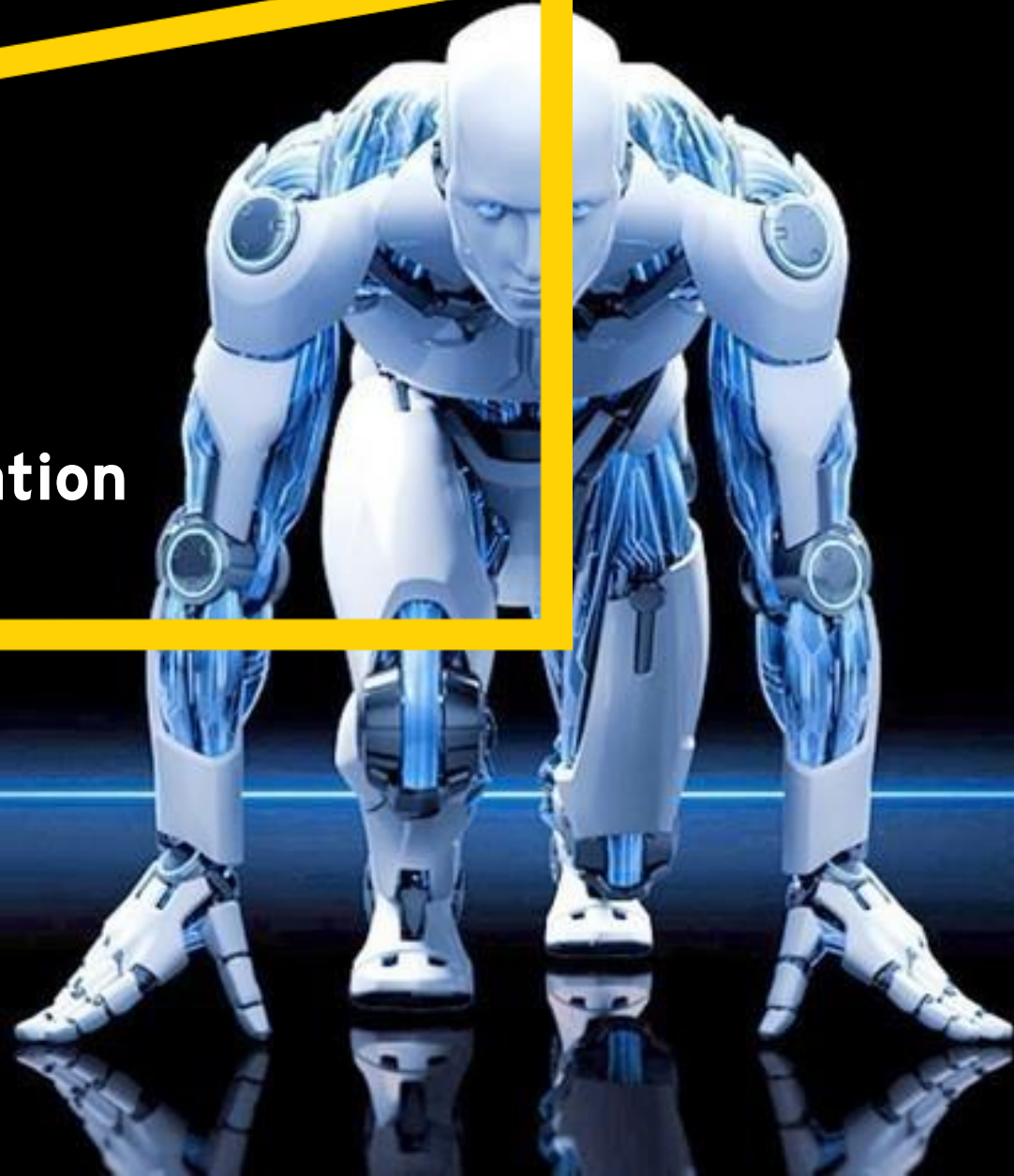


SIFMA Conference

Robotics & intelligent automation

June 14, 2018



The better the question. The better the answer.
The better the world works.

