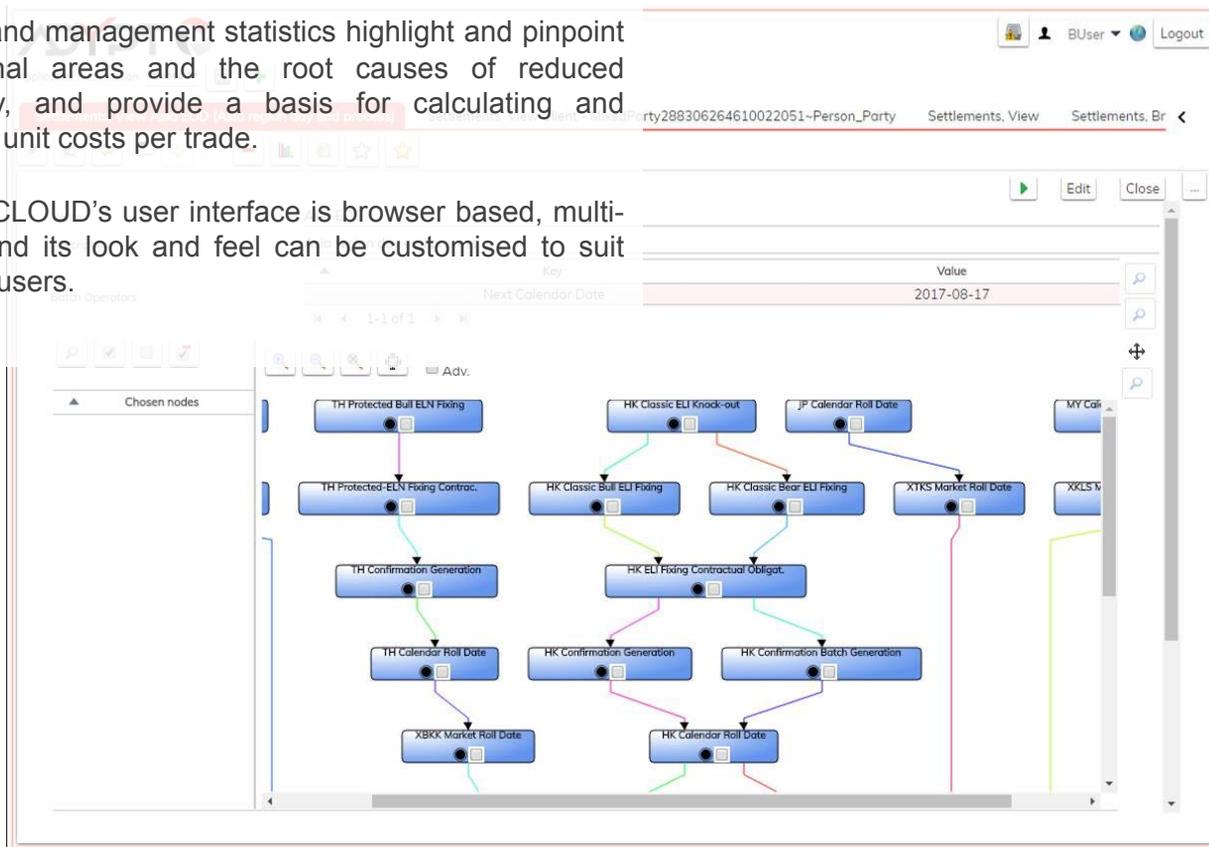
If unforeseen trade process breaks occur, ADYPT CLOUD alerts users to take actions to meet cut-off times.

ADYPT CLOUD provides full transparency of change history, presenting the data as it was each time a change has taken place.

Metrics and management statistics highlight and pinpoint operational areas and the root causes of reduced efficiency, and provide a basis for calculating and reducing unit costs per trade.

ADYPT CLOUD's user interface is browser based, multi-lingual and its look and feel can be customised to suit different users.

- Enables real transformation of operations, improving customer service, and STP rates
- Supports blockchain enabled reductions in settlement times
- Adds flexibility, efficiency, capacity, security and auditability to operations
- Serves multiple business units 24*7
- Complies with regional reporting requirements with greater control
- Exploits new business opportunities



EXAMPLE: CUSTOMER ONBOARDING

ADYPT CLOUD's Customer Onboarding capability automates the setting up and maintenance of customer account data as an audited primary reference data source. It communicates that information to subscribers both inside the institution and, if required for self-service assisted onboarding, also outside the institution.

