

Finance & Accounting Process Cycles, Foundation to Automation

Sample of Instruction Slides

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Course overview

Why was the course created?

Many finance and accounting professionals have expressed concerns over the last few years that newly minted accountants coming out of college lack an understanding of the scope of a typical corporate finance function.

This course is designed to prepare students to assess if their real-world working environment is still developing stability or is it advancing towards market leading performance.

Course examines the baseline of activities in three core F&A process cycles, and the tools and technology that enable each cycle.

Three Core Process Cycles Examined

1. **Order-to-Cash (OTC)**
2. **Procure-to-Pay (P2P)**
3. **Record-to-Report (RTR)**

Major Elements of the Course

Process Cycle Topics

- **Finance Operating Model**
- **Service Delivery Model**
- **Process Cycle Framework**
- **Key Internal Controls**
- **Performance Metrics**
- **Leading Practices**
- **Technology Solutions**

Case Studies

- **OTC Challenges**
- **P2P Challenges**

Automation Discussions

- **Robotic Process Automation (RPA)**
- **Machine Learning (ML)**
- **Artificial Intelligence (AI)**

Note on course slides and instruction periods

- The instruction facilitation presentations are divided into six sections with each section estimated to require 3 to 5 teaching periods.
- The total course with two test periods and one group presentation period is estimated to require 26 teaching periods. Each period estimated to be 50 to 60 minutes in length.
- Nearly all instruction slides are editable by the instructor. Four graphics that required advanced graphic design services are pictures.
- Instructor slide facilitation notes can be supplied as needed

Learning objectives for each section of the facilitation presentations

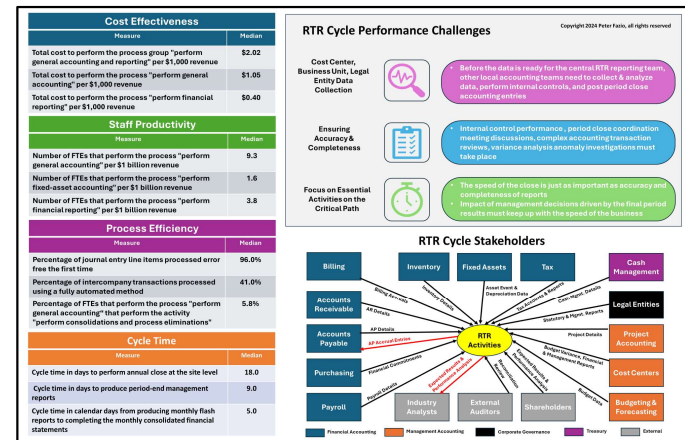
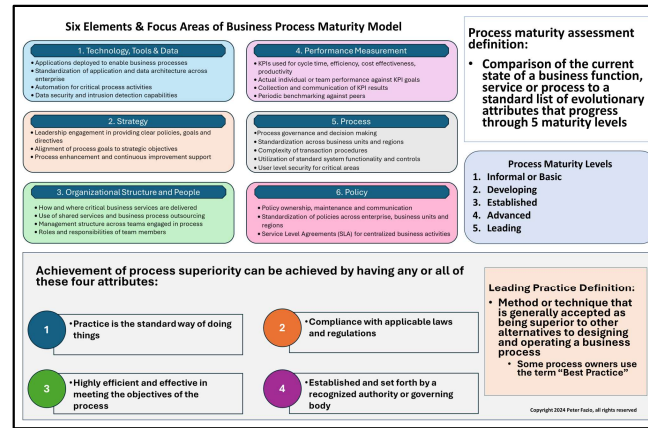
| Section | Learning Objective 1 | Learning Objective 2 | Learning Objective 3 | Learning Objective 4 | Learning Objective 5 |
|---|---|---|---|---|---|
| 1. Finance & Accounting Function Overview | Identify the high-level core accounting processes and cycles | Describe the components of the finance & accounting operating model for a business entity | Identify the components of a leading finance & accounting service delivery model for a business entity | | |
| 2. Business Process Framework, Performance Measurement, And the Foundations of Process Automation | Identify the finance and accounting elements in the APQC Standard Business Classification Framework | Identify the Key Performance Indicators (KPIs) used in measuring the performance of finance and accounting process cycles | Describe how benchmarking is used to identify areas in a business process that require improvement | Identify the foundational elements of business process automation available today, and the promise of expanded automation in the future | |
| 3. Business Process Analysis Methods | Identify how a critical process weakness is identified through the examination of Key Performance Indicators (KPI) and the use of process maturity model, process leading practices, and process gap analysis tools | Describe how headcount related cost and productivity performance metrics are calculated and used in process analysis | Describe how process cycle time performance metrics are calculated and used in process analysis | | |
| 4. Order-to-Cash (OTC): Leading Practice View of Process Cycle Structure and Service Delivery | Describe the taxonomy structure of the OTC process cycle | Identify the key internal controls in the OTC process cycle | Describe the leading practices high performing organizations employ at the business activity level in the OTC process cycle | Identify the capabilities of leading technology solutions and automation in the OTC process cycle | Discuss how Cargill addressed their key challenges in transforming the OTC process cycle |
| 5. Procure-to-Pay (P2P): Leading Practice View of Process Cycle Structure and Service Delivery | Describe the taxonomy structure of the P2P process cycle | Identify the key internal controls in the P2P process cycle | Describe the leading practices high performing organizations employ at the business activity level in the P2P process cycle | Identify the capabilities of leading technology solutions and automation in the P2P process cycle | Describe how Gallagher addressed their key challenges in transforming the P2P Expense Reimbursement process |
| 6. Record-to-Report (RTR): Leading Practice View of Process Cycle Structure and Service Delivery | Describe the taxonomy structure of the RTR process cycle | Identify the key internal controls in the RTR process cycle | Describe the leading practices high performing organizations employ at the business activity level in the RTR process cycle | Identify the capabilities of leading technology solutions and automation in the RTR process cycle | |

Reading materials for the course

- There is no textbook for this course
 - Students are expected to read the articles, case studies, technology briefs, and process design study aids detailed to the right
 - All reading materials and instruction slides that are copyrighted will be provided with a proper licensing agreement or disclosure as required by the author
- Process Classification Framework, Version 7.2.1, Created 01/09/2020, American Productivity & Quality Center (APQC)
 - Financial Supply Chain Management, Article, published by Driver Logistics, August 2023
 - Glossary of Process and Performance Excellence Terms, K05313, 2018, American Productivity & Quality Center (APQC)
 - End to End Global Process Ownership in Finance, Article, August 17, 2020; American Productivity & Quality Center (APQC)
 - APQC's Open Standards Benchmarking Measures List, 02/21/2023, American Productivity & Quality Center (APQC)
 - Insights on automating desk work with Robotic Process Automation (RPA), by Keyence Corporation, 2023
 - Gallagher, P2P Case Study from APQC
 - Cargill, OTC Case Study from APQC

Student reference materials and study aids from instruction slides

- Four study aid documents are available for the students to use as a reference during the instruction periods
- The documents are in a “placemat format” and designed to be printed on 11”x17” tabloid size paper on both sides
- The study aids contain images of graphics taken from the instruction slides
- A sample of the study aid placemats has not been included but the thumbnail pictures to the right are a representative sample of them



Section 1:

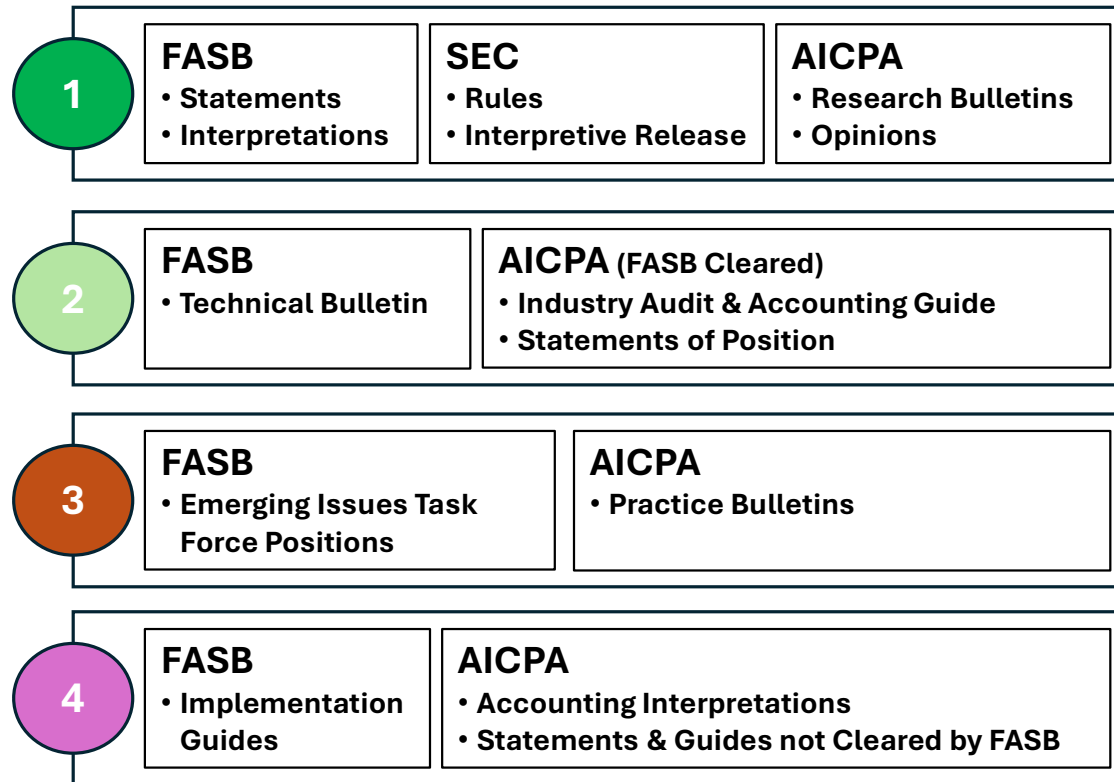
Finance & Accounting Function Overview

Sample Slides: 7

Total Slides in Instruction Facilitation Presentation: 35

What accounting principles, guidelines and rules must Finance & Accounting processes support in the United States?


Four Levels of US Generally Accepted Accounting Principles (GAAP)



- **Financial Accounting Standards Board (FASB)** is the source of authoritative accounting standards to be followed by nongovernmental entities in the United States
- **Securities and Exchange Commission (SEC)** is a source for authoritative GAAP for US public companies
- **American Institute of Certified Public Accountants (AICPA)** is a nonauthoritative source of accounting guidance

What makes Finance & Accounting (F&A) processes so different than other business processes?