Today's agenda

1. Need for increased automation
2. RPA spotlight use cases and video
3. Panel discussion on automation journey



The need for increased automation



Industry FOCUS reporting themes

In April 2018, EY performed an industry scan of five ANC firms. The information was provided by the firms' broker-dealer finance group and/or FINOP. Key themes included:

FOCUS Reporting: 15c3-1 Net Capital Calculation 15c3-3 Customer Protection Reserve Calculation

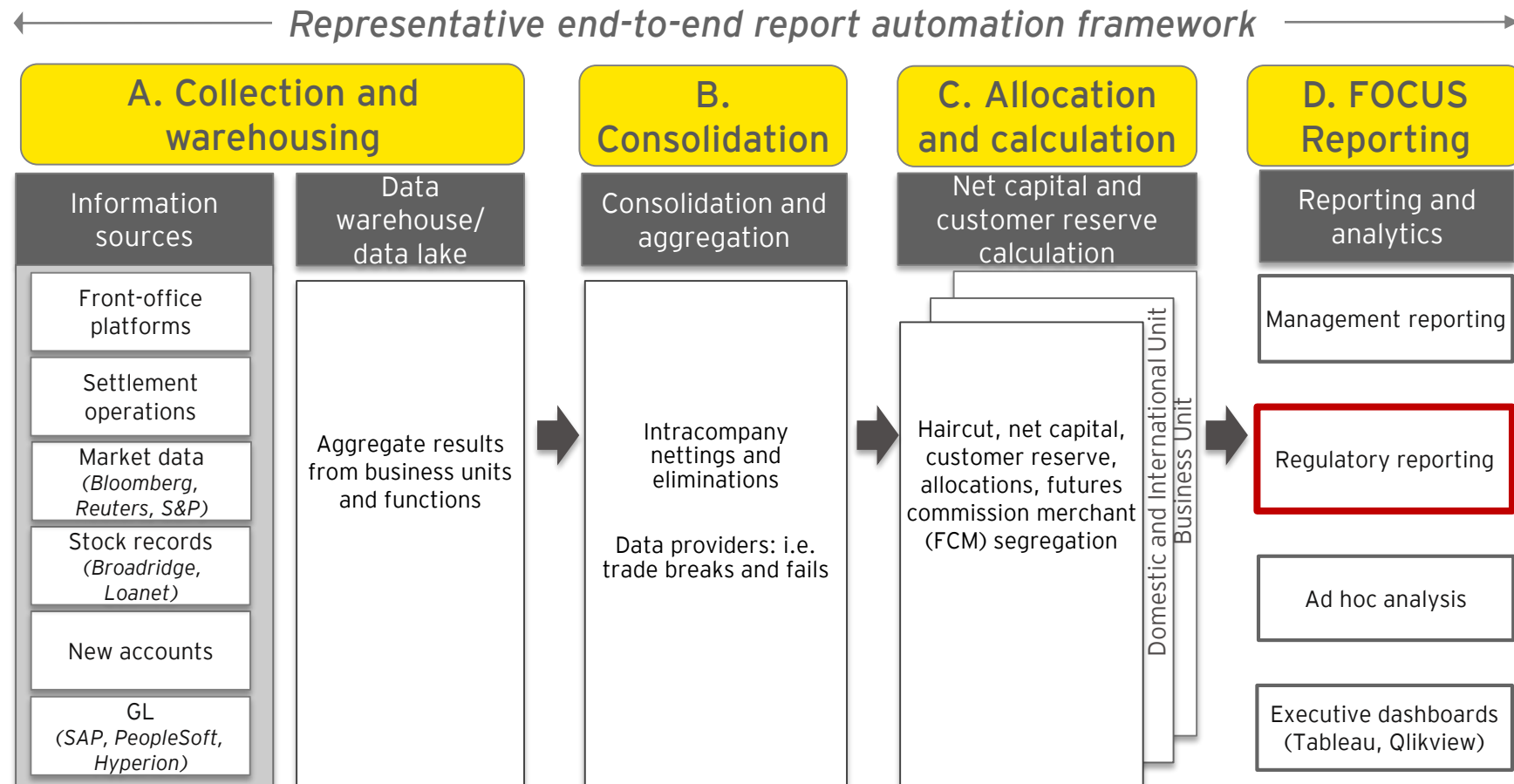
- ▶ **Level of automation** There are no readily available comprehensive vendor packages nor is there a target industry standard for true automation; pervasive use of manual spreadsheets with inputs from emails and/or PDFs
- ▶ **Net Capital:** firms are holding an additional capital buffer
- ▶ **Customer Protection Reserve Calculation:** Two firms perform weekly customer protection calculations and have no concerns around static data; Three firms perform daily calculations and do have concerns about static data
- ▶ **Common Issues:** Struggle with manual adjustments on spreadsheets, data quality and availability, and certain interpretative issues such possession or control and customer/non customer classification

17a-5 FOCUS Reporting: control focus and staffing

- ▶ **Control focus:** Focused on improving, controlling and certifying source data for their customer reserve calculation and IT general controls
- ▶ **Staffing:** Core regulatory reporting team made up of 10–20 employees, including 5 to 10 subject matter experts to assist with broker-dealer reporting