ADYPT CLOUD provides a single data entry point for account request data for both external customers and internal users.

Onboarding processes, driven by the workflow, raise real time exception-based alerts to users only when the customer-defined workflow necessitates their interaction. Alerts may use ADYPT CLOUD's internal workbasket or email. Graphical views of the customer's account structure are employed to give users a clear view of the relationships between customer accounts.

- Reduces customer onboarding turnaround time and costs with a fast, automated, single point of data entry
- Removes data inconsistency through a single point of entry for customer requests
- Increases efficiency through an automated approach to maintaining accounts
- Supports self-service models through real-time setup of processes
- Reduces operational risk by decreasing the volume of dispersed data and introducing a powerful audit trail



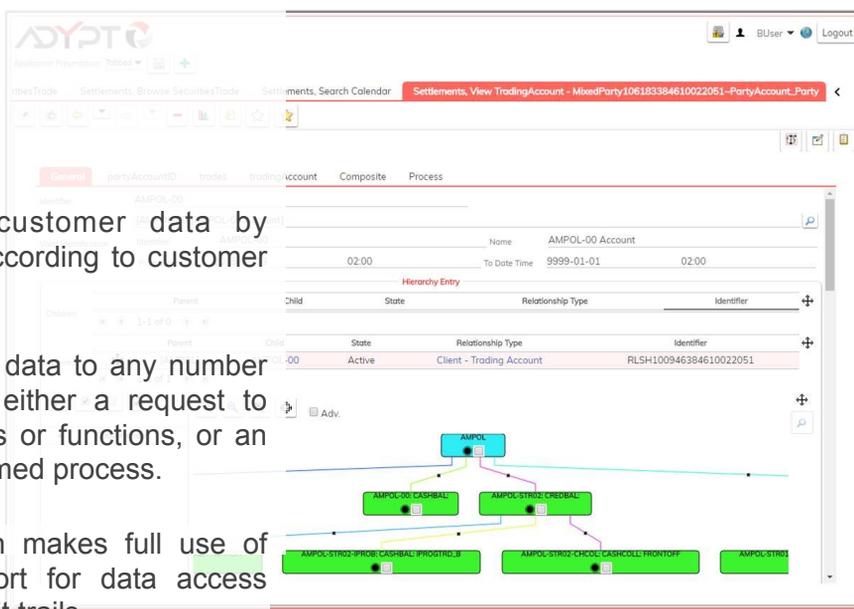
ADYPT CLOUD configures behaviour dynamically using rules for:

- Authorisation
- Data validation & enrichment
- Customer and account structures
- Data cleansing
- Permissible state changes.

ADYPT CLOUD enriches the customer data by accessing external data sources, according to customer defined enrichment rules.

ADYPT CLOUD provides reference data to any number of external systems, triggered by either a request to ADYPT CLOUD from other services or functions, or an action within ADYPT CLOUD, or a timed process.

The Customer Onboarding solution makes full use of ADYPT CLOUD's advanced support for data access controls, authorisation rules and audit trails.





INTRODUCTION

ADYPT CLOUD includes a comprehensive library of standard, extensible and dynamic models which describe standard processes in financial services. These are the foundational units for the *Xtreme Modelling* of applications and enable rapid definition, implementation and modification of customer specific workflows and processing rules. The important Application Frameworks are:

PARTIES

- Graphical models of the ownerships and relationships of Organisations, Persons and Accounts
- A party may have any number of parents or children - both internal or external providing unlimited hierarchies and relationships

TRADES

- Full trade lifecycle
- Market reporting interfaces
- Confirmations
- Block and allocation trades
- Instruction matching and enrichment
- Market specific settlement
- Settlement instructions, matching and status updates
- Write off and tolerances
- Manual settlement netting