- F&A processes and support systems must be designed to record information that will become the basis for management's implicit and explicit assertions in the financial statements
- The five management assertions were documented in the 2010 release of Auditing Standard No. 15, Audit Evidence, by the Public Company Accounting Oversight Board (PCAOB)



Existence
or
Occurrence

Completeness

Valuation or
Allocation

Rights &
Obligations

Presentation
&
Disclosure

What is a business process?

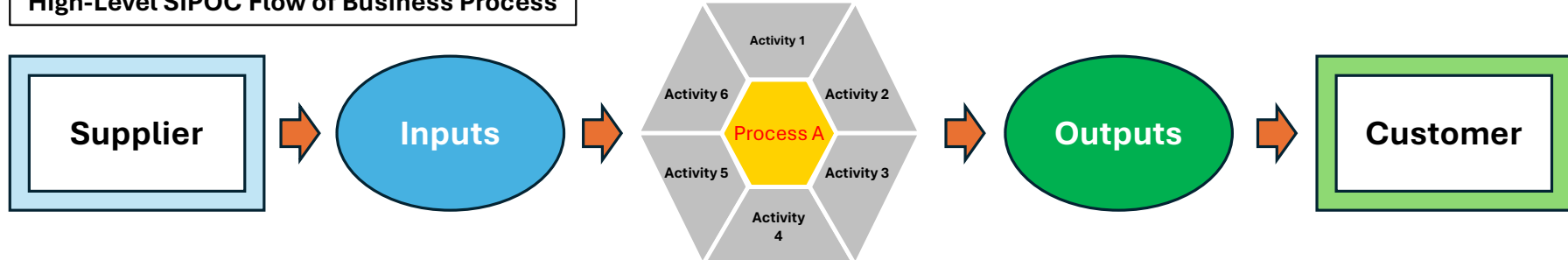
Definition

- Series of interrelated activities that transform inputs into results (outputs)

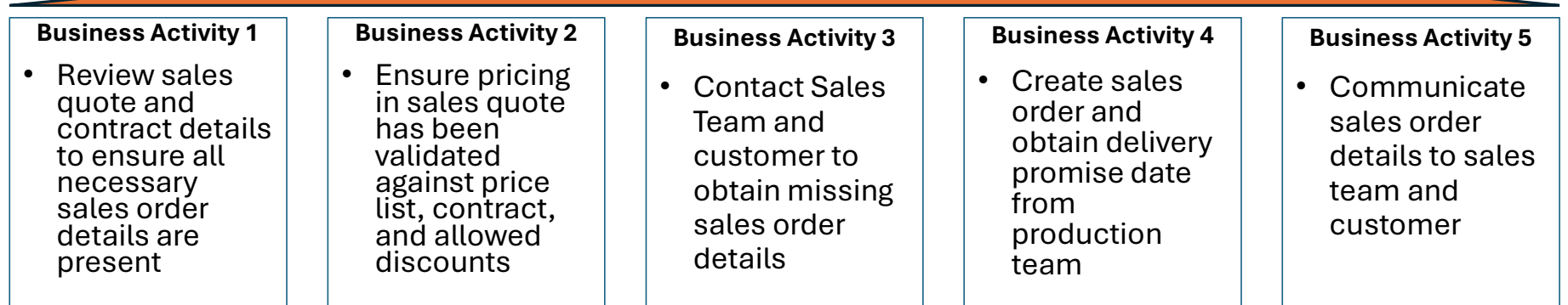
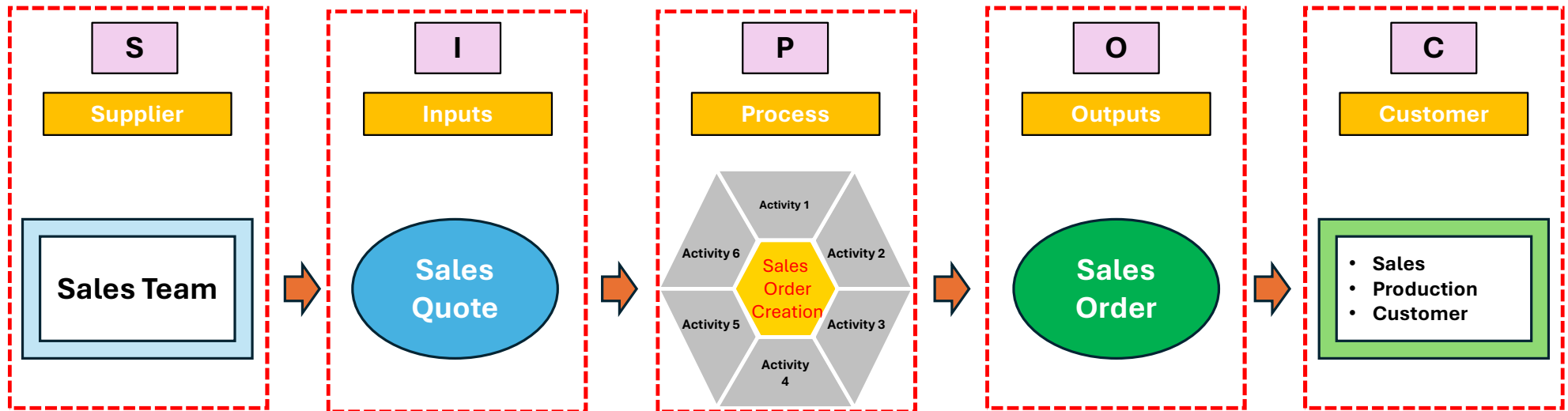
Principals of Business Process Design

- Require standards to ensure repeatable performance
- Supported by control systems to regulate quality of services
- Monitored to measure error rate, processing time and cost of outputs

High-Level SIPOC Flow of Business Process



**Major activities of a core finance & accounting process in a SIPOC diagram:
Create Customer Sales Order**



Procure-to-Pay (P2P) Process Framework

| Mega Process Cycle | Source-to-Pay (S2P) | | | | | | | | | | | |
|--------------------|--|---|---|--|--|--|---|---|---|---|--|---|
| Process Cycle | Source-to-Contract (S2C) | | | | Procure-to-Pay (P2P) | | | | | | | |
| Process | Sourcing | | | Contracting | Procurement | | Receiving | Accounts Payable (AP) | | | Reporting | Governance |
| Sub-Process | Sourcing Strategy | Category Management | Supplier Management | Contract Management | Requisitioning | Purchasing | Receive Goods & Services | P-Card Administration | Supplier Invoice Processing | Expense Reimbursement | Reporting & Analysis | Process Governance & Maintenance |
| Activities | Develop and maintain procurement plan | Develop and maintain category management strategy | Develop baseline of supplier qualifications by category and product | Develop and maintain plan to support purchasing contract lifecycle | Process purchase requisition (PR) and select supplier | Create purchase order (PO) and distribute to supplier | Receive supplier goods and place in storage location | Purchasing Card (P-Card) set-up | Receive supplier invoice and record details in accounts payable (AP) system | Maintain and communicate employee expense reimbursement policy | Produce procurement spend analysis reports and dashboards | Maintain policies and procedures and communicate changes |
| | Analyze organization historical spend profile | Assist operating units with improving quality and accuracy of demand forecast | Identify new suppliers, negotiate terms & pricing, assist with onboarding | Manage Request For Proposal (RFP) purchasing activity | Strategic sourcing or category manager review supplier selection in PR | Create blanket PO for longer term purchase of common items from preferred supplier | Record goods receipt against PO in ERP, procurement and warehouse systems | P-card purchasing activity approval | Conduct 2-way or 3-way matching process | Capture and review expense details and supporting documentation | Produce supplier service level reporting | Perform periodic supplier master data review and maintenance |
| | Identify and clarify strategic purchasing requirements | Identify, validate and certify preferred suppliers for select categories | Update supplier master data for new and existing suppliers | Negotiate, review and execute purchasing contracts with suppliers | Review and approve purchase requisition | Review supplier quotes and adjust terms and pricing in PO | Research and resolve discrepancies in quantity, quality and conformance of goods received | P-card reconciliation | Validate and resolve supplier invoice matching discrepancies | Communicate expense items exceeding policy limits | Create, review and approve purchasing accrual entries for period end | Review and maintain interfaces of procurement and AP systems to ERP |
| | Establish levels for materials management and contingency plans | Assist preferred suppliers with integration of product catalogs | Monitor supplier pricing exceeding expected category and product ranges | Manage supplier performance against purchasing contract terms | | Process and track expedited and manual purchase orders | Document evidence of service provider delivery of services | Process P-card vendor payment | Review and approve supplier invoices | Approve expense reimbursements | | Review processing issues and challenges and develop mitigation plan |
| | Aggregate demand and match supply needs to sourcing capabilities | Validate supplier compliance with code of conduct and quality levels | Collect and analyze supplier KPI data and publish supplier ratings | | | Review supplier portal and communications and update promise date in PO | Review and approved evidence of service delivery | Analyze P-card spend and inquire on unusual trends and activity outside of policy | Support supplier inquiries through portal or communications | Process expense reimbursement payments | | Manage ongoing process improvement initiatives |
| | Collaborate with suppliers to improve efficiency and value | Manage risk of procurement outside of preferred suppliers | Conduct periodic performance reviews with key suppliers | | | Review and reconcile open purchase orders | Record service delivery against a PO | | Process supplier payments | | | |

The larger S2P mega process cycle is presented here to provide greater context to the complex inputs to the Procure-to-Pay (P2P) process cycle

Five key dimension of the Finance & Accounting Operating Model



There are 40 services across the six F&A business capabilities of a leading organization

Financial Accounting

General Ledger Accounting

Fixed Asset Accounting

Revenue Accounting

Inventory Accounting

Accounts Receivable Activity

Intangibles Accounting

Financial Period Close

Intercompany Processing

Accounts Payable Activity

Chart of Accounts

Tax Planning and Reporting

Payroll Accounting

Management Accounting

Temporary Cost Collection for Events

Plan, Budget and Forecast

Profit Center Accounting and Reporting

Project Accounting

Cost Center Accounting and Reporting

Product Costing

Treasury

Treasury and Cash Management

Risk Monitoring and Hedging

Manage Foreign Exchange Risk

Cash Forecast

Financial Supply Chain Management

Customer Credit Management

Credit Exposure and Control

Customer Credit Limit

Corporate Governance

Internal Control

General Ledger Configuration

Incentives and Rewards

Legal Entity Structure

Manage Policies and Procedures

Target Setting Aligned to Strategy

Data Governance

Organizational Hierarchies

Operating Unit Results Evaluation

Business Intelligence & Reporting

Financial Reporting

Variance Analysis

Management Reporting

Performance Dashboards

Functional Reporting

Key Performance Indicators

Section 2:

Business Process Framework, Performance Measurement, And the Foundations of Process Automation

Sample Slides: 7

Total Slides in Instruction Facilitation Presentation: 60

APQC and their Process Classification Framework (PCF)

APQC:

The American Productivity Quality Center (APQC), a member-based proponent of business benchmarking, best practices, and knowledge management research, identifies **thirteen functional areas** in their standard process classification framework (PCF)

What is a process classification framework (PCF)?