Typical monthly FOCUS reporting process

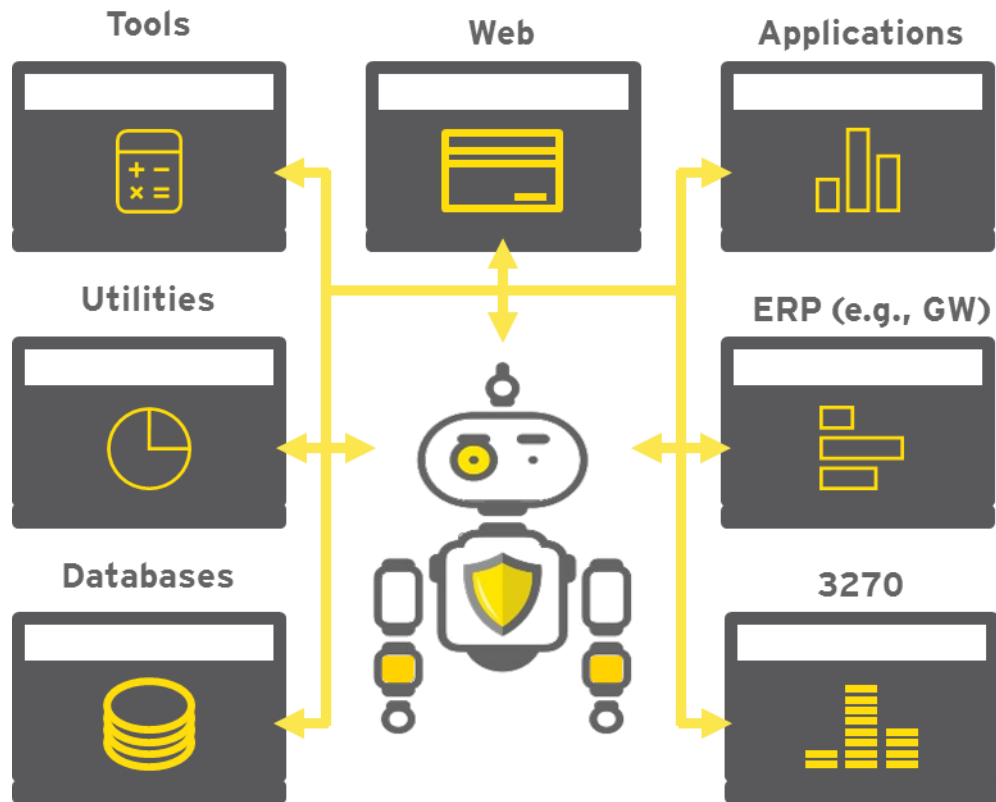
Many broker-dealers are heavily reliant upon manually driven processes using spreadsheets and/or internally developed proprietary tools with reliance on data quality and availability from data providers.



What is Robotic Process Automation (RPA)?



Virtual workers (robots) perform business tasks similar to users, handling complexity and volume with ease



An enterprise-class software automation solution that runs unattended by people:

- ▶ Unwinds legacy of people-based quick fixes
- ▶ Performs laborious and repetitive tasks reliably
- ▶ Scales up and down to match peak loads
- ▶ Emulates business user behavior
- ▶ Shifts control directly to the business rather than coders
- ▶ Delivers ROI in weeks or months through a rapid, agile approach

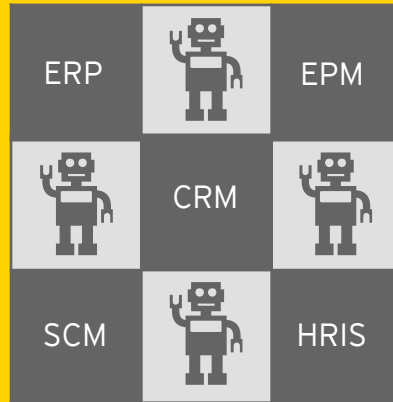
SAP Bank reconciliation – for AR process

<https://vimeo.com/179056270>

What are the benefits of RPA?

Low risk, low cost
extension of
existing technology

RPA often "fills the gaps"
between existing systems



Cost savings or
avoidance

**Ranging from
20-60%** of baseline
FTE cost



Productivity

Accuracy



Right shoring



Scalability



Consistency



Reliability

Audit trail



Opportunity
focused



Retention



ROI



RPA applicability in Finance

There are several areas within a typical finance organization that can quickly benefit from RPA, depending upon the level of existing automation, tools employed, and manual activities.