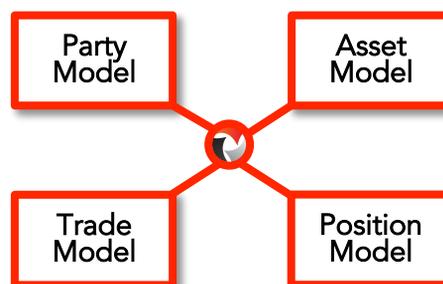
ASSETS

- Any asset or asset class with *Xtreme Modelling*
- Currency, tradable assets or future rights
- Any number of local identifiers
- Issue data
- Corporate Actions data

POSITIONS

- Physical (depot) positions separate from traded (book) positions
- Positions held on trade and value-dated bases
- An instrument can be in any number of asset 'books'
- Multiple cost bases (Average Cost, LIFO, FIFO, HIFO etc.)
- Segregated Posting Generator and Sub Ledger.

- Rapidly develops tailored business processes, workflows and applications of any scope or complexity
- Removes process and data inconsistency across the organisation by using common standards for all applications
- Supports rapid configuration of new solutions, and a common approach to setting up and maintaining processes and data





XTREME MODELLING

Central to the ADYPT CLOUD models of both assets and transactions is the concept of *Xtreme Modelling* using clear graphical workflows and by writing simple and understandable English rules.

Xtreme Modelling adapts all trade types in the same way using the Application Frameworks and these differ only in their use of data. For example, an equities trade, a repo with multiple interest payments, and a 20 year swap in ADYPT CLOUD each has different units but uses an identical approach to composing their elements. This allows agile adoption of new structures and processing on an 'ad hoc' basis.

For example, equity trades that are composed using one configuration:

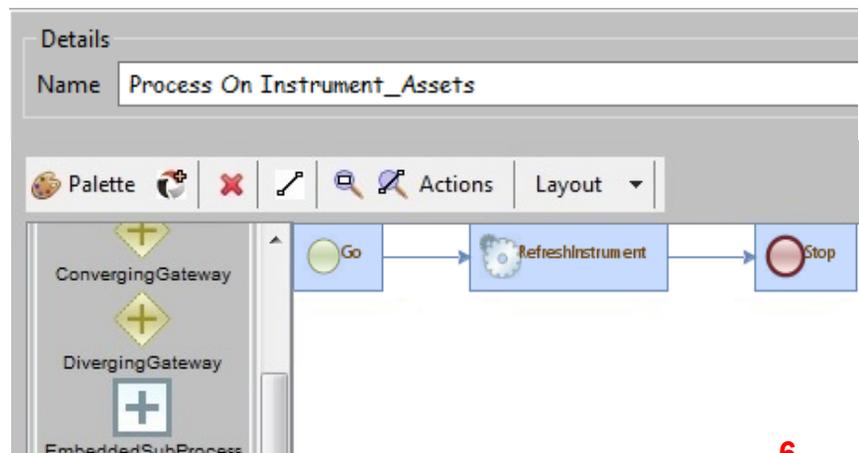


... can be adapted to create interest bearing equity trades, by adding a reusable component, interest, with its associated process:



With *Xtreme Modelling*, modellers assemble components to create the desired features and behaviour of parties, trades, assets and positions. In this way ADYPT CLOUD can dynamically model and process trade and asset types that may not exist today.

- Assembles reusable components to create desired behaviour
- Makes dynamic changes simply and safely, using diagrams and user defined rules – not coding – even in real time
- Promotes business growth as processes are extensible to support new initiatives
- Supports self-service models through real-time setup of processes





INTERFACING

ADYPT CLOUD provides very flexible real time and batch interfaces to internal and external systems maintaining the integrity of inbound and outbound messages.

