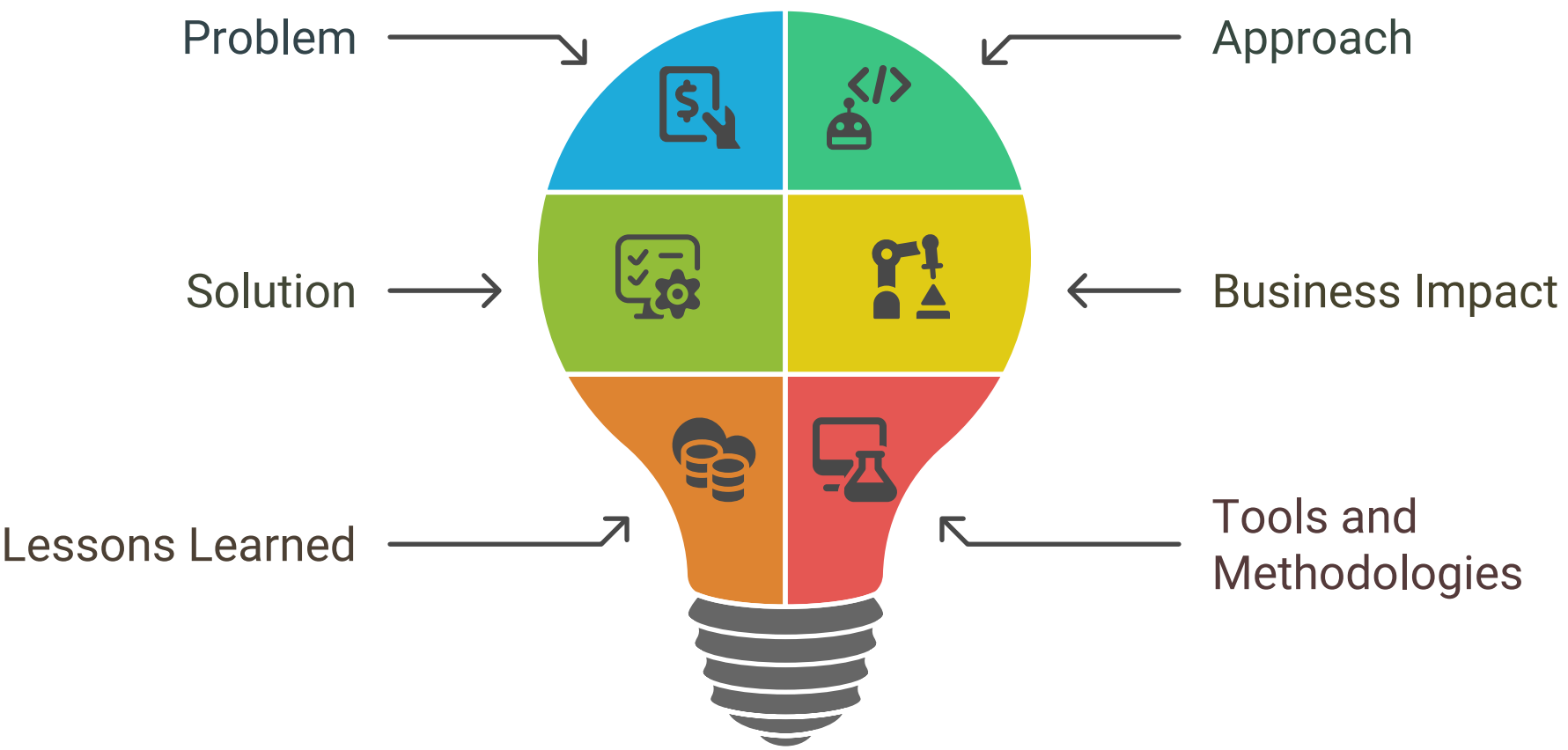


Exception-Driven Invoice Dispatch Automation: A Case Study

This document details a successful project where business analysis principles and VBA scripting were leveraged to automate a self-bill invoice processing and supplier dispatch workflow. The project, implemented in a high-volume finance operation, resulted in a significant reduction in manual effort, saving over 15 hours per week. The case study highlights the problem, approach, solution, business impact, lessons learned, and the tools and methodologies employed.