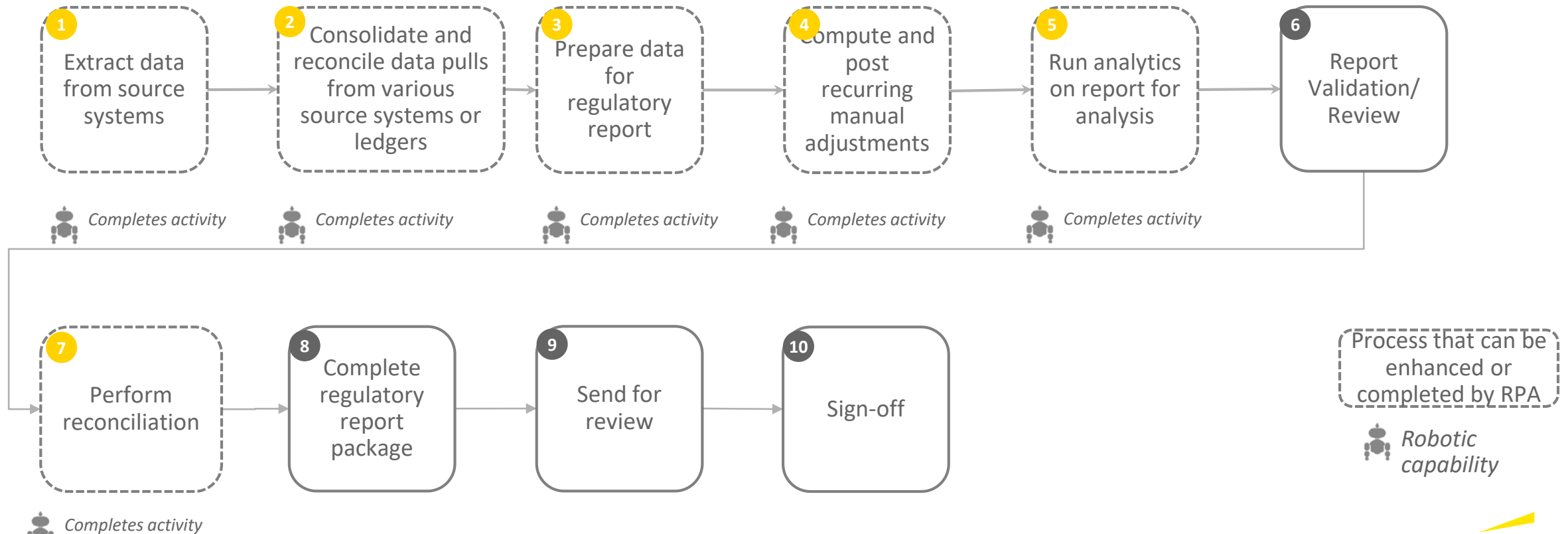
Operational Accounting	Procure to Pay	General Accounting	Financial & External Reporting	Performance & Management Reporting	Budgeting, Planning and Forecasting	Policy, Controls, Governance & Compliance	Internal Audit	Treasury	Capital Management & Investments	Investor Relations
Security pricing / NAV	Strategic Sourcing	Chart of Accounts Maintenance	Financial Reporting	Responsibility Reporting	Strategic Planning	Accounting Policy & Gov.	Risk & Control Framework	Debt/Equity Management	Capital Planning	Stakeholder ID and Analysis
Investment Accounting	Vendor Administration	Allocations & Adjustments	Regulatory Reporting	Org profit reporting	Annual Budget	Regulatory Policy & Gov.	Functional Auditing	FX Management	Capital Structure and Asset level	Stakeholder engagement
Custody	Contract Negotiations	Journal Entry Processing	Reporting	Product Profitability	Quarterly/ Rolling forecast	Statutory Policy & Gov.	Consultation	Liquidity Management	Business Case Support	Stakeholder relations
Distribution	Accounts Payable	Reconciliations	Statutory Reporting	Customer Profitability	Earnings Forecast	Mgmt. Accounting Policy & Gov.		Cash Management	Acquisitions & Divestitures	Corporate Communications
Fund Accounting	Requisitions & PO Processing	Inter-company Transactions	Audit Support	Fund Profitability		Internal Process & Controls		Capital Strategy	Project Accounting	Rating Agency Relations
Accounts Receivable	Payroll	Consolidation		Cost Development		SOX Compliance		Bank Relations		
Performance attribution	Expense Accounting & Reimbursement	Close		Cost Allocations		Tax & Treasury Policy		Treasury Strategy		
TA – shareholder recordkeeping		Fixed Asset Accounting		Funds Transfer Pricing		Finance Master Data Governance		Global Economics		
Loan Accounting		Securities Pricing & Product Control		Ad hoc Reporting						
Billing & Collections		Legal Entity Mgt. / Maintenance		Analytics & Decision Support						
Majority of RPA Opportunity in Finance										

Legend	
High Potential	Situationally valuable

Finance - Regulatory reporting

The end-to-end regulatory reporting production process timeline takes significant effort and time to complete. The below process demonstrates the automation of data aggregation, preliminary analysis, and reduction of errors.