- Index or catalog of the process activities that an organization is engaged in when they conduct their day-to-day operations

What is a PCF used for?

1. Build end-to-end process maps
2. Standardize processes
3. Document changes from technology implementations
4. Conduct benchmarking analysis

OTC process cycle sub-processes aligned to APQC process classification framework

Sales Order Management

| Hierarchy ID | PCF Process or Activity Name |
|--------------|--|
| 3.5.4.1 | Accept and validate sales order |
| 3.5.4.2 | Collect and maintain account information |
| 3.5.4.3 | Determine availability of products or services |
| 3.5.4.4 | Determine fulfillment process |
| 3.5.4.5 | Enter orders into system |
| 3.5.4.6 | Identify / perform cross-sell / up-sell activity |
| 3.5.4.7 | Process back orders and updates |
| 3.5.4.8 | Handle sales order inquiries including post-order fulfillment transactions |

Invoicing & Collection

| Hierarchy ID | PCF Process or Activity Name |
|--------------|---|
| 9.2.1 | Process customer credit |
| 9.2.2 | Invoice customer |
| 9.2.3 | Process accounts receivable (AR) |
| 9.2.4 | Manage and process collections |
| 9.2.5 | Manage and process adjustments / deductions |

Performance measurement key terms:

Key Performance Indicator (KPI)

What is a Key Performance Indicator (KPI)?

- A quantifiable **performance metric** of a business function, process or activity that is **critical** to the **achievement of an organization's success**

How does the organization measure success at the process level?

- Collecting metric data in four categories and comparing results over time
 1. Cost Effectiveness
 2. Staff Productivity
 3. Process Efficiency
 4. Cycle Time

KPI Metric Category: *Cost Effectiveness*

What performance
do we look at?

- **Management of operating costs**

Personnel

- **Compensation:**
 - Salaries, wages, bonus
- **Fringe Benefits:**
 - Healthcare, insurance, pension, stock purchase plans

Systems

- **Computer hardware purchase and software license fee**
- **Maintenance fees for computer hardware and software**
- **Application and data cost related to process delivery**
- **IT employee salary & benefits, IT vendor service labor**

Overhead

- **Costs typically allocated based on size of process staff**
 - Facilities used by staff, and related utilities & maintenance
 - Use of centralized corporate services
 - Corporate HQ or Division HQ operating unit costs

Outsourced

- **Third party supplier delivering services related to the process**
 - Recurring charges for baseline services
 - Transaction volume for business surge or seasonal increase
 - Permanent increase in service and vendor staffing levels

KPI Metric Category: *Cycle Time*

What performance do we look at?

- How quickly can the end-to-end process be completed

What can slow down the process cycle?

No Global Process Owner

No process standards across business units

No minimum service levels

No improvement projects roadmap

Incorrect or Missing Data

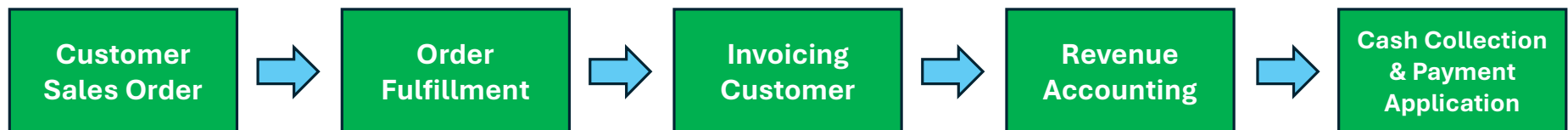
Process inputs require manual intervention

Wrong product ID in an order will require customer to be contacted

Lack of Visibility to Downstream Data Inputs

Planned stock levels cannot be validated against delivery promise date

Order-to-Cash (OTC) Value Stream:



Cycle time KPI examples for Finance & Accounting

Concern

Delaying a customer order for longer than a work week can increase rate of canceled orders

Possible Solution

- Configure order management system for automated credit terms and approval based on customer risk rating derived from past order and payment history

Concern

4 days extra to bill a customer will increase company borrowing costs

Possible Solution

- Move orders for high volume in-stock products to customer portal with accelerated automated billing

Key Performance Indicator

Cycle time in days for credit approval

| Leading | Established | Our Performance |
|-------------|-------------|-----------------|
| Unavailable | 5 Days | 6 Days |

Source: APQC, 2021

Key Performance Indicator

Cycle time in days to perform the process "invoice customers" **Current Level**

| Leading | Established | Our Performance |
|-------------|-------------|-----------------|
| Unavailable | 18 Days | 22 Days |

Source: APQC, 2021

What can Robotic Process Automation (RPA) and the associated Bots do?



**Copy &
Paste**



**Read & Write
Databases**



**Open, Read &
Send Email**



**Read &
Write Excel
Files**



**Save Email
Attachments**



**Fill In
Forms**



**Extract
Structured Data
From Documents**



**Scraping Data
From web, pdf,
image, &
application**

Other Basic Bot Jobs:

- Perform Calculations
- Move Files & Folders
- Collect Non-Financial Metric Data

Advanced Bot Jobs:

- Interact with on screen dashboard reports and send email notice of suggested actions
- Retrieve data from multiple sources and generate recurring internal reports
- Comparative analysis of product specifications and prices available online from competitors

Section 3:

Business Process Analysis Methods

Sample Slides: 7

Total Slides in Instruction Facilitation Presentation: 81

Six major elements and focus areas of a business process maturity model

1. Technology, Tools & Data

- Applications deployed to enable business processes
- Standardization of application and data architecture across enterprise
- Automation for critical process activities
- Data security and intrusion detection capabilities

4. Performance Measurement

- KPIs used for cycle time, efficiency, cost effectiveness, productivity
- Actual individual or team performance against KPI goals
- Collection and communication of KPI results
- Periodic benchmarking against peers

2. Strategy

- Leadership engagement in providing clear policies, goals and directives
- Alignment of process goals to strategic objectives
- Process enhancement and continuous improvement support

5. Process

- Process governance and decision making
- Standardization across business units and regions
- Complexity of transaction procedures
- Utilization of standard system functionality and controls
- User level security for critical areas

3. Organizational Structure and People

- How and where critical business services are delivered
- Use of shared services and business process outsourcing
- Management structure across teams engaged in process
- Roles and responsibilities of team members

6. Policy

- Policy ownership, maintenance and communication
- Standardization of policies across enterprise, business units and regions
- Service Level Agreements (SLA) for centralized business activities

Maturity model for Procure-to-Pay (P2P): Supplier Invoice Processing

- Process & Policy elements combined
- Model structure aligned to process cycle framework

| | Basic | Developing | Established | Advanced | Leading |
|-----------------------------|--|--|--|--|---|
| Process & Policy | Hard copies of supplier invoices are provided to requisitioners and cost center managers to markup with proper General Ledger coding to complete data entry in the accounts payable system | Electronic copies of supplier invoices are provided to requisitioners and cost center managers to markup with proper General Ledger coding to complete data entry in the accounts payable system | Electronic images of supplier invoices are loaded into an invoice review portal for each cost center manager and requisitioner to record the proper General Ledger coding for each invoice | Robotic Process Automation (RPA) technology identifies relationships between key supplier invoice data elements to add additional data elements to complete the General Ledger coding for each invoice | The accounts payable team and cost center managers review the General Ledger coding of supplier invoices suggested by the accounts payable system and make minimal adjustments to complete the coding |
| Process & Policy | The organization does not consistently enforce a 2-way or 3-way match of the supplier invoice | The majority of supplier invoices undergo a 2-way match of the invoice details to the purchase order | The majority of supplier invoices undergo a 3-way match of the invoice details to the purchase order and the goods receipt | The accounts payable system processes the majority of supplier invoices through an automated 3-way match that requires manual intervention for exception handling | Accounts payable system is configured to eliminate need for manual intervention in the 3-way match results when immaterial differences arise. Automated workflow in place for routing the review of material differences. |
| Process & Policy | The organization requires manual signoff on payment approval for most supplier invoices | The organization requires manual signoff on payment approval for all supplier invoices | The organization requires electronic signoff on payment approval for all supplier invoices | The accounts payable department ensures compliance with the payment policy by initiating a payment approval workflow for supplier invoices that are over the value threshold or are a transaction type required to be approved | The accounts payable system initiates an automated supplier invoice approval workflow for the invoices that meet specific criteria configured in the system business rules |

Sources of leading practices

- Outside of obtaining a list of current leading practices from a management consulting firm the following organizations and guides can be reviewed by a Subject Matter Expert (SME) to construct a list:

Organizations

- American Productivity Quality Center (APQC)
- American Institute of Certified Public Accountants (AICPA)
- Association of Business Process Management Professionals (ABPMP)
- Gartner technological research and consulting firm

Technology

- ERP solution feature and design guides:
 - SAP, Oracle, workday, Sage Intacct, Infor, Microsoft Dynamics, Acumatica
- Process cycle solutions & service providers:

| <u>OTC</u> | <u>P2P</u> | <u>RTR</u> |
|--------------|-------------|---------------|
| • Esker | • tipalti | • Blackline |
| • GETPAID | • Bill | • Trintech |
| • Billtrust | • Coupa | • TrustRadius |
| • HighRadius | • SAP Ariba | • floqast |

Methods & Tools

- COSO Internal Control Integrated Framework
- Six Sigma quality control method and tools
- TOGAF design, plan, implement, and govern IT architecture method & tools
- Process Automation Tools:

| | | |
|-------------|---------------|-----------------------|
| • UiPath | • NICE | • Automation Anywhere |
| • blueprism | • Pegasystems | |

