Close, Consolidate and Report

Point of view on Enabling Technologies

December 2016
Introduction

Finance Organization of the future

Wheel of Finance

The future of Finance: As we look at the future of Finance, it’s important to consider two things: How Finance delivers value to the organization, and what enables the Finance function to do so.

How Finance delivers value: In our view, Finance delivers value through three types of services: Operational Finance, Business Finance and Specialized Finance. Think transactional, strategic and highly specialized.

What enables Finance: Underpinning these three services are what we call Finance enablers. These enablers include the organizational structure and the Finance team’s talent; the information, systems and data available to the Finance group, and the processes and policies that enable the Finance team to monitor risk and stay on top of regulatory obligations.

What does the future hold for the Finance function? Today’s Finance organizations are more then ever under pressure to deliver value to the business and in parallel operate within a highly cost-efficient and most-effective delivery model. The introduction of new Digital technologies is likely to be the most important factor impacting the Finance function.

Digital technologies radically transform how the business and it’s Finance function delivers value. Digital Finance utilizes disruptive technology, data, innovation, and people to elevate and differentiate the capabilities of the Finance function. Digital requires organizations to think and act differently in order to generate value.

The ability of CFOs to leverage Digital technologies to position their future Finance function will determine the future of their organizations.
Operational Finance

A journey towards a Digitalized Operational Finance
Rise of the Finance Factory: Finance will be a utility function where day-to-day transactional finance — from payables, receivables and invoices to treasury transfers, journals, capital expenditures and the close cycle — will be managed centrally in “Finance Factories”. These Finance Factories are fully automated/robotized process centers with continuous control and process visualization tools monitoring real-time on process exceptions.

What else: There’s no paper, anywhere. Employees use cloud-based apps on mobile devices to transact their business, and highly standardized, workflow-enabled business processes handle the rest. Finance managers receive event-driven, real-time updates thanks to new integration tools and advances in in-memory processing.

Information & Systems: Integrated ERP systems will remain the backbone of companies’ financial systems for some time. However we expect that Finance teams will be transformed by the rising use of robotics, mobile devices and cloud computing.

Close, Consolidate and Report: One of the transactional Finance processes is the process by which organizations produce their internal management reports and external financial statements. In this Point of View we focus on Finance technology trends and enabling technologies providing solutions for today’s Close, Consolidate and Report challenges, in particular the Close process.

Reviewing the literature, global trends, innovations and based on conversations with solution providers about how they see Finance evolving, we developed our perspective on the future of Finance and the Close, Consolidate and Report process.
The Evolution of Automation

Automation continuum range from enabling strategies that improve parts of business processes to sophisticated technologies with cognitive elements

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Robotic Process Automation

Software used to capture and interpret existing applications for the purpose of automating transaction processing, data manipulation, and communication across multiple IT systems.

*The robots are coming*, Deloitte Financial Services White Paper, 2015

- Screen scraping data collection
- Rules based business process management
- Tactical toolset to automate repetitive tasks
- Cheaper and faster step towards process efficiency

Intelligent Automation

Automate non routine tasks involving intuition, judgment, creativity, persuasion, or problem solving.

*Automate this: The business leader’s guide to robotic and intelligent automation*, Service Delivery Transformation, Deloitte, 2015

- Data input and output in any format
- Pattern recognition within unstructured data
- Replication of judgment based tasks
- Basic learning capabilities for continuous improvement to quality and speed

Artificial Intelligence

“The theory and development of computer systems able to perform tasks that normally require human intelligence.”

*Cognitive Technologies, the real opportunities for business*, Deloitte Review, issue 16, 2015

- Natural language recognition and processing
- Dealing with unstructured super data sets
- Hypothesis based predictive analysis
- Self-learning rules continuously rewritten to improve performance

Source: Gartner Hype Cycle for Emerging Technologies | Note: Trends across time are not to scale
What could Digital look like for Operational Finance?

Most processes could be centralized into “Finance Factories” providing oversight and continuous improvement over highly automated activities.

Imagine a future where...

- Advances in technologies give rise to centralized shared service “Factories” which perform the majority of transactional processing (e.g. payroll).
- Factories are overseen by a Finance Control Center that monitors process performance, exceptions and service levels for both people and Robotic Process Automation (RPA) bots. These processes are completely web, workflow, and self-serve enabled.
- Event-driven, real-time information updates and continuous process improvement are made possible thanks to advances with in-memory processing and integration tools.
- The close cycle becomes nearly continuous thanks to the advent of visual close-management tools, integrated sub-ledgers, and the automation of consolidation and intercompany transfers.
- CFOs are no longer focused on processing lagging data, and instead leverage leading analytics to make key decisions.