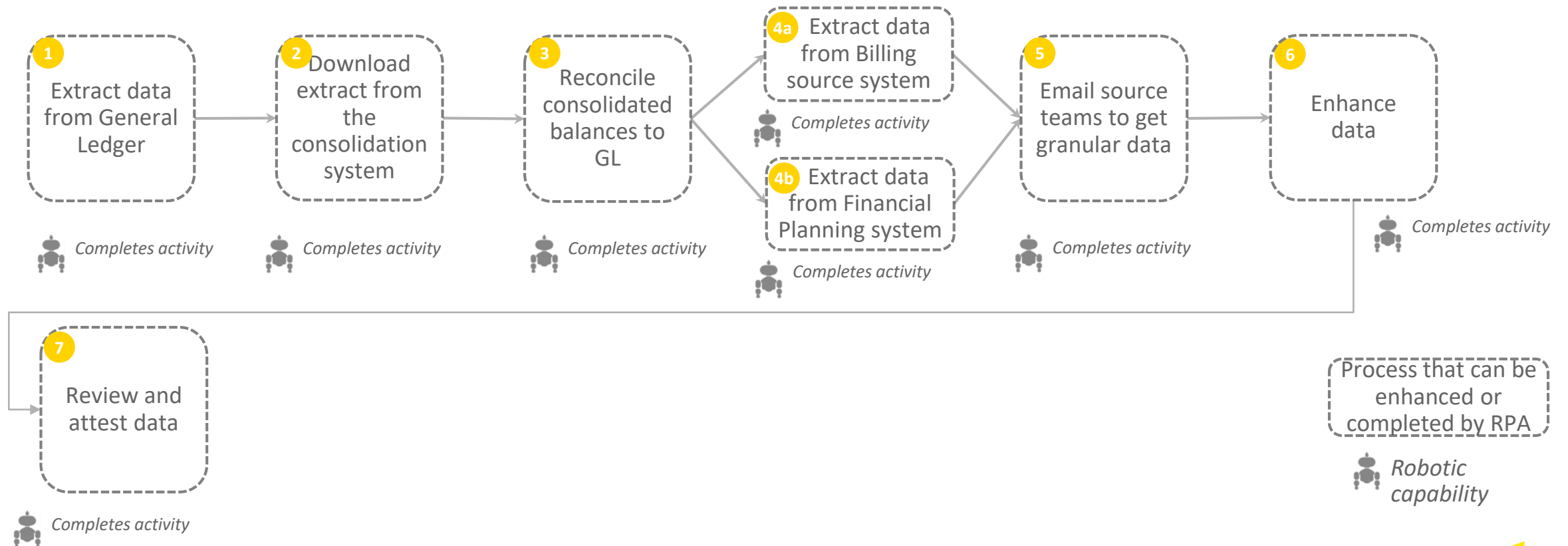
Regulatory reporting



Finance - Data extraction

Operationally intensive and time consuming effort is required for data extraction processes for different applications and the ledger. Automating data extraction therefore increases efficiency and better ensures a complete and accurate download.

Data extraction



Panel discussion and Q&A

EY | Assurance | Tax | Transactions | Advisory

About EY

EY is a global leader in assurance, tax, transaction and advisory services. The insights and quality services we deliver help build trust and confidence in the capital markets and in economies the world over. We develop outstanding leaders who team to deliver on our promises to all of our stakeholders. In so doing, we play a critical role in building a better working world for our people, for our clients and for our communities.

EY refers to the global organization, and may refer to one or more, of the member firms of Ernst & Young Global Limited, each of which is a separate legal entity. Ernst & Young Global Limited, a UK company limited by guarantee, does not provide services to clients. For more information about our organization, please visit ey.com.

Ernst & Young LLP is a client-serving member firm of Ernst & Young Global Limited operating in the US.

© 2018 Ernst & Young LLP.
All Rights Reserved.

1502-1396089
ED None

This material has been prepared for general informational purposes only and is not intended to be relied upon as accounting, tax, or other professional advice. Please refer to your advisors for specific advice.

ey.com