Example of Leading Practices: Source-to-Pay (S2P) cycle

| Sourcing Strategy | Category Management | Supplier Management | Contract Management | Requisitioning | Purchasing | Receive Goods & Services | P-Card Administration | Supplier Invoice Processing | Expense Management | Reporting & Analysis | Governance |
|--|---------------------|---|---------------------|----------------|------------|---|-----------------------|-----------------------------|--------------------|----------------------|------------|
| Practice | | Description | | | | Benefit | | | | | |
| Aggregating demand into one global purchasing contract with a key supplier | | <ul style="list-style-type: none"> Analysis of buying trends and opportunities for cost reduction to identify categories and/or materials that could provided savings with one global procurement contract | | | | <ul style="list-style-type: none"> Drives actions to improve cost reduction across future purchasing decisions Improve supplier relationship by supporting key suppliers with achievement of performance goals | | | | | |
| Formal and documented contract development process | | <ul style="list-style-type: none"> Standard process supported by automated workflow for the development of supplier contract terms and pricing Documented contract lifecycle process Contract management enable through a Contract Lifecycle Management (CLM) system with access and role level security | | | | <ul style="list-style-type: none"> Drives actions to improve cost reduction across future purchasing decisions Enables procurement team to aggregate demand for key materials/products across limited number of suppliers | | | | | |
| Request For Proposal (RFP) process for putting purchasing requirements out for bid is enabled through dedicated platform | | <ul style="list-style-type: none"> Standard RFP process documented and criteria for required use established in policies and procurement training materials Robotic Process Automation (RPA) routes purchasing requests to specific buyers for materials/products requiring RFP enabled bids by suppliers | | | | <ul style="list-style-type: none"> Drives actions to improve cost reduction across future purchasing decisions Enables procurement team to aggregate demand for key materials/products across limited number of suppliers Reduced cost of onboarding and maintaining suppliers | | | | | |
| Standard contract template utilized to facilitate negotiations and gaining agreement with key suppliers | | <ul style="list-style-type: none"> Standard contract terms and conditions used to define key terms such as: <ul style="list-style-type: none"> Key supplier profit margin, payment terms, incoterms, supplier performance levels, penalties and price concessions for poor performance, etc. | | | | <ul style="list-style-type: none"> Drives actions to improve cost reduction across future purchasing decisions Reduce exposure to contract terms that result in burdensome performance level for the business | | | | | |

FTE Cost and Productivity Performance Metrics

Headcount Cost

FTE Cost

- ▶ **Compensation**
 - ▶ Salary
 - ▶ Bonus
 - ▶ Benefits
- ▶ **Outsourced Labor**
- ▶ **FTE Calculation**
 - ▶ Allocation of Time Across Process Activities
 - ▶ Part-Time vs Full Time

Efficient Use of Labor

Staff Productivity

Production Per FTE

- ▶ **Output of Each Staff Member**
- ▶ **Number of Staff Engaged in Process**
- ▶ **Qualitative View of Staff**
 - ▶ Hours of Training
 - ▶ Staff Tenure
 - ▶ Service Level Goals

Performance measures are designed to track the major process variables:

1. **Resource Utilization**
2. **Cost**
3. **Productivity**
4. **Quantity**
5. **Quality**
6. **Timeliness**
7. **Cycle Time**

With Headcount Cost and Staff Productivity we track 5 of the 7 process variables

Efficiency - Productivity Metrics - Order-to-Cash (OTC)

| Measure A | Leading | Established | Basic | Company ABC Performance |
|---|-----------------------------|-------------|-----------------------------|-------------------------|
| | 25 th Percentile | Median | 75 th Percentile | |
| Number of invoices processed per FTE that performs the process "process accounts receivable (AR)" | 85,000 | 44,444 | 19,387 | ? |

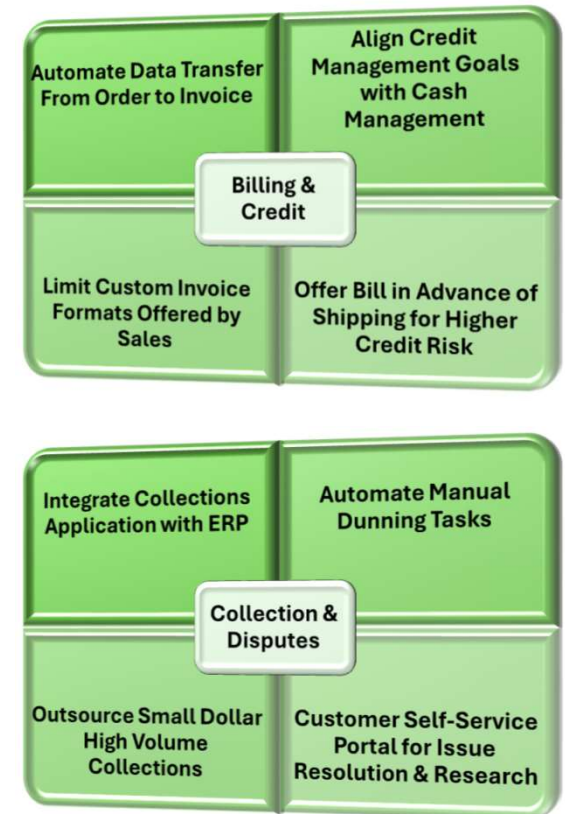
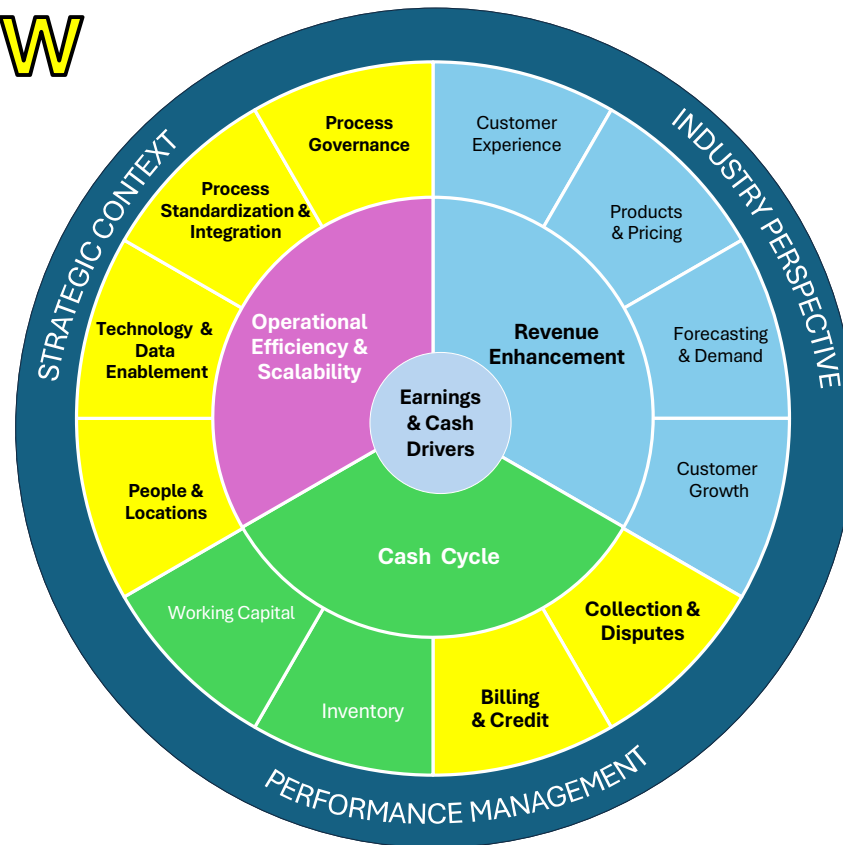
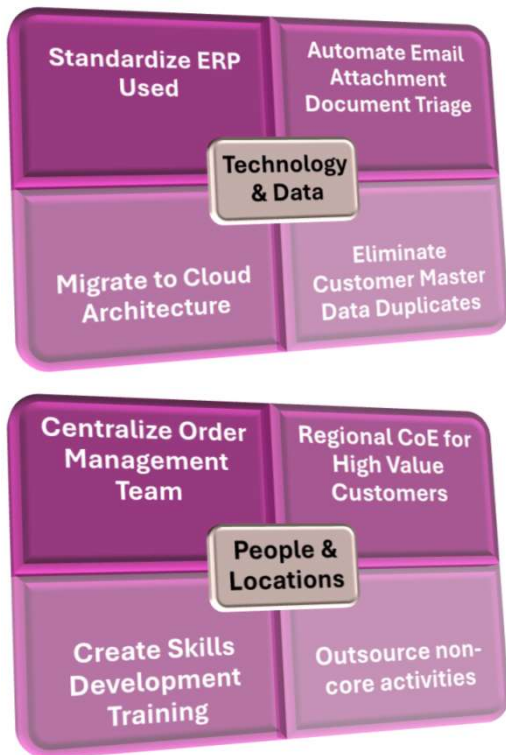
| Measure B | Leading | Established | Basic | Company ABC Performance |
|---|-----------------------------|-------------|-----------------------------|-------------------------|
| | 25 th Percentile | Median | 75 th Percentile | |
| Total cost to perform the order-to-cash processes per \$1,000 revenue | \$1.18 | \$1.89 | \$2.83 | ? |

| Measure C | Leading | Established | Basic | Company ABC Performance |
|--|-----------------------------|-------------|-----------------------------|-------------------------|
| | 25 th Percentile | Median | 75 th Percentile | |
| Number of FTEs that perform the process "process accounts receivable (AR)" per \$1 billion revenue | 2.52 | 4.00 | 6.08 | ? |

What can the OTC process owner change to improve the earnings and cash drivers in a business?