Overview of Invoice Automation Project



Context

In a fast-paced finance department, the distribution of self-billed invoices to over 550 suppliers was a weekly manual undertaking. Each email contained Excel and PDF attachments linked to voucher IDs, necessitating validation before dispatch. The process involved manually sorting emails, matching SSRS reports, handling exceptions, and dispatching to suppliers via Outlook. This consumed more than 15 hours of Business Analyst [BA] time each week.

Problem Statement

The existing manual process was riddled with inefficiencies and risks:

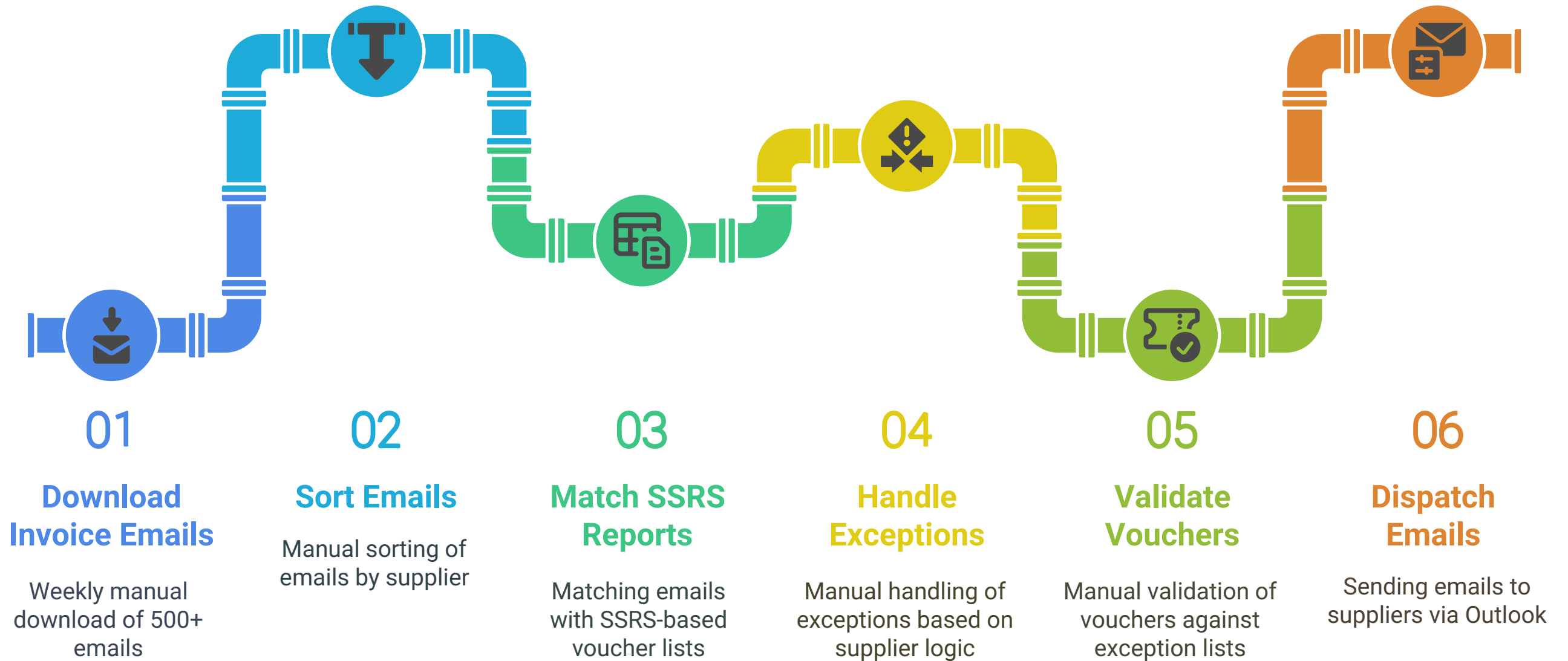
- **Manual Download and Triage:** Weekly manual download and sorting of 500+ invoice emails.
- **SSRS Dependency:** Reliance on SSRS-based voucher lists for checklist creation.
- **Lack of Exception Rules:** Absence of defined rules for flagging exceptions [accepted vs. rejected].
- **Manual Exception Handling:** Manual exception handling based on supplier-specific logic.
- **High Error Risk:** Elevated risk of errors and delayed payments.
- **Resource Drain:** Significant BA time spent, hindering strategic initiatives.

