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Information Systems and
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GROUP ASSIGNMENT COVER SHEET

GroupID: W18A-43
Course: INFS3604
Tutorial time: Wednesday 6pm-8pm
Assignment Title: Team Case Study Part C
Due Date: 15/04/2024

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Process Improvement #1

Change	Change #1
Issue Addressed	<p>Issue 1</p> <p>Automation of form creation and approval, driving improved cycle time & profits</p>
Description of the change	<p>Employees should submit form directly to a “Review” section on procurement system, indicating is “recurring” order. Then, check to see if the order is recurring, for example, an identical stationary request every 3 months. If yes, automatic approval, otherwise continue. The system checks whether the request is a duplicate.</p> <ol style="list-style-type: none"> 1. If duplicated, system compares to previous request using BRMS. Acceptance/Denial sent. 2. Alternatively, if the request is brand new, the original process occurs.
Related Redesign Heuristics	<p><u>Task Elimination</u> – Submitting form directly to the system removes “Email (form) to Head”, and “Input requisition details” activities. Also correlates to Principle 1 in BPR, reducing cycle time and driving cost reduction (moodle).</p> <p><u>Resource Optimisation</u> – Through limiting a department head/manager’s interaction with duplicated requests, they’re able to focus time and effort on revenue generating tasks, producing the greatest value.</p> <p><u>Automation</u> – Using network technology to replace email forms, and complete forms directly on internal platform (Cisco, 2023). Furthermore, business rules technology to automate process for duplicated requests, where outcome is determined by the system as opposed to user input (IBM, 2024).</p>
Feasibility of this change	<p>Highly Feasible</p> <p>Technical: No additional hardware requirements (Kosinski, M. 2021). Use existing procurement system but extend capabilities to include an “Under Review” section, and employ business rules technology to facilitate automation.</p> <p>Financial: Assuming Apec employs technical staff, no additional cost. Would need to purchase business rule management software along with any onboarding/maintenance costing anywhere between \$20,000 - \$100,00 based on requirements (SoftwareSuggest, 2024). Benefits outweigh the costs, given a conservative savings of \$185,000 p/year.</p>
Evaluation	<p>Devils Quadrangle</p> <p><u>Time:</u></p> <p>Significant Improvement With approval of repetitive forms being automated, the human element driving cycle time up is mitigated. Time taken for the entire process, or cycle time efficiency is greatly improved.</p> <p><u>Cost:</u></p> <p>Improvement Whilst there is an initial investment (discussed in feasibility), the cost in the long run is vastly better due to cost savings associated with repeated requisitions.</p>

Quality:

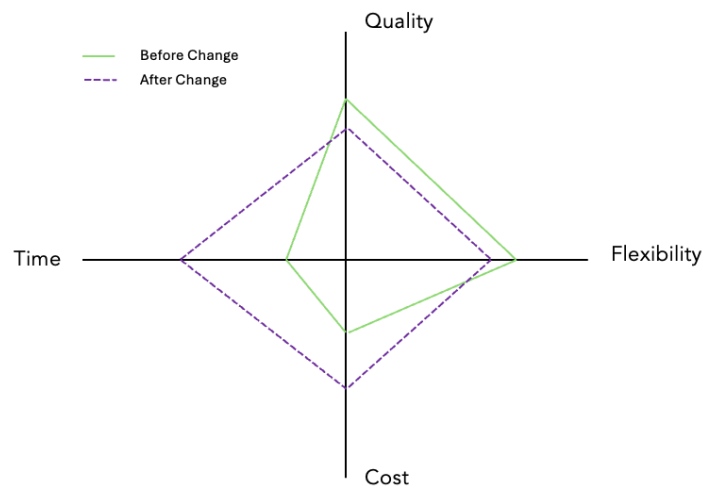
Slightly Lowered

Business rules around operational needs/budget are established, therefore limited impact on quality. However, due to lower flexibility as managers have limited input regarding duplicate form submissions, there might be minor issues.

Flexibility:

Slightly Lowered

Whilst automation & task elimination have reduced workload and improved efficiency, managers have reduced judgement on repeated requisitions. As a result, there's less flexibility to react to those form submissions.



Process Improvement #2

Change	Change #1
Issue Addressed	<p>Issue 2</p> <p>Filtering and applying greater weight towards ESG to achieve 60% of preferred suppliers above 65/100 rating.</p>
Description of the change	<p>If preferred suppliers provided, only accept the suppliers which are above 50. In the instance the preferred suppliers ESG rating is below 50 then research external directories for new suppliers in which their ESG is 65 or above.</p> <p>Using the simplified concept of having weights to environment, social and governance (ESG Score Meaning 2024), same can be applied to show ESG is prioritised above other factors such as price, quality and delivery times. E.g. 35% ESG, 25% price, 20% quality, and 20% delivery time.</p>
Related Redesign Heuristics	<p><u>Control addition:</u> Quantifying the supplier ESG criteria in the supplier evaluation process guarantees that environmental and social governance are included in the procurement process.</p> <p><u>Knock-out:</u> By setting a threshold ESG rating for supplier selection, we minimise uncertainty and expedite the decision-making process by eliminating suppliers that do not meet standards.</p>
Feasibility of this change	<p>Highly Feasible</p> <p>Technical: No new hardware or software would be required assuming APEC electronic has an existing supplier database. However, the database would need to be extended to incorporate supplier ESG ratings with APIs and data import mechanisms to ensure ratings are updated without manual intervention.</p> <p>Financial: Assuming Apec Electronics employs technical staff and has an existing database to store preferred supplier records, the maintenance cost to run and manage the system would be \$60,000 annually (Winn, 2023)</p> <p>Organisational: Apec would need to revise its procurement policies to formally incorporate ESG ratings. This would affect its supplier selection criteria which may impact their existing supplier relationships.</p>