Digital technologies are used to advance Finance

**Blockchain**
- Increased transparency to all transactions via a distributed ledger
- Increased speed of exchange between entities while reducing the number of intermediaries (and the costs associated) to accelerate data consolidation and reporting
- Blend teams involved in payment processing

**RPA**
- Reduced labor required across all routine (rule based) financial transactions
- Increased need for change management due to dramatic revision of talent models

**Cognitive**
- Self-correct repetitive tasks such as AP/AR, leading to reduced costs and improved accuracy
- Enables identification, recovery, and reduction of overpayments in high volume, complex transactional data environments

**In-Memory**
- Enhanced visibility into information and more efficient processes
- Faster execution of transactional processes such as AP/AR and Travel & Expenses

**Cloud**
- Shortened close cycles and reduction of reconciliations/data entry through single platform implementation
- Increased access to more efficient, well defined data models
Where should organizations first focus on?

Driving the Digital agenda toward value creation requires an evaluation of technologies according to the organization’s needs

<table>
<thead>
<tr>
<th>Level of Maturity</th>
<th>Benefits</th>
<th>Impact</th>
<th>Mobilization Complexity</th>
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</table>
| **RPA** | Automation of low and medium complex processes resulting in three to ten times more operational efficiency gains depending on application | Highest ROI can be found in transaction intensive processes | □ High  
□ Medium  
□ Low |
| **RPA with Cognitive Science** | Automation of medium and high complex processes resulting in true process exception management; robots learn and evolve as new scenarios are presented | Integrating RPA and cognitive predictions is at the leading edge of applications and requires Finance workers to develop new skillsets | □ High  
□ Medium  
□ Low |
| **Cognitive Computing** | Deeper insights allow Finance to enhance business capabilities and move to granular exception management; can be a driver to improve enterprise value and increase speed to insight | Cross disciplinary support required to develop and manage technological and analytics platform; new skills are required in the Finance organization | □ High  
□ Medium  
□ Low |
| **In-Memory Computing** | Exponentially faster transaction and BI processing allows moment in time close and performance analysis; allows organizational data to be mined in real time to support business strategy | Requires organizations to refocus processes to support shorter cycle times; adoption is still in early stages | □ High  
□ Medium  
□ Low |
| **Blockchain** | Distributed ledger allows increased transparency of transactions, reduced auditing burden, and changes payment processing (AR/AP) | Early stages of adoption; commercially viable products are still evolving | □ High  
□ Medium  
□ Low |
| **Insight Generation** | Machine driven insights to sense patterns and trends in data, allowing for the automation of repetitive reporting, customer engagement, and data visualization insights | Early stages of adoption; use cases and ROI are still evolving | □ High  
□ Medium  
□ Low |
Typical Finance processes for automation

A typical Finance organization is very suitable for RPA solutions as it contains many repeatable, rules-based processes

### Transaction processing

<table>
<thead>
<tr>
<th>Close, Consolidate and Report (general accounting)</th>
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<tbody>
<tr>
<td>General Ledger Accounting</td>
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<tr>
<td>Fixed Asset Accounting</td>
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<td>Premium Accounting (Ins)</td>
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<table>
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<tr>
<th>Purchase-to-Pay</th>
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<tbody>
<tr>
<td>Requisition Materials</td>
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<tr>
<td>Payment Processing</td>
</tr>
<tr>
<td>T&amp;E Accounting/Reimbursement</td>
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</tbody>
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<table>
<thead>
<tr>
<th>Order-to-Cash</th>
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<tbody>
<tr>
<td>Order Entry</td>
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<tr>
<td>Cash Application</td>
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<tr>
<td>Bank Reconciliation</td>
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### External reporting

<table>
<thead>
<tr>
<th>Legal Entity Reporting</th>
<th>Statutory Reporting</th>
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<tbody>
<tr>
<td>Regulatory Reporting</td>
<td>Rating Agency Relations</td>
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<tr>
<td>Investor Relations</td>
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### Business decision support

<table>
<thead>
<tr>
<th>Planning</th>
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<tr>
<td>Strategic Planning</td>
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<table>
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<tr>
<th>Control</th>
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<tr>
<td>Accounting/Tax Policy</td>
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### Finance management

<table>
<thead>
<tr>
<th>Financial Function Management</th>
<th>Human Performance Management</th>
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<tr>
<td>Business Liaison</td>
<td>Training &amp; Development</td>
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### Opportunities for automation