Constraints

The project faced several limitations:

- **No API Integration:** No API or direct integration between Outlook, SSRS, and Excel.
- **No Third-Party Tools:** Restrictions on using third-party tools due to governance policies.
- **Undefined Exception Logic:** Vague and manual exception handling procedures.
- **Manual Voucher Validation:** Manual validation of vouchers against exception lists.
- **Tight Timelines:** Strict deadlines for dispatch to avoid payment delays.
- **BA-Led Design:** Requirement for a BA-led design without direct tech team dependency.

Manual Invoice Distribution Process

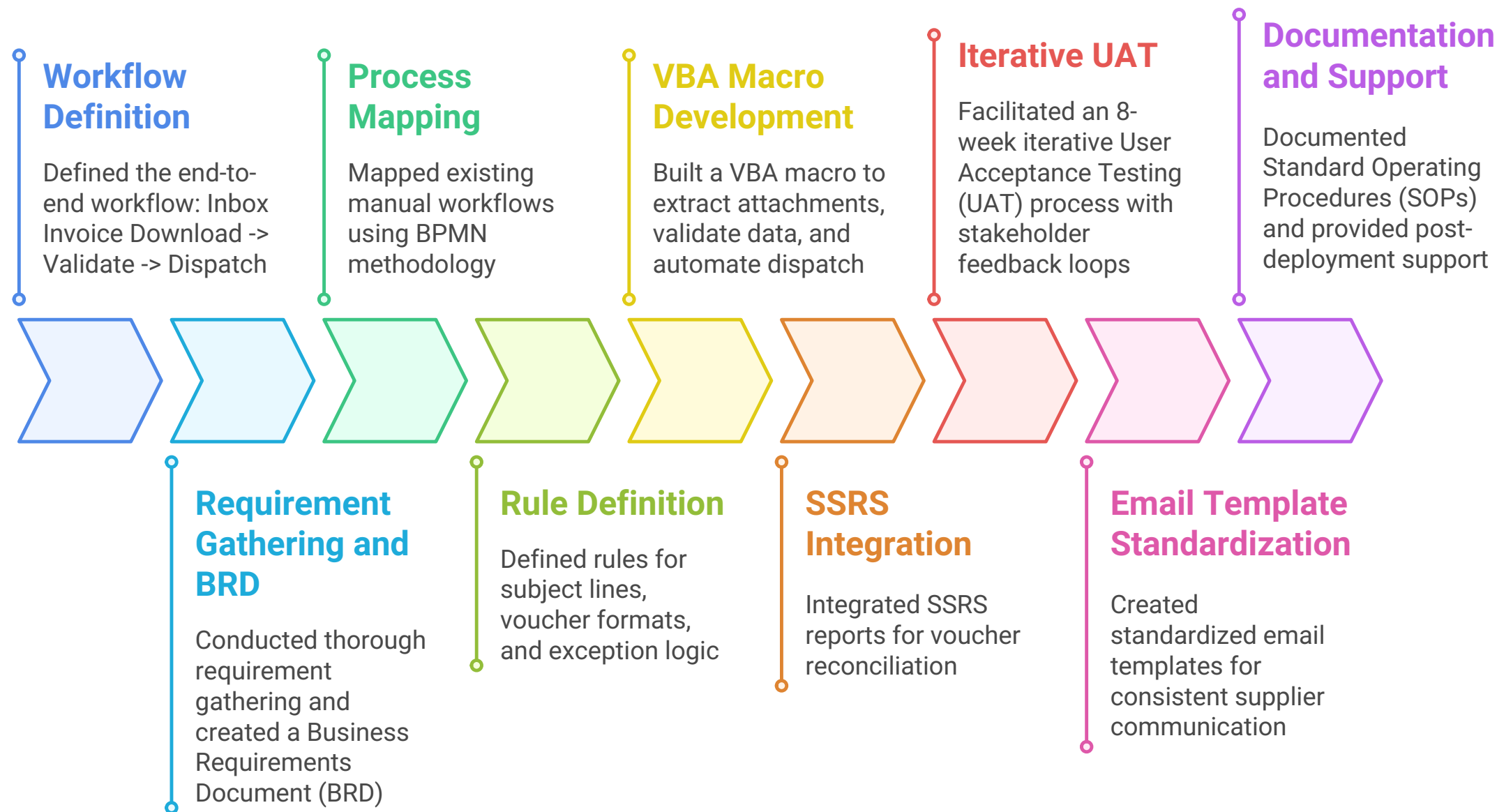


Approach

The project followed a structured approach:

1. **Workflow Definition:** Defined the end-to-end workflow: Inbox Invoice Download -> Validate -> Dispatch.
2. **Requirement Gathering and BRD:** Conducted thorough requirement gathering and created a Business Requirements Document [BRD] for the entire process.
3. **Process Mapping:** Mapped existing manual workflows using BPMN [Business Process Model and Notation] methodology.
4. **Rule Definition:** Defined rules for subject lines, voucher formats, and exception logic.
5. **VBA Macro Development:** Built a VBA macro to extract attachments, validate data, and automate dispatch.
6. **SSRS Integration:** Integrated SSRS reports for voucher reconciliation.
7. **Iterative UAT:** Facilitated an 8-week iterative User Acceptance Testing [UAT] process with stakeholder feedback loops.
8. **Email Template Standardization:** Created standardized email templates for consistent supplier communication.
9. **Documentation and Support:** Documented Standard Operating Procedures [SOPs] and provided post-deployment support.