Evaluation

Devils Quadrangle

Time:

Slightly Lowered

The company may experience a period of adjustments initially, as it researches and evaluates new suppliers as well as establishes supplier relationships. This phase may temporarily extend procurement times but would ensure sustainability criteria are met in the long run.

Cost:

Slight Improvement

Despite initial costs, operational efficiencies and waste reduction of higher ESG-rated suppliers will lead to long term cost saving (Zuno 2024). Furthermore, “(numerous) studies find a positive relationship between ESG ratings and financial performance”, driving improvements (Lucy 2022).

Quality:

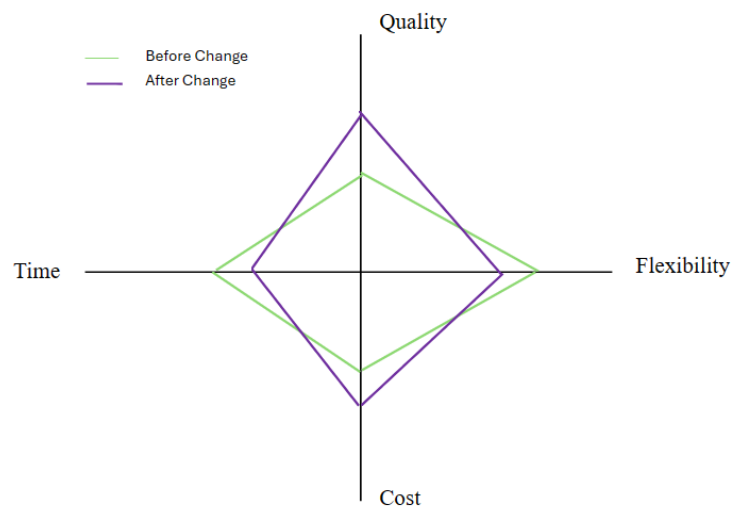
Improvement

Quality would be improved as higher-rated suppliers would reflect better on Apec Electronics' brand reputation.

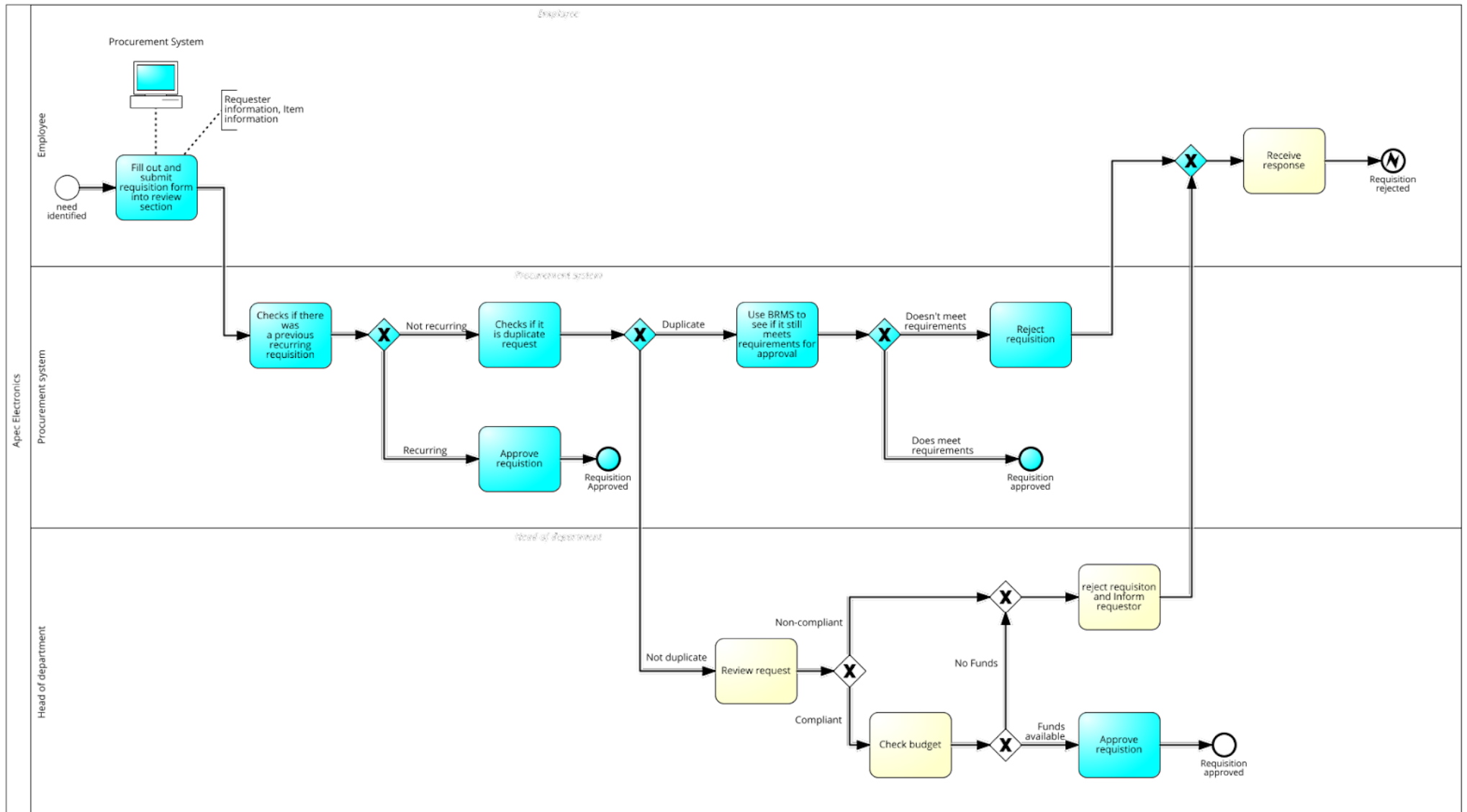
Flexibility:

Slightly Lowered

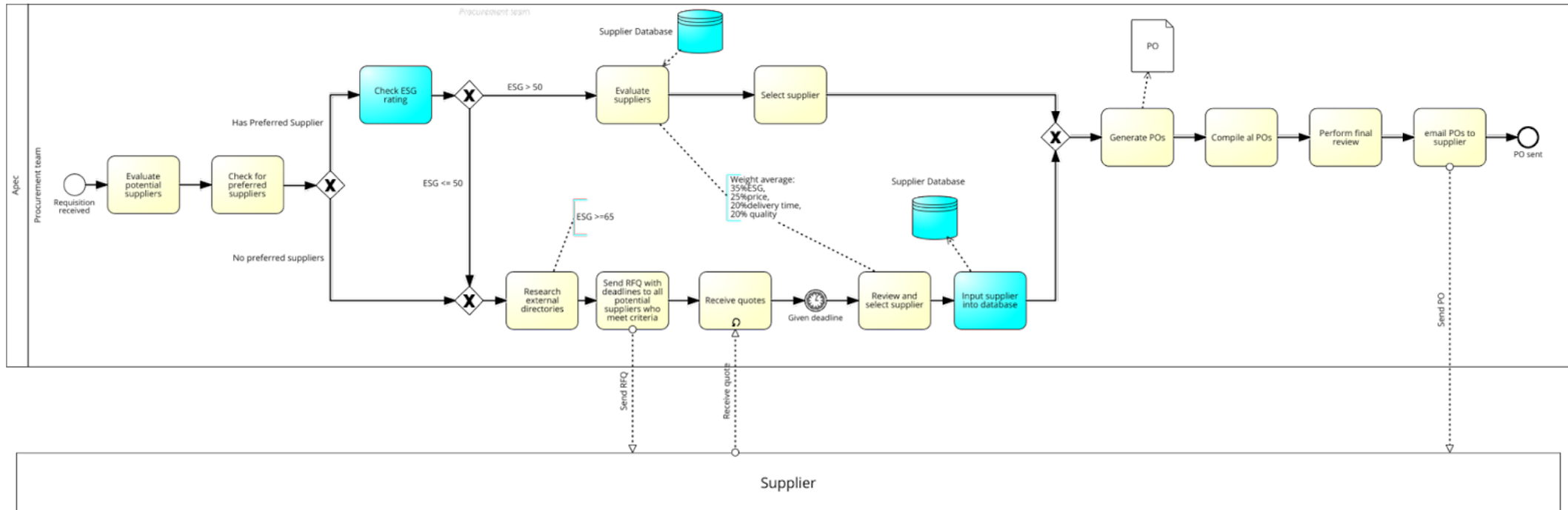
The selection of suppliers may become less flexible initially due to adherence to the ESG criteria. However, in the long run, implementing ESG standards will position Apec to meet regulatory requirements, as well as industry expectations.



Fill in and approve Requisition – TO-BE Model



Select Supplier & Generate PO – TO-BE Model



Assumptions

- Change 1 - Orders are only marked as “recurring” by employees if the overall cost is relatively low. Even if an order is known to occur every month, it’ll only trigger as “duplicate” if high cost given employees should not make the executive decision to order without review.
- Change 2 - We assume that existing contracts with suppliers whose ESG are less than 50 will not be terminated, however they will not be considered for future contracts if there ESG remains lower than 50.
 - It is also assumed that Apec Electronics has an existing database system for its suppliers.

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