- **Low**
- **Medium**
- **High**
Close process

Enabling technologies
Disruption in the Close process

Organizations typically exhibit challenges that may be indicators for initiating transformation of the Close process

**Level 1: Close Consolidate and Report**

- Master Data Management
- Close
- Consolidate
- Report

**Level 2: Close**

- Ensure Close Readiness
- Close Sub-Ledgers
- Manage IC Accounting and Transfer Pricing
- Execute GL Accounting and Close
- Reconcile Accounts
- Prepare Financial Statements
- Perform Management Review
- Calculate Income Tax Provision

**Close challenges**

- Inconsistent closing calendar and checklist
- Lack of quality data from upstream processes or ineffective data aggregation activities
- Lack of automated close processes (e.g. high level of manual journal entries)
- Ineffective procedures for validating results
- Lack of timely hard close of periods and ability to post transactions after reporting package submission
- Intercompany accounting and reconciliation is overly time-consuming
Filling the “gaps” between ERP and enabling technologies

Enhanced Finance Control and Automation (EFCA) and Robotic Process Automation (RPA) provide innovative opportunities

**Functionalities**

1. Financial process & close management
2. Automated account reconciliation (operational & financial)
3. Manual Journal Voucher control, Intercompany (IC) accounting (transfers & eliminations) and Disclosure management
4. Analytics, including external benchmark data and big data analytics
5. Automated Close through Robotic Process Automation

**Filling the ERP “gaps”**

- ERP systems currently do not automate the full end-to-end Close Consolidate and Report process. Also, ERP systems do not fully support the linkages with the business
- This can lead to a fragmented, manual and inefficient close, as well as to inefficiencies throughout the accounting period
- Leveraging integrated technology solutions for financial close management improves governance, collaboration and workflow around complex, labour-intensive activities, including:
  1. Financial process & close management
  2. Automated account reconciliation (operational & financial)
  3. Manual Journal Voucher control, Intercompany (IC) accounting (transfers & eliminations) and Disclosure management
  4. Analytics, including external benchmark data and big data analytics
  5. Automated Close through Robotic Process Automation

- Innovations focuses on deploying reconciliations management outside of the finance organization into operational areas*
- Enhanced Finance Control and Automation (EFCA) suites are continuously expanding in scope and delivery options to meet business functionality needs*
- Gartner predicts these solutions as being the norm through 2019*

* Source: Enhanced Finance Controls and Automation Fills the Gaps in ERP and CPM Processes, Gartner Inc., October, 13, 2014 (last reviewed on February 2, 2016)
Financial close solutions and Robotic Process Automation

Today’s business conditions are ripe for a major change. Emerging technologies and Robotic process Automation could be the solution.

Financial Close solutions

- Solution providers have been noticing the market need for innovations and offer solutions to improve the efficiency and compliancy of the financial close process as well as improvements in management reporting and analysis and external financial reporting and disclosure.
- Solution providers develop a single solution or offer a platform solution (suite) which integrates a range of finance processes and controls.
- Platform solutions have workflow integrations, use vendor-supported integration technologies, and are positioned as components of a “solution”, rather than as stand-alone products in the vendors’ portfolios.
- The marketplace comprises of:
  - ERP vendors, e.g. SAP and Oracle, offering Financial Corporate Performance Management (FCPM) solutions in- and outside their ERP customer base.
  - Traditional on-premises vendors, like Tagetik, offering modified, or new, cloud-based solutions and pure play SaaS.
  - Niche players, such as Insightsoftware.com, offering cloud or SaaS solutions outside the ERP suite. These solutions are often purchased due to corresponding functionality not being available in the buyer’s integrated financial management or ERP suite.

Robotic Process Automation

- Robotic Process Automation (RPA) in its basic form is the automation of manual processes by replicating repetitive tasks with a computer-based application.
- RPA (commonly known as “robot” or “bot”) are computer coded software programs that perform these repetitive rule-based tasks using cross-application macros to automate all or parts of an end-to-end cross-functional process.
- RPA tools evolved quietly over the last decade, but have now reached a level of maturity where process automation is possible at a significant scale.
- Automation technology providers range from RPA focused vendors to others having a wide and diverse portfolio. Examples of RPA vendors are: Blue Prism, Automation Anywhere, UiPath and Redwood.
- RPA vendors are evolving to provide consulting services along with technology services, and offer solutions which broadly comprise three fundamental elements:
  - A set of developer tools
  - A robot controller
  - Software robots themselves.