Project Execution Timeline: From Definition to Support



Solution Overview

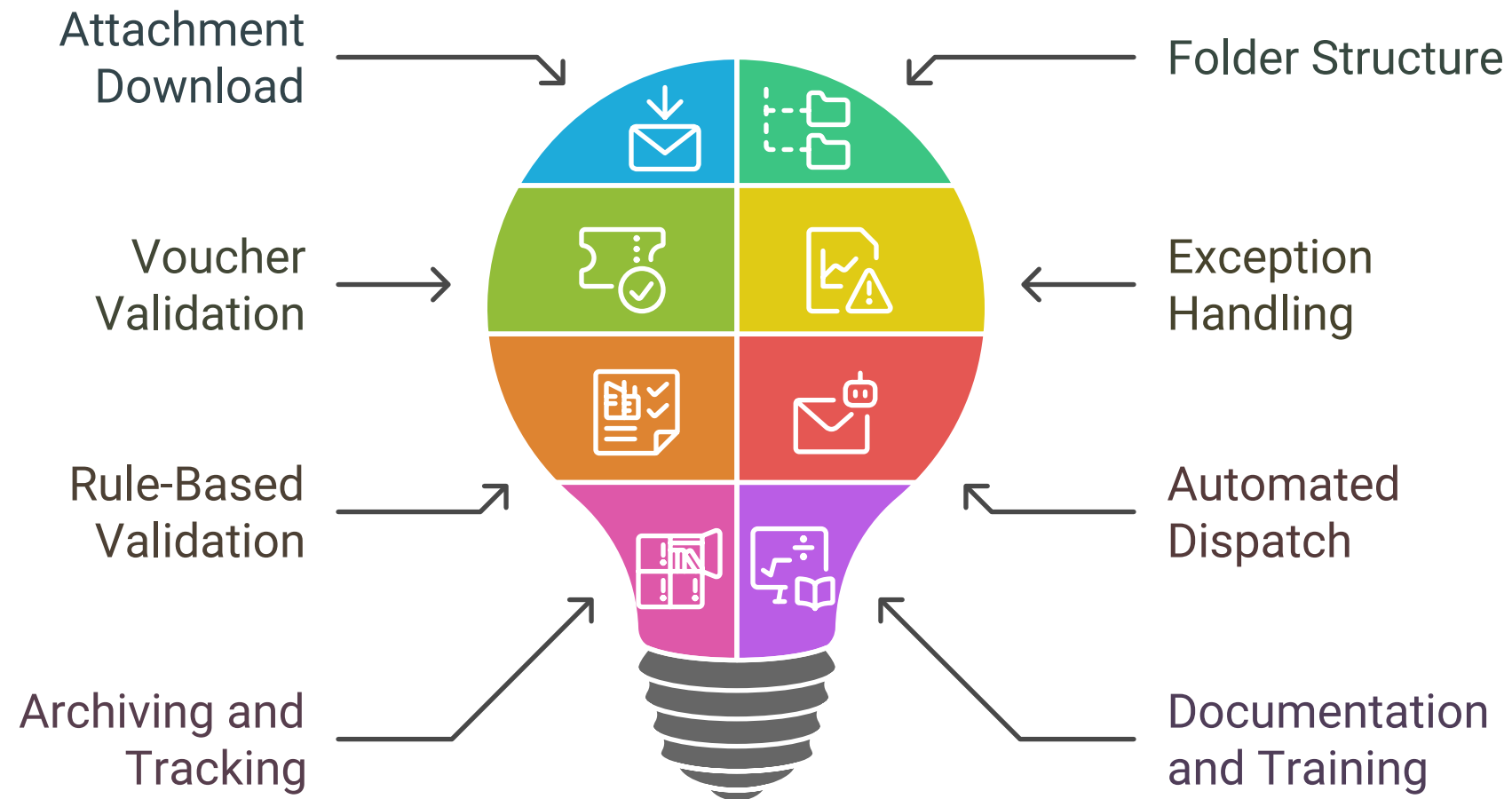
The implemented solution automated key aspects of the invoice dispatch process:

- **Automated Attachment Download:** Automated download of invoice attachments from the Outlook mailbox.
- **Automated Folder Structure:** Automatically generated folder structure to store invoices.
- **Voucher Validation:** Validated voucher numbers against the SSRS list.
- **Exception Handling:** Cross-checked invoices with the exception list to mark them as accepted or rejected.
- **Rule-Based Validation:** Applied rule-based validation using subject line patterns and voucher criteria.
- **Automated Dispatch:** Automated dispatch of accepted invoices to 550+ suppliers using Outlook macros.
- **Archiving and Tracking:** Archived sent invoices and tracked weekly completion status.
- **Documentation and Training:** Documented SOPs and trained users for a smooth rollout.