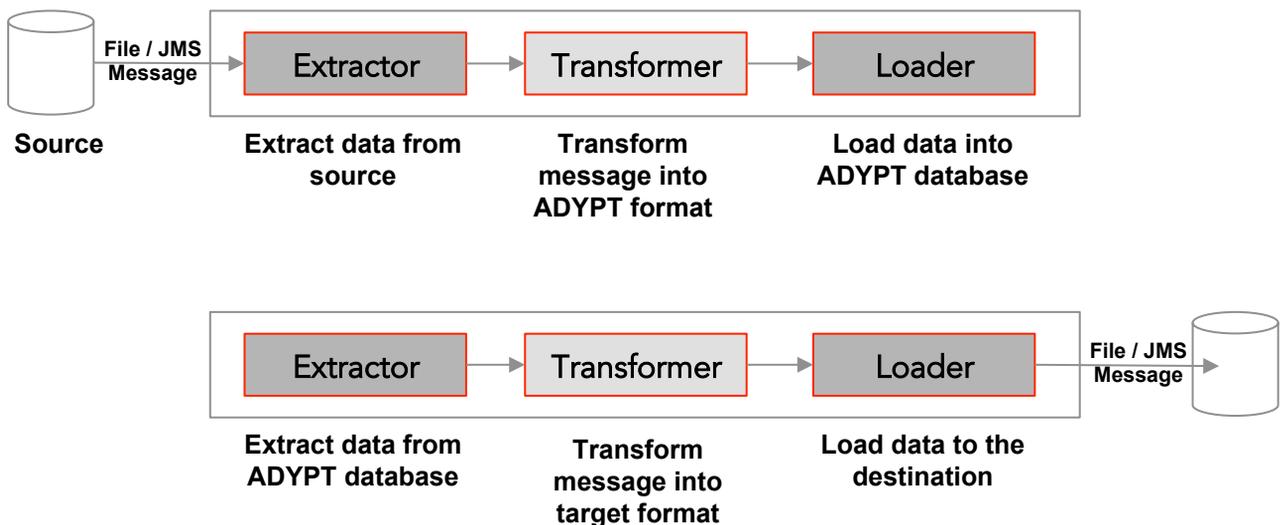
Xtreme Modelling includes flexible tools, pre-built configuration files and Application Frameworks to interface rapidly with other systems via XML, messaging, and file upload. *Xtreme Modelling* supports sequencing, file recovery, transactional recoverability and data mapping. The exact logic for each interface is softly configured and includes possible integrity logic such as:

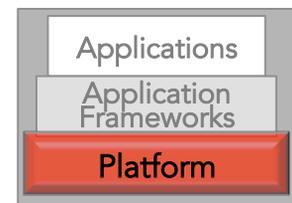
- two-phase commit
- discards on a message queue
- duplicate message checking and discard
- message response.

ADYPT CLOUD provides many export, transform and load (ETL) components which are configured for message extraction from the source system, message transformation and message loading to a target destination.

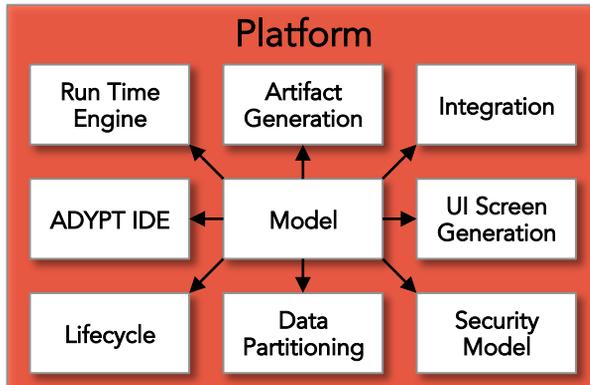
ADYPT CLOUD's interfacing tools also accelerate one time data migration from legacy systems during implementation using ADYPT CLOUD's configurable file upload utilities.

- Implements functions alongside current systems with ease
- Interfaces with external systems using out of the box ETL components
- Models new ETL extractors, transformers or loaders for unusual direct API calls or TCP connections
- Migrates data efficiently with pre-built upload tools





The ADYPT CLOUD Platform comprises various services, some of which are depicted below.



With *Xtreme Modelling*:

- the application itself is modelled
- the application's interactions with the Platform services are modelled
- the services and dependencies within the Platform are themselves modelled.

ADYPT CLOUD is thereby fully positioned to assimilate new technologies and present these as new modelling features to the Application Frameworks.

With *Xtreme Modelling* the application models, including customer- or site-specific extensions, are entirely developed through the ADYPT Integrated Development Environment (IDE).

The IDE is itself modelled - allowing new concepts to be embedded with great ease and rapidity.

- Ensures applications are independent of technology
- Protects investments in applications from technology obsolescence
- Enables rapid adoption of innovations such as blockchain clearing
- Models and deploy gateways to other systems with ease
- Maintains exceptionally high levels of built in security
- Audits processes and transactions transparently in their context
- Enables technology to evolve independently of applications



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