**Interview with Nicholas Lee, CEO of EZ-Link**

**25 October 2023**

**Interviewers:**

Ruchir Pande

Alamae Gan

**Facilitator:**

Brian Chng

|  |  |  |
| --- | --- | --- |
| **No.** | **Question** | **Answer** |
| 1 | How will ABT and CRM feature in EZ-Link’s strategic business goals in the next 1 to 3 years? | * ABT & CRM are viewed as core pillars and with the move from offline to online system, both systems are expected to serve a large majority of Singaporeans – 2.7 – 2.8 million users * As ABT information of users is stored in CRM, this would enable EZ-Link to develop products and services based on the data to better serve the public commuters * One of the strategy for ABT is to transform interactions with users – from payments to an ecosystem of services (e-commerce, rewards, merchants, microservices) * Immediate and short term goals: Resiliency of systems – Security & Operational |
| 2 | What are the current short and mid-term goals or milestones that have been planned for EZ-Link’s business where ABT and CRM are involved in these milestones? | * Today: 50-50 split of users on ABT & CBT * 2024: 100% ABT for adult users and CBT will be phased out * 2030: 100% ABT for concession pass holders |
| 3 | From 1 – 5, 5 being the best, how would you rate your IT teams’ technical skills & competencies in managing & supporting the ABT & CRM systems?  From 1 – 5, 5 being the best, how would you assess your IT teams’ ability to adapt to changing circumstances and solve issues/incidents related to ABT and CRM systems? | * CRM managed by AvePoint – 5-year contract * ABT is heavily reliant & dependent on CRM * IT Ops: 2/5   + Potential resistance to upskill, lack of resources & leadership capability   + Playing catch up with TDG   + Although reactive, have implemented enhanced monitoring