Process Owner Control:

- Areas in **YELLOW**



Section 4:

Order-to-Cash (OTC): Leading Practice View of Process Cycle Structure and Service Delivery

Sample Slides: 7

Total Slides in Instruction Facilitation Presentation: 47

Order-to-Cash (OTC) Process Framework

| Mega Process Cycle | Opportunity-to-Cash (Op2C) | | | | | | | | | | | |
|--------------------|---|--|---|---|---|--|---|--|---|---|--|--|
| Process Cycle | Opportunity-to-Quote (Op2Q) | | | | Order-to-Cash (OTC) | | | | | | | |
| Process | Sales | Quote, Customer and Contract Management | | | Sales Order Management | | Invoicing & Cash Collection | | | | Reporting | Governance |
| Sub-Process | Sales Management | Bid/Quote | Customer Setup & Credit Risk Management | Contract Management | Order Management | Order Fulfillment | Billing/Invoicing | Accounts Receivable & Collections | Cash Management | Dispute Management | Reporting & Analysis | Process Governance & Maintenance |
| Activities | Define markets, customers, and capabilities | Receive and process customer request for proposal (RFP) or quote (RFQ) | Collect, validate, setup customer data in CRM and ERP systems | Establish standard contract terms | Create sales order from quote and contract details | Perform inventory and service planning | Generate, review and transmit invoices to customers | Monitor accounts receivable key performance indicators (KPI) | Manage customer payment receipts and bank reconciliations | Identify and research customer disputes | Produce sales and fulfillment analysis reports and dashboards | Maintain policies and procedures and communicate changes |
| | Develop & manage marketing strategy and plans | Develop RFP/RFQ solution and delivery approach | Collect customer relevant data and conduct credit review | Conduct sales contract and terms negotiations | Validate and updates sales order details | Product or service job management | Manage payables for shipping | Analyze accounts receivable aging | Perform cash application against open accounts receivable | Manage resolution of disputes | Produce customer level reporting | Perform periodic customer master data review and maintenance |
| | Develop and manage pricing of products and services | Perform pricing, discount, and rebate management | Evaluate customer credit data and set credit limit and credit terms | Develop contract performance standards | Perform job planning and inventory forecasting to update orders | Deliver product or service to the customer | Post receivable entries to general ledger | Perform collections and customer dunning | Manage unapplied cash | Process invoice and AR adjustments to settle disputes | Create, review and approve sales, revenue, and AR accrual entries for period end | Review and maintain interfaces of CRM, CLM, CPQ, and Solution systems to ERP |
| | Develop and implement sales strategy, market and customer sales plans | Manage customer negotiations and deal or offering approval | Communicate credit terms to customer and finalize quote | Finalize and execute sales contract | Manage and track sales orders | Confirm delivery and obtain acceptance from the customer | Recognize revenue | Engage external collections agencies and legal services | Perform cash forecasting | | | Review processing issues and challenges and develop mitigation plan |
| | Pursue target customers | Manage, maintain, and update product or service specifications | Monitor customer credit limits | Support contract lifecycle management | Manage back orders and communicate updates to customers | Process product returns | Process customer rebates | Process charge backs and write-offs | | | | Manage ongoing process improvement initiatives |
| | Manage customer sales inquiries and opportunities | Communicate final bid/quote to customer | Conduct periodic review of customer credit limits and credit terms | | | | Perform intercompany transfers | Reconcile accounts receivable and establish reserves | | | | |

Please have your OTC placemat of graphics as a ready reference as we examine this process cycle.

The placemat is an 11" x 17" double sided document.

OTC Process:**Sales Order Management****Sub-Process:****Order
Management**

1. Examine the Sales Quote with product, price, quantity, sales terms, and initial promise date agreed with the customer
 - **Create a Sales Order in the Order Management System**
2. The order management system validates price and product details and prompts Order Management team to act if there are inconsistencies between the order and the ERP product master data or customer master data

- **Who should correct the inconsistencies? Sales Team or Order Management Team?**

This slide is used to gain a deeper understanding of each activity box in the process cycle framework

3. Consult the product production schedule or attend production planning meetings to gather data to validate the delivery date promised to the customer

- **Should activity 3 be automated? Why?**

4. Sales Orders that cannot be filled in a reasonable time are placed on a backorder monitoring status so appropriate communication can be sent to customer

- **What might be missed when the back order is finally fulfilled and shipped to the customer?**

No Invoice Created

OTC Process:**Invoicing & Cash Collection****Sub-Process:****Billing /
Invoicing**

1. Data from the sales order along with information from the product shipping confirmation is used to create an invoice that is sent to the customer
 - ***The ERP system or the standalone billing system is configured to allow a specific data element or event to trigger the creation of an invoice***
2. Additional data that is added to the invoice that could impact the total invoice amount includes the following:
 - **Sales & use tax charged to customer**
 - **Value added tax**
 - **Freight charges for shipping products to customer**

This slide is used to gain a deeper understanding of each activity box in the process cycle framework

3. Revenue recognition can take place when two things have taken place:
 - a) Product is shipped or made available for the customer to pickup
 - b) Organization has satisfied local GAAP requirements for revenue recognition
 - ***Billing does NOT have to take place to recognize revenue***
4. Intercompany billing or transfers occurs when products or services may be shipped on behalf of or directly to a related company
 - ***Intercompany transfers of products across international borders are typically governed by an organization's Transfer Pricing policy that is updated on an annual basis to ensure compliance with local country guidelines***

Three levers of change to strike the right balance between the control and performance of business processes

Process Improvement

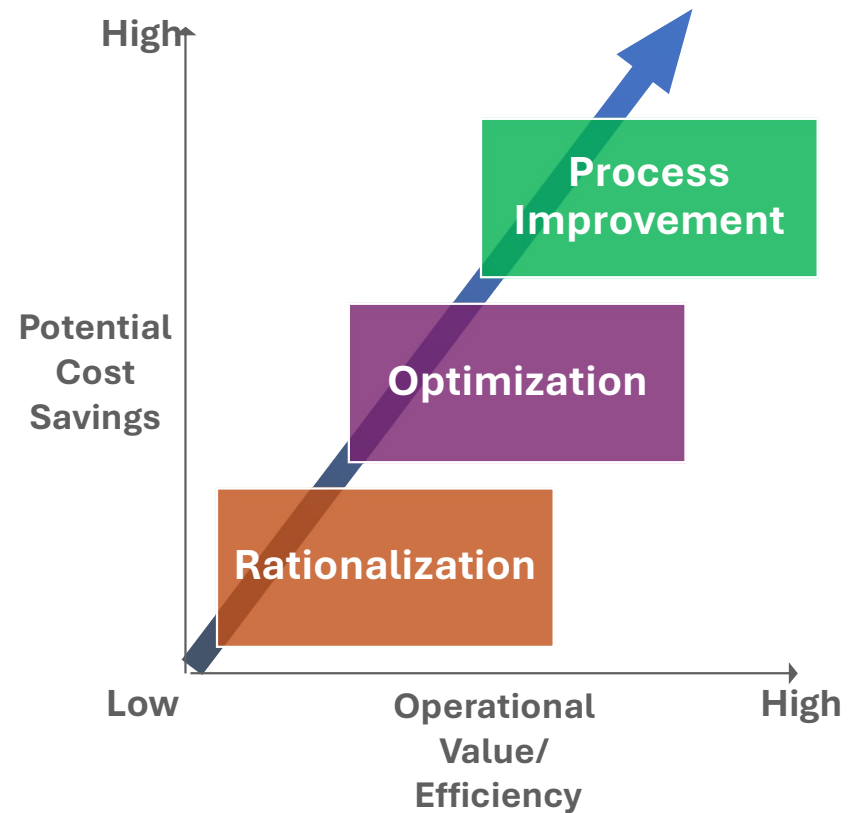
- Modifying and re-designing a process and the underlying control structure to drive operational efficiency and effectiveness

Optimization

- Implementing more efficient controls through standardization and automation

Rationalization

- Removing controls that are not significant or are duplicative



Internal Controls: OTC

Order Management

1
Payment terms properly assigned to customer

2
User access controls to change price list or override prices in order

Order Fulfillment

3
Shipping information in customer master data reviewed

4
Product picking transaction updates inventory balances

Billing / Invoicing

5
System automatically generates billing data for invoice

6
Customer discounts approved through workflow tool

Accounts Receivable & Collections

7
Delinquent customer AR balances are reviewed periodically

8
Bank account reconciliations to General Ledger performed

Cash Management

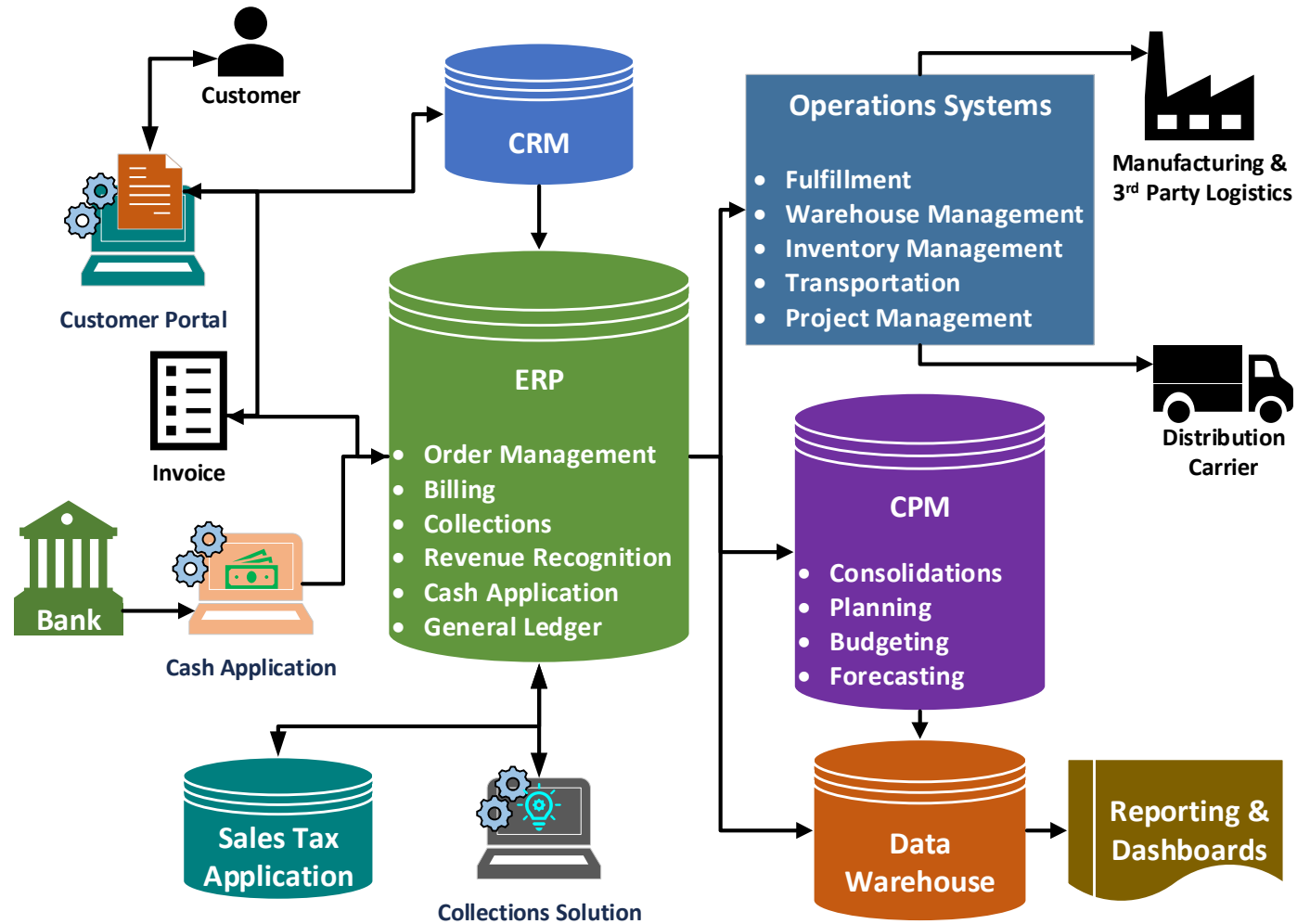
9
System automatically updates customer account balances when cash payments applied to invoice

Dispute Management

10
Sales returns are regularly reviewed and approved by management

What are we trying to find looking at returns?