2 Source: Automate this: The business leader’s guide to robotic and intelligent automation, Service Delivery Transformation, Deloitte, 2015
Financial Close solutions – Vendor landscape

Gartner’s 2016 Magic Quadrant report provides insight in what the market looks like for the year ahead

Financial Close solutions

- Gartner’s Magic Quadrant presents a global view of the primary Financial Corporate Performance Management (FCPM) vendors from a market perspective
- Solutions support the office of finance’s accounting processes toward the financial close, as well as targeting improvements in management reporting and analysis and external financial reporting and disclosure
- Blackline* and Workiva do not have financial consolidation as part of their solutions, but are Leaders in disclosure and reconciliations/close management
- Leaders provide mature offerings that meet market demand and have demonstrated the vision necessary to sustain their market position as requirements evolve
- Challengers have a strong ability to execute, but may not have a plan that will maintain a strong value proposition for new customers
- Visionaries align with Gartner’s view of how a market will evolve, but their ability to deliver against that vision is less proven
- Niche Players do well in a segment of a market, or they have a limited ability to innovate or outperform other vendors in the wider market

Gartner’s Magic Quadrant

* In September 2016 Blackline acquired Runbook

Robotic Process Automation

An introduction
Robotic Process Automation – Vendor landscape

The RPA vendor landscape is highly fragmented with no clear market leader. Some are focused only on RPA, others have a diverse portfolio.

**Robotic Process Automation**

<table>
<thead>
<tr>
<th>Mimics Human Actions</th>
<th>Mimics Human Judgment</th>
<th>Augments Human Intelligence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Robotic Process Automation</td>
<td>Intelligent Automation</td>
<td>Artificial Intelligence</td>
</tr>
</tbody>
</table>

- **AutoMate**
- **Blueprism**
- **Automation Anywhere**
- **UiPath**
- **Kira**
- **TCS ignio**
- **Narrative Science**
- **Celaton instream**
- **iDavatars**
- **Arago**
- **IBM Watson**
- **Wipro Holmes**
- **IpSoft Amelia**
- **BluePond**
- **Automix**
- **Pega systems**
- **Redwood**
- **Genfour**
- **Open Connect**

*The intent of this selection is limited to the illustration of software vendors operating in the market, and is not meant to compare product capabilities or to recommend any particular solution.*

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What is Robotic Process Automation (RPA)?

RPA is delivered through software that can be configured to undertake rules-based (deterministic) tasks

### RPA is...
- Computer-coded software
- Programs that replace humans performing repetitive rule-based tasks
- Cross-functional and cross-application macros

### RPA is not...
- Walking, talking auto-bots
- Physically existing machines processing paper
- Artificial intelligence or voice recognition and reply software

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**Sample functions**

**Manual process**
- Opening email and attachments
- Logging into web/enterprise applications
- Moving files and folders
- Copying and pasting
- Filling in forms
- Reading and writing to databases

**Judgement process**
- Scraping data from the web
- Connecting to system APIs
- Making calculations
- Extracting structured data from documents
- Collecting social media statistics
- Following “if/then” decisions/rules
How does RPA work?

RPA can be easily deployed and managed from a central controller to interact with a wide range of business applications.

1. **Process Developers** specify the detailed instructions for robots to perform and “publish” them to the robot controller repository.

2. The **Robot Controller** is used to assign jobs to robots and to monitor their activities.

3. Each **Robot** is located on an organization environment – which may be virtualized or physical (i.e., desktop computer) – where it interacts directly with business applications.

4. **Business Users** review and resolve any exceptions or escalations.

5. Robots are capable of interacting with a wide range of **applications**.
RPA software leverages existing technology to shift performance

The priority to automate and the potential to automate have met, and organizations can now reap the benefits of RPA

All processes across functions that are rules-based and repetitive; Shared Services is a good place to start looking

Characteristic outcomes of process automation

- Improved quality: Reduced risk of human data entry errors, or the risk to that data of human corruption, theft or malpractice
- Decoupled profitability & labor: Revenue and profit generated becomes less dependent on the ability to scale labor; automation enhances the abilities of current resources
- Flexibility: Rapidly scale up or down depending on the nature of the business issue
- Consistency: RPA processes activities in exactly the same manner, improving consistency of output (volume) without the element of human variability
- Cost reduction: 15 – 90% cost reduction opportunity depending on the characteristics of the functions selected for automation

Expected cost savings and other benefits from RPA (illustrative)

- Robots are scalable: easy to switch on and off
- A far lower cost than the equivalent human FTE
- Higher efficiency and productivity than human FTE
- Reduced error rate
- Reduced overhead and fixed costs associated with housing and employing an FTE