Automated Invoice Dispatch Process



Streamlining Invoice Dispatch

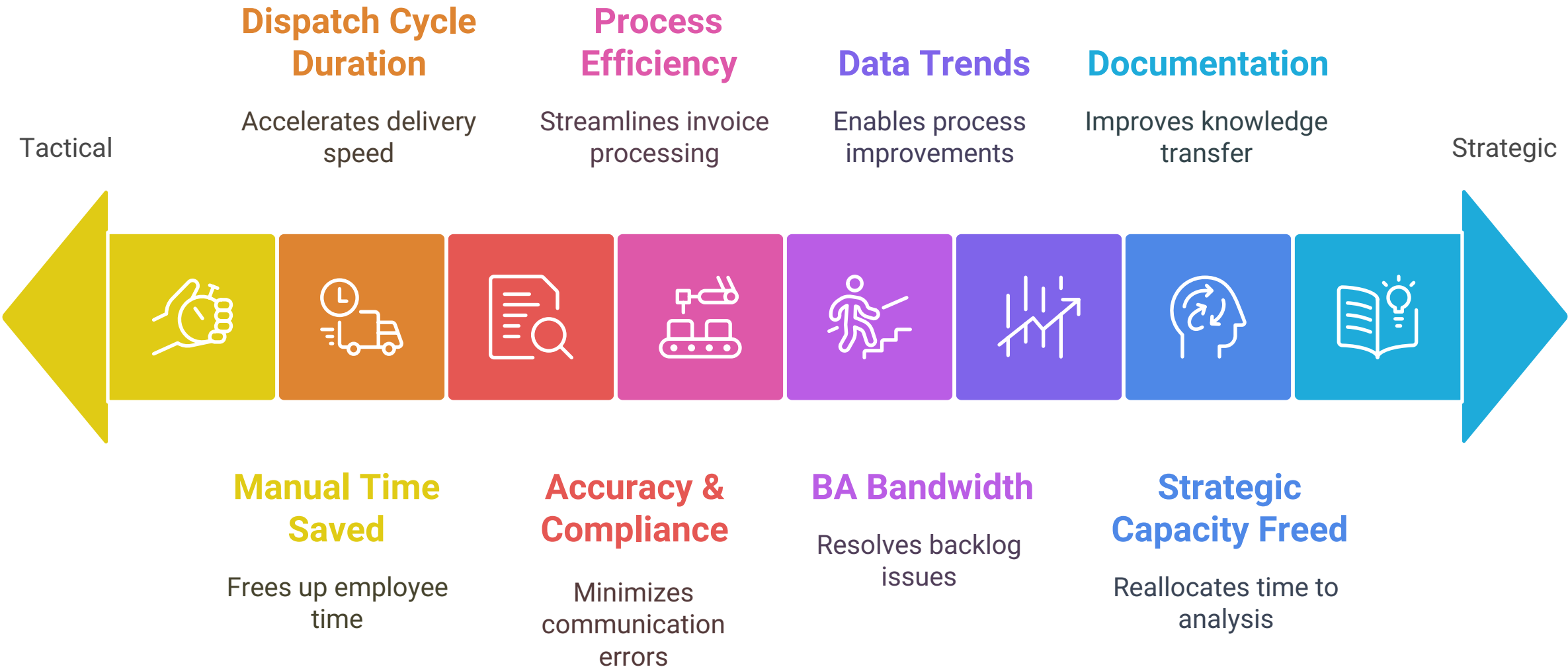


Business Impact

The automation project delivered significant business benefits:

Area	Result
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Manual Time Saved	15+ hours/week (equivalent to 0.4–0.5 FTE)
Dispatch Cycle Duration	Reduced from 5–7 days/week → 1 day/week
Accuracy & Compliance	Reduced manual errors in supplier communication
Strategic Capacity Freed	BA time reallocated to backlog clearance and trend analysis
Process Efficiency	Standardized invoice flow and reusable logic framework
BA Bandwidth	Enabled time for backlog resolution
Data Trends	Enabled supplier trend and process analysis
Documentation	Improved handovers via SOPs

Automation impact ranges from tactical to strategic improvements.