OTC Technology Solutions Architecture



OTC Technology Solutions

| | | |
|--|------------------------|--|
| Technology Solution: | Salesforce Sales Cloud | |
| Focus Area of Solution: | CRM | |
| Capabilities: | | |
| <ul style="list-style-type: none">• Manage and track sales campaigns across multiple sales channels• Import documents such as purchase orders across multiple document types• Integration with an organization’s email system to maintain communication details with customers• Share files with customers such as sales quotes and draft sales contracts | | <ul style="list-style-type: none">• Provides customer master data repository and integrates with ERP customer master data• Supports sales forecasting tasks• Integrates with ERP systems to share product, pricing, and credit management transactional data• Solution deployed as Software as a Service (SaaS) solution and not available as and on premises application |

Section 5:

Procure-to-Pay (P2P): Leading Practice View of Process Cycle Structure and Service Delivery

Sample Slides: 7

Total Slides in Instruction Facilitation Presentation: 54

Procure-to-Pay (P2P) Process Framework

| Mega Process Cycle | Source-to-Pay (S2P) | | | | | | | | | | | |
|--------------------|--|---|---|--|--|--|---|---|---|---|--|---|
| Process Cycle | Source-to-Contract (S2C) | | | Procure-to-Pay (P2P) | | | | | | | | |
| Process | Sourcing | | | Contracting | Procurement | | Receiving | Accounts Payable (AP) | | | Reporting | Governance |
| Sub-Process | Sourcing Strategy | Category Management | Supplier Management | Contract Management | Requisitioning | Purchasing | Receive Goods & Services | P-Card Administration | Supplier Invoice Processing | Expense Reimbursement | Reporting & Analysis | Process Governance & Maintenance |
| Activities | Develop and maintain procurement plan | Develop and maintain category management strategy | Develop baseline of supplier qualifications by category and product | Develop and maintain plan to support purchasing contract lifecycle | Process purchase requisition (PR) and select supplier | Create purchase order (PO) and distribute to supplier | Receive supplier goods and place in storage location | Purchasing Card (P-Card) set-up | Receive supplier invoice and record details in accounts payable (AP) system | Maintain and communicate employee expense reimbursement policy | Produce procurement spend analysis reports and dashboards | Maintain policies and procedures and communicate changes |
| | Analyze organization historical spend profile | Assist operating units with improving quality and accuracy of demand forecast | Identify new suppliers, negotiate terms & pricing, assist with onboarding | Manage Request For Proposal (RFP) purchasing activity | Strategic sourcing or category manager review supplier selection in PR | Create blanket PO for longer term purchase of common items from preferred supplier | Record goods receipt against PO in ERP, procurement and warehouse systems | P-card purchasing activity approval | Conduct 2-way or 3-way matching process | Capture and review expense details and supporting documentation | Produce supplier service level reporting | Perform periodic supplier master data review and maintenance |
| | Identify and clarify strategic purchasing requirements | Identify, validate and certify preferred suppliers for select categories | Update supplier master data for new and existing suppliers | Negotiate, review and execute purchasing contracts with suppliers | Review and approve purchase requisition | Review supplier quotes and adjust terms and pricing in PO | Research and resolve discrepancies in quantity, quality and conformance of goods received | P-card reconciliation | Validate and resolve supplier invoice matching discrepancies | Communicate expense items exceeding policy limits | Create, review and approve purchasing accrual entries for period end | Review and maintain interfaces of procurement and AP systems to ERP |
| | Establish levels for materials management and contingency plans | Assist preferred suppliers with integration of product catalogs | Monitor supplier pricing exceeding expected category and product ranges | Manage supplier performance against purchasing contract terms | | Process and track expedited and manual purchase orders | Document evidence of service provider delivery of services | Process P-card vendor payment | Review and approve supplier invoices | Approve expense reimbursements | | Review processing issues and challenges and develop mitigation plan |
| | Aggregate demand and match supply needs to sourcing capabilities | Validate supplier compliance with code of conduct and quality levels | Collect and analyze supplier KPI data and publish supplier ratings | | | Review supplier portal and communications and update promise date in PO | Review and approved evidence of service delivery | Analyze P-card spend and inquire on unusual trends and activity outside of policy | Support supplier inquiries through portal or communications | Process expense reimbursement payments | | Manage ongoing process improvement initiatives |
| | Collaborate with suppliers to improve efficiency and value | Manage risk of procurement outside of preferred suppliers | Conduct periodic performance review meetings with key suppliers | | | Review and reconcile open purchase orders | Record service delivery against a PO | | Process supplier payments | | | |

The larger S2P mega process cycle is presented here to provide greater context to the complex inputs to the Procure-to-Pay (P2P) process cycle

P2P Process:

Procurement

Sub-Process:

Requisitioning

1. Procurement most often begins with someone in the organization identifying a need to purchase goods or services and completing a Purchase Requisition (PR) document

- ***Can a requisitioner contact a vendor directly and order materials without following the formal requisition process? What is the impact of that?***

2. The PR is routed through a rules-based workflow tool to either an approver for the requisitioner's cost center or to a buyer in the procurement team for further action

This slide is used to gain a deeper understanding of each activity box in the process cycle framework

3. Strategic procurement typically involves the purchase of materials and services that are identified as the most critical to produce core products
 - a) Not all products would qualify as core
 - b) Strategic related materials are identified in the ERP and procurement systems master data to allow for the application of business rules for processing
 - c) A short list of active strategic suppliers are maintained to ensure the material demand is aggregated to those suppliers that can deliver required quality, delivery time, and most often re-negotiated pricing for all orders
4. Review and approval of PRs typically follows the organization's Delegation of Authority policy

New Vendor Addition Fraud: How does it happen?

Outside Unrelated Party

How does the fraud happen?

- Email sent to AP team mailbox with new vendor data sheet completed and asking for new vendor to be created
- Email sender masks actual email address to look like it is sent from internal employee

What can AP Team do to prevent or detect fraud?

- Never send response by clicking on links in email or simply creating a “reply” from inside the email
- Verify new vendor details with internal employee and credit rating agencies

No goods receipt will be created for a three-way match

Internal Employee or Contractor

How does the fraud happen?

- Internal resource wants to get personally paid for fictitious invoices that they will send after establishing the “new vendor” relationship
- Internal resource typically sets up working email addresses to mask identity and exploits weaknesses in processes they have already observed

What can AP Team do to prevent or detect fraud?

- Insist on submission of organization’s purchase order with purchase requisitioner name before new vendor record is activated
- Contact internal purchase requisitioner, and internal purchasing team’s category manager or buyer directly to verify “new” vendor details

P2P Leading Practices:

Supplier Invoice Processing

| Practice | Description |
|---|---|
| Supplier invoice approvals documented and maintained in secure database or system | Workflow enabled supplier invoice approvals and adjustments maintained in a secure database, ERP or procurement system |
| Supplier payment scheduling supports overall cash management plan of business | ERP or procurement system automatically schedules approved supplier invoices based on payment due dates and configured cash management rules |
| Suspension of supplier payments to facilitate resolution of supplier performance issues | <ul style="list-style-type: none">• AP and Sourcing Team collaborate on suspension of payments to suppliers with significant performance and quality issues• ERP system has capability to allow manual application of payment block on suppliers |

This slide provides insights on what can be done with well designed sub-process and support systems for each process cycle. These details are what one can expect from a Subject Matter Expert (SME).

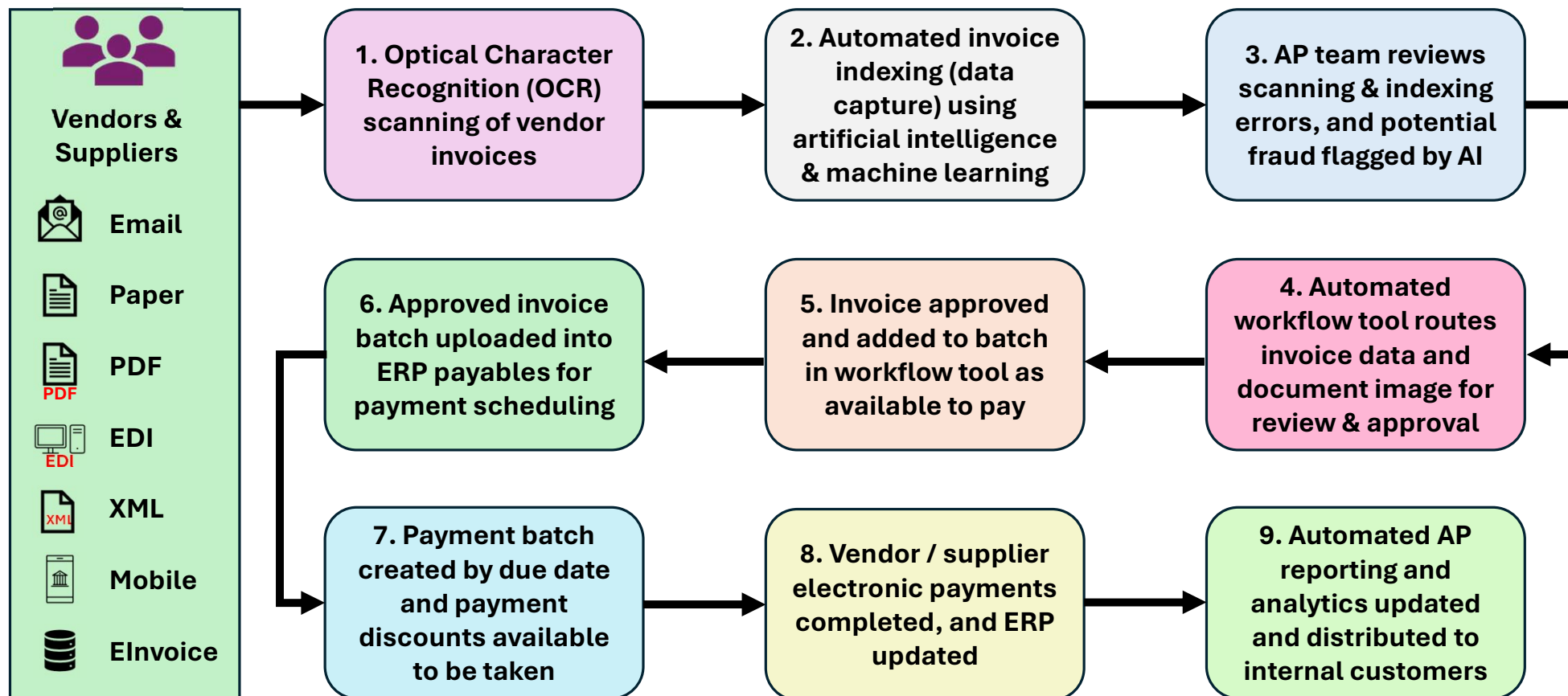
P2P Leading Practices:

Expense Reimbursement

| Practice | Description |
|--|---|
| Specialized system for recording business expense reports and storage of supporting expense invoice images | <ul style="list-style-type: none">• Expense report management system used for capturing employee reimbursable expenses• Expense system integrated with Accounts Payable system |
| Direct import of expense items from corporate credit card into the expense report management system | <ul style="list-style-type: none">• Employees can import individual charges from corporate credit card into expense report management system to populate new expense report• Policy to require import of all airfare and lodging charges directly into expense report management system from the corporate credit card systems |

This slide provides insights on what can be done with well designed sub-process and support systems for each process cycle. These details are what one can expect from a Subject Matter Expert (SME).

The automated P2P vendor invoice flow



Note: We have seen this diagram before when we discussed cycle time performance in an earlier class

P2P Technology Solutions

| | | |
|-------------------------|--|---|
| Technology Solution: | bill | |
| Focus Area of Solution: | Accounts Payable Automation | |
| Capabilities: | | |
| | <ul style="list-style-type: none">• Electronic invoice data entry through scanning vendor invoice images uploaded manually and received in emails• Automated approval workflows• Provides AP team with access to SaaS application in Cloud• Outsourcing services provided with bill tools and systems | <ul style="list-style-type: none">• Pre-built standard interfaces for leading ERP systems• Access to millions of vendors over the <i>bill</i> network and more payment options—from ACH to credit card, check, and international wire transfer—user has more flexibility and control over payments |

Section 6:

Record-to-Report (RTR): Leading Practice View of Process Cycle Structure and Service Delivery

Sample Slides: 7

Total Slides in Instruction Facilitation Presentation: 55

| Mega Process Cycle | Record-to-Report (RTR) | | | | | | | | | |
|--------------------|-------------------------------|--------------------------------------|---|-----------------------------|-------------------------|---|---------------------|---------------------------|---------------------------|------------------------------------|
| Process Cycle | Data Maintenance & Collection | | | Entity Close & Submission | | Intercompany Accounting & Consolidation | | Reporting | | |
| Process | Data Maintenance | Data Collection | | Entity Close | Period Close | Intercompany | Consolidation | Internal Reporting | External Reporting | Governance |
| Sub-Process | Manage Financial Data | Prepare Sub-Ledgers for Period Close | Period Close Entries, Allocations and Cutoffs | Entity Close and Submission | Period Close Management | Intercompany Accounting | Finalize Financials | Manage Internal Reporting | Manage External Reporting | Process Governance and Maintenance |

| | | | | | | | | | | |
|------------|--|---|--|--|---|--|--|---|---|--|
| Activities | Manage business enterprise and controlling (Profit Center, Cost Center) structures | Complete AR invoicing, cash collection, payment application, write-offs | Perform rules based automated and manual allocations of expense and revenue balances | Generate and review trial balance, investigate and resolve issues | Maintain period close tasks, calendar, workflow and communicate changes | Manage intercompany policy compliance by automated analytics | Automated collection of financial data from BU GL into consolidation system | Maintain standard report structure and interfaces for internal reporting | Maintain standard report structure and interfaces for external reporting | Manage master data governance process to ensure data integrity and reliability |
| | Manage financial master data (Chart of Accounts) | Complete AP vendor invoice entry, goods receipts, credit memos, vendor payments | Record automated and manual standard period close entries | Perform General Ledger (GL) automated and manual account analysis and reconciliations | Conduct period close meetings: issues, accuracy, materiality thresholds, cutoff | Central intercompany system identifies balancing issues & informs users | Create initial consolidated financial statements in consolidation system | Manage automated workflow for distribution of standard internal reporting | RPA process for data capture, cleansing, populating into quarterly & annual templates | Manage standardization of data definitions across all business units |
| | Manage customer master data | Complete fixed asset lifecycle & depreciation entries | Perform period close validation analytics to ensure completeness | Robotic processing automation (RPA) balancing entries for discrepancies | Monitor completion of close tasks in close process workflow application | Review of intercompany transactions in sub-ledgers & central system | Analytical review of financial data in consolidation system and identification of reporting issues | Manage reporting tool with drill down, across & through reporting lines | | Maintain data flow models & diagrams to support user level data security |
| | Manage vendor master data | Complete payroll & benefits transaction entries & accruals | | Review RPA variance analysis of business unit actual results to budgets & resolve issues | Review business unit (BU) submissions, investigate and resolve issues | Center of Excellence (CoE) review of complex intercompany trading | Conduct financial statement preparation meetings to resolve reporting issues | Maintain report writer facilities that provide user defined reports from ad hoc queries | | Maintain standard period close and data submission policy across all BU |
| | Manage payroll data | Perform system cutoff of sub-ledgers for end of accounting period | | Finalize submission of period results | Reconciliation, entry, allocation, internal control documents submitted to archive system | Confirm intercompany issues, communicate changes, record balancing entries | Manage correction and adjustment process in BU GL and consolidation | Manage predictive analytics & automated creation of future trend reports | | Maintain one common intercompany policy across the enterprise |
| | Manage user access security & workflow in reporting technology | | | | | Automated posting intercompany eliminations in GL & consolidation | Record final consolidation entries, corrections, allocations, tax adjustments | Manage period results data flow to planning, budgeting & forecasting technology | | |
| | Maintain interfaces for transaction & reporting technology | | | | | Perform intercompany account reconciliations in all business units | Consolidated financial statements review & sign-off in workflow application | Conduct variance analysis of consolidated actual results & resolve issues | | |
| | Maintain automated expense and revenue allocations for reporting | | | | | | | | | |

Record-to-Report (RTR) Process Framework

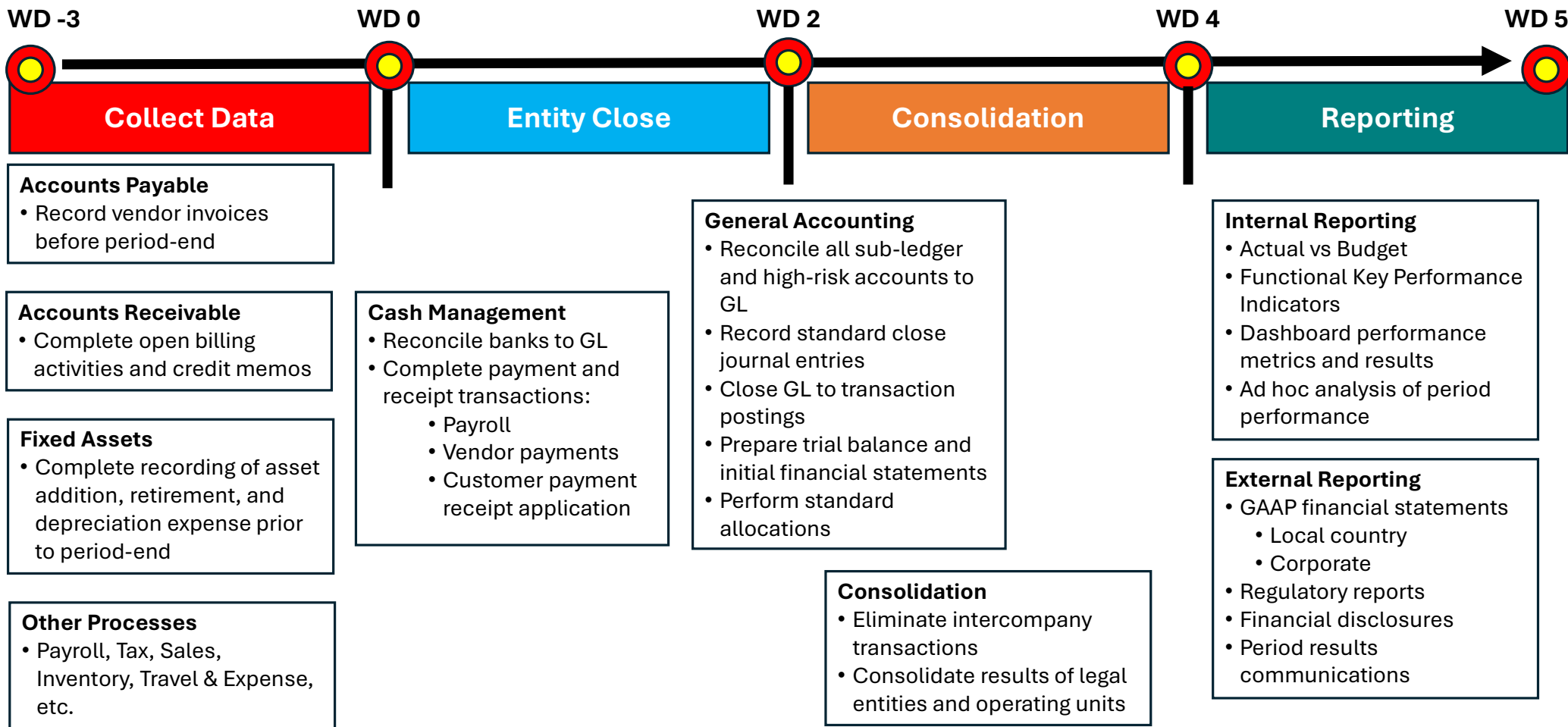
RTR Process:**Data Maintenance****Sub-Process:****Manage
Financial Data**

1. Legal entity structure and intercompany reporting relationships can change year to year to take advantage of favorable tax treatments in various countries
 - ERP and consolidation system features accommodate multiple sets of books in US GAAP and IFRS standards as well as various entity reporting structures
2. Chart of Accounts (COA) is standardized across all legal entities, general ledger accounts and COA segment changes are centrally controlled by reporting master data owner
3. Master data is maintained in one central system and shared with other critical systems through API interfaces to ensure standardization of data elements