Source: Deloitte analysis based on Frey and Osborne, 2014
Process Taxonomy
# Close, Consolidate and Report Process Taxonomy

<table>
<thead>
<tr>
<th>Process</th>
<th>Description</th>
<th>Example</th>
</tr>
</thead>
</table>
| **Master Data Management** | This process group houses the processes involved with managing the master data (i.e. maintaining chart of accounts, reporting entities, cost and profit centers, industry and company attributes, and managing information interfaces and users and access rights) | • Harmonized chart of accounts supporting enterprise reporting needs (regulatory, management, statutory)  
• Harmonized cost and profit center structure across BU’s  
• Standardized, workflow enabled access management process integrated with HR |
| **Close**                | Processes involved are ensuring closing readiness, close sub-ledgers, manage intercompany accounting and transfer pricing, execute general ledger accounting and close, reconcile accounts, prepare financial statements, perform management review and calculate income tax provisions | • Technology enabled detailed close process with calendar, workflow, well-documented activities, deadlines, pre and post review and accountability. The process can be monitored online throughout the organization  
• Automated reconciliation process enabled by reconciliation tools between AP sub-ledger and general ledger  
• Proactive communication and expectation setting and thresholds (e.g. with exception based reporting) |
| **Consolidate**          | This process group houses the processes during the consolidation process (i.e. collecting data, eliminating intercompany positions, performing equity accounting and establishing group financial statements and analyzing financials) | • Input data is populated automatically from source legal entity ledgers into consolidation books  
• Eliminations adjustments occur automatically and in a timely manner in the consolidation tool  
• Ad hoc real time analytics capability |
| **Report**               | Activities are related to the generation of internal reports to facilitate management’s analysis of business performance (i.e. generation of performance reports, cost reports, and analytics reports) and activities related to preparation and release of external financial reporting materials (i.e. preparing consolidated financial statements, disclosures, and regulatory reports and conducting investor relations conferences and calls) | • Fully automated preparation of multidimensional management reporting  
• Advanced analytics including visualization to identify trends and exceptions  
• Mobile enabled dashboards  
• Fully automated preparation and submission of financial statements and schedules to external parties |
## Close Process Taxonomy

<table>
<thead>
<tr>
<th>Process</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ensure Close Readiness</td>
<td>This process describes the activities related to preparing for the financial close and ensuring a smooth close process. Close readiness activities include managing the close calendar, managing disclosures, managing the internal and external financial reporting processes, and managing accounting policies and procedures.</td>
</tr>
<tr>
<td>Close Sub-Ledgers</td>
<td>Activities related to closing sub-ledger accounts such as accounts payable, accounts receivable, fixed assets, inventory, and industry specific sub-ledgers. Depending on the size of the company some of the related work may be performed by departments outside of accounting.</td>
</tr>
<tr>
<td>Manage IC Accounting and Transfer Pricing</td>
<td>Activities falling under the scope of managing and performing intercompany accounting and transfer pricing include: allocation of shared expenses between entities within a company, reconciling intercompany transactions, posting of eliminations (to avoid double counting), and the determination of transfer pricing.</td>
</tr>
<tr>
<td>Execute GL Accounting and Close</td>
<td>Encompasses activities related to executing General Ledger (GL) accounting and closing GL accounts. Processes involved are performing accruals, deferrals, provisions, non-standard or non-recurring journal entries, foreign exchange revaluations, review of the trial balance and closing the general ledger.</td>
</tr>
<tr>
<td>Reconcile Accounts</td>
<td>This process group houses the processes involved in management and performance of account reconciliations. This includes the implementation and enforcement of account reconciliation standards, policies, and procedures, and reconciling general ledger accounts and documenting that account balances are accurate.</td>
</tr>
<tr>
<td>Prepare Financial Statements</td>
<td>This process describes the activities related to the establishment of business unit or regional level financial statements. This process includes the preparation of the balance sheet, profit &amp; loss statement, financial schedules, statement of cash flows, and conversion of GAAP into IFRS. It also includes the compilation of notes and comments and performance metrics along with the submission of the reporting package.</td>
</tr>
<tr>
<td>Perform Management Review</td>
<td>Encompasses activities related to the review of business unit or regional financial statements by management and the corporate office. Management reviews should follow a clearly defined schedule and exception reports and manual checks should be used where necessary to validate results.</td>
</tr>
<tr>
<td>Calculate Income Tax Provision</td>
<td>Activities include the preparation of current and deferred taxes, the calculation and posting of provisions for these taxes, the calculation and posting of tax liabilities and assets and the preparation of the provision schedule.</td>
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