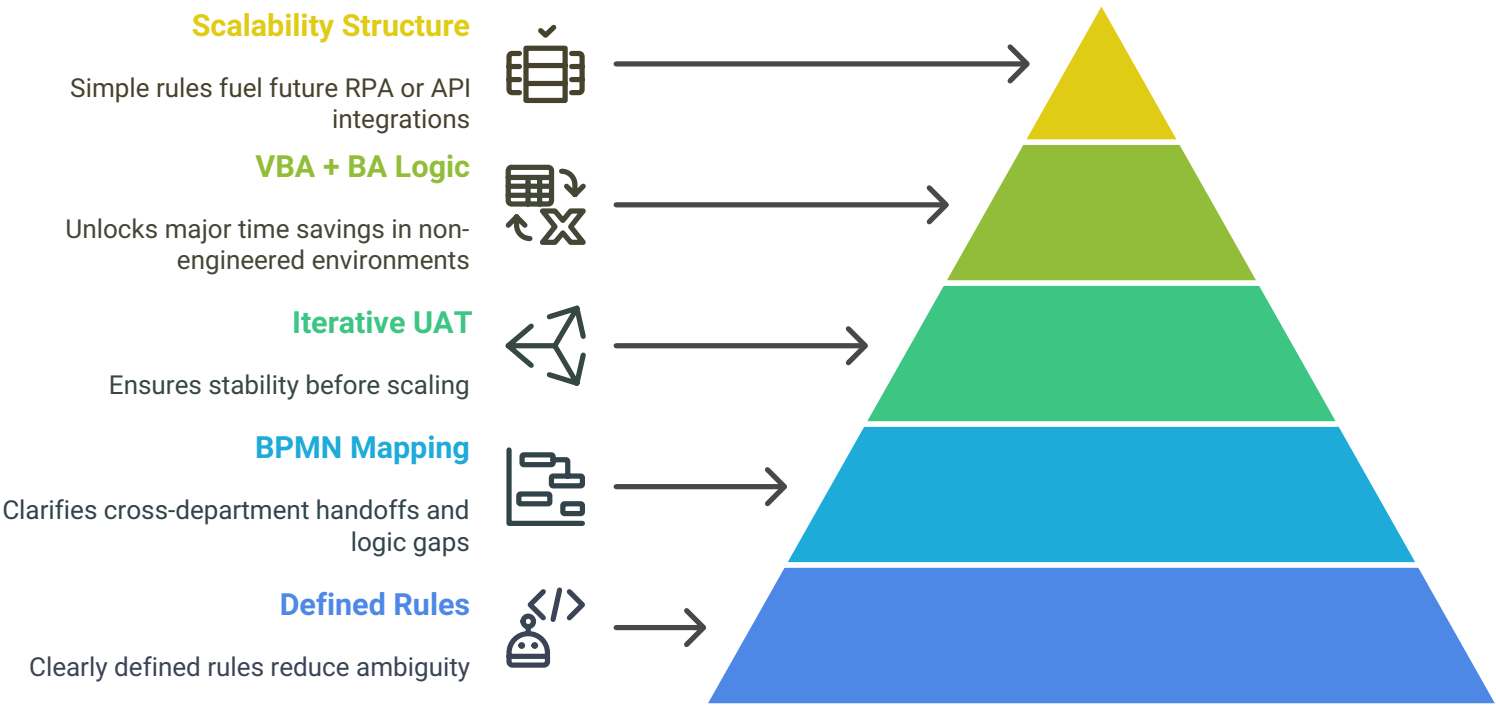


Lessons Learned

The project yielded valuable insights:

- **BA-Led Automation ROI:** BA-led automation delivers strong ROI even in low-code environments.
- **Importance of Defined Rules:** Clearly defined rules at the email and voucher level reduce ambiguity.
- **Subject Line Standardization:** Standardized subject line rules dramatically improved automation accuracy.
- **BPMN for Clarity:** BPMN flow mapping clarified cross-department handoffs and logic gaps.
- **Iterative UAT:** Iterative UAT ensures stability before scaling, and early stakeholder feedback is essential for aligning automation with real-world scenarios.
- **VBA + BA Logic:** VBA combined with BA logic unlocked major time savings in non-engineered environments.
- **Structure for Scalability:** Simple rules can fuel future RPA or API integrations.

Automation Success Pyramid



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Tools & Methodologies Used

Automation Tools

- VBA Macros (Excel & Outlook Integration)
- SSRS (SQL Server Reporting Services) Data Extraction
- Excel for Rule-Based Exception Logic

BA Artifacts

- BRD & Process Documentation
- BPMN Workflow Modeling
- UAT Test Case Design & Execution
- Supplier Communication Templates
- Stakeholder Alignment & Feedback Loops
- Exception Handling Algorithm

This project demonstrates the power of combining business analysis expertise with readily available tools like VBA and SSRS to achieve significant efficiency gains in finance operations. The solution was built for efficiency and owned by Business Analysts, showcasing the value of BA-led automation initiatives.

Business Analysis and Automation Flowchart