4. IT department ensures adherence to data governance policies by using Master Data Management (MDM) solutions such as:
 - PiLog, Informatica, TIBCO, Semarchy xDM
5. Profit center and cost center structures are optimized to reduce the need for complex and numerous period end allocations of revenue and expenses
6. ERP business rules, or robotic process automation (RPA) is used to record adjusting revenue and expense entries at the time an intercompany transaction takes place to implement a commissionaire tax model when one legal entity completes sales on behalf of another related legal entity across multiple countries

This slide is used to gain a deeper understanding of each activity box in the process cycle framework

High-level period close timeline for leading organization



COSO Components of Internal Control

Control Environment

- Commitment to integrity, ethical values, and competence of the entity's people
- Management exercises appropriate oversight and enforces accountability
- Maintain a formal structure of authority and responsibilities

Risk Assessment

- Identification and analysis of business risks and significant changes
- Assessment of fraud risk

Control Activities

- Management selects & develops control activities over business processes and the technology environment to mitigate risks
- Establish controls through policies and procedures

Information & Communication

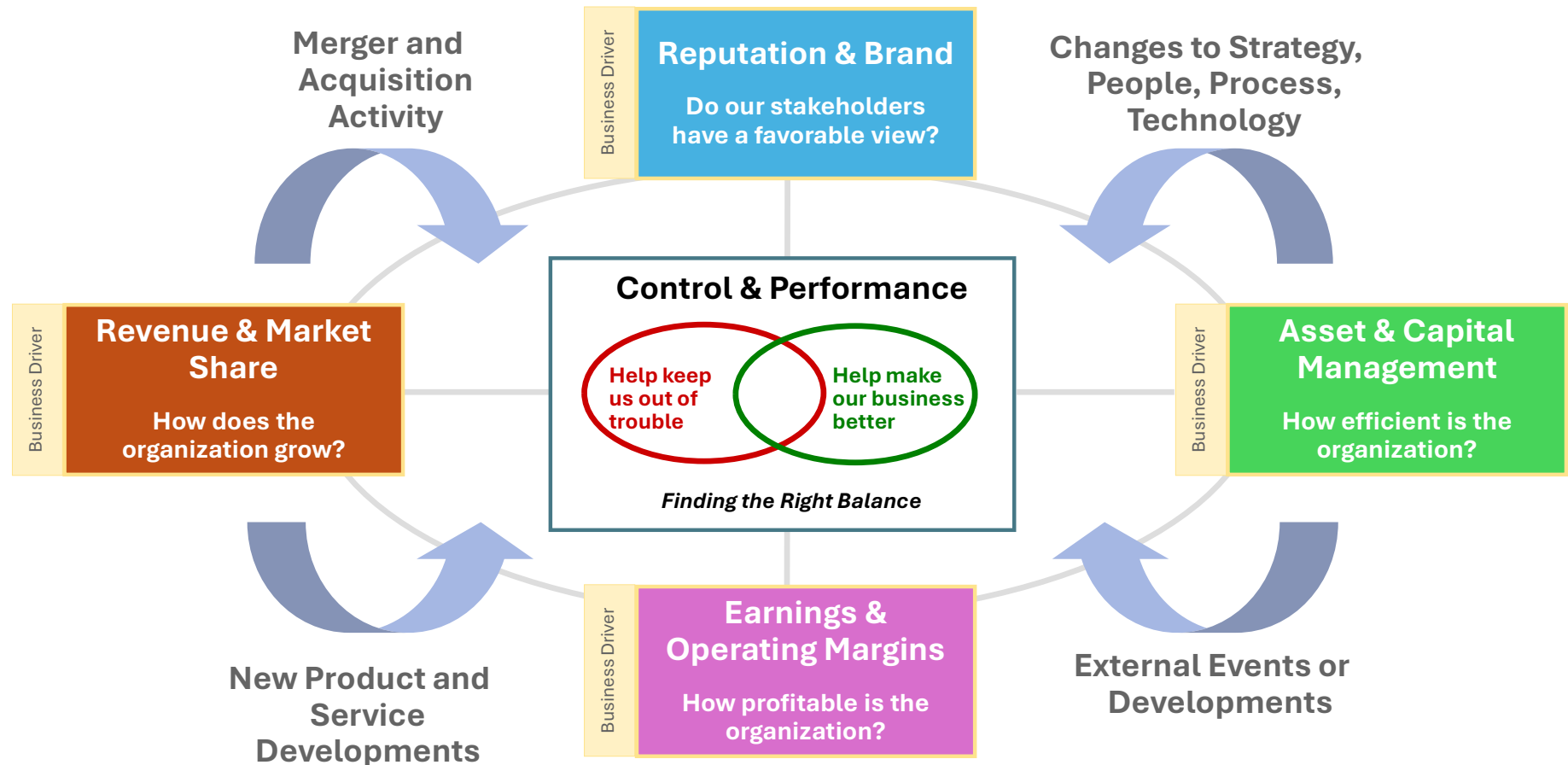
- Use internal and external information to carry out control responsibilities
- Internal communication that control responsibility must be taken seriously, external communication that is required and expected

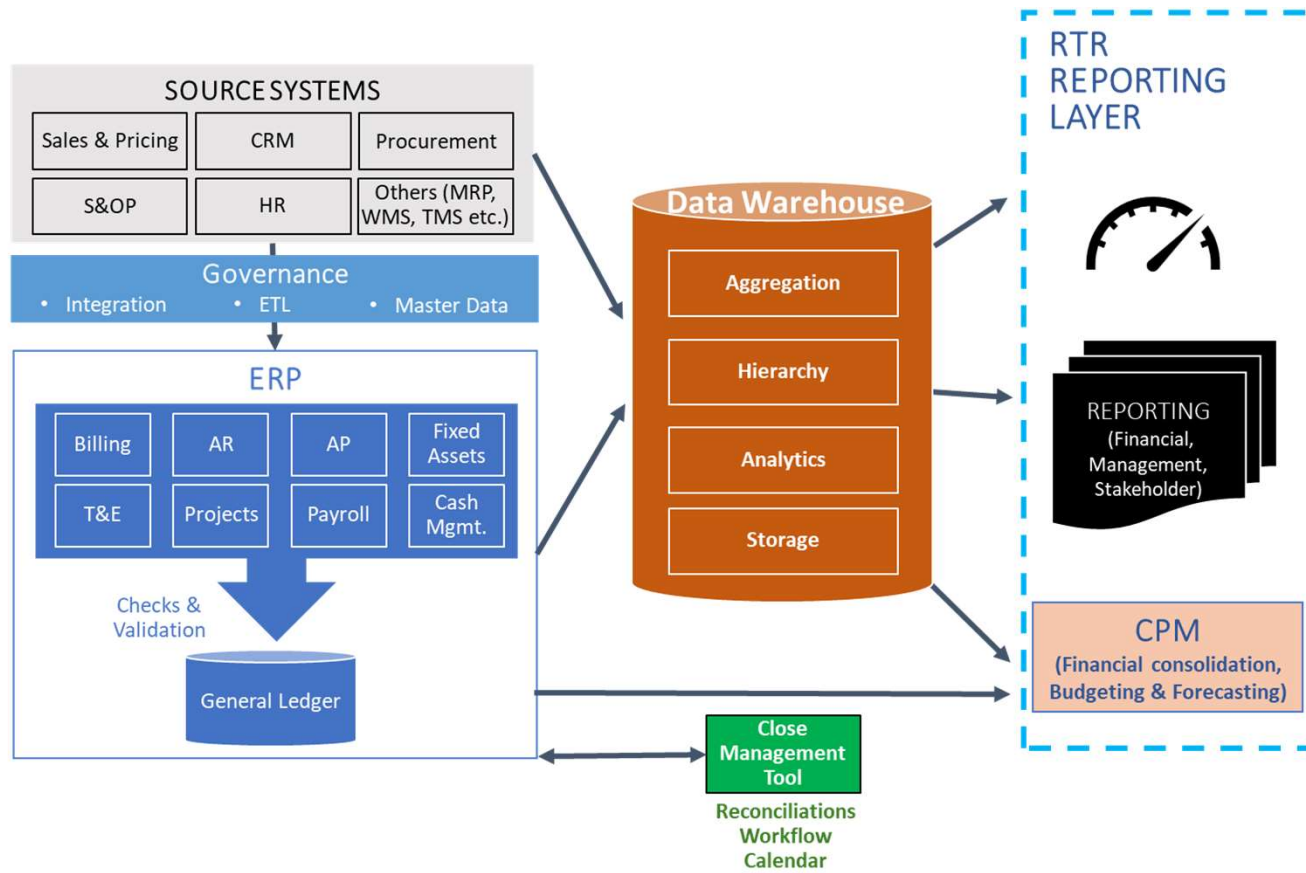
Monitoring Activities

- Ongoing evaluations of the internal control components and business processes
- Formal evaluation of findings & communication of deficiencies



Internal controls can be designed to detect most reporting issues, but that level of assurance can be too costly of an impact of 4 primary business drivers





RTR Technology Solutions Architecture

RTR Technology Solutions

| | | |
|--|---|--|
| Technology Solution: | OneStream | |
| Focus Area of Solution: | Period Close Management, Account Reconciliation, Consolidation, Financial Reporting | |
| Capabilities: | | |
| <ul style="list-style-type: none">• Period close workflows and task status in dashboards• Execute automated GL account reconciliations and store audit ready documentation• Drill down from financial statement lines into account reconciliations | | <ul style="list-style-type: none">• The solution is built for consolidation and reporting so there is no need to separately load data just to complete account reconciliations• Pre-built interfaces to major ERP systems to support seamless financial report creation• Centralized consolidation tool• Centralized financial reporting tool |

Background on course content providers

About APQC:

- APQC helps organizations work smarter, faster, and with greater confidence. It is the world's foremost authority in benchmarking, best practices, process and performance improvement, and knowledge management. APQC's unique structure as a member-based nonprofit makes it a differentiator in the marketplace. APQC partners with more than 500 member organizations worldwide in all industries. With more than 40 years of experience, APQC remains the world's leader in transforming organizations.

About Peter Fazio:

- Peter Fazio is a finance and accounting professional with over 20 years experience as an SVP of Finance, Controller, External Auditor and Management Consultant. He has led several finance transformation projects at large global corporations across Asia, Europe, and North America. He is also an adjunct professor of accounting at a leading university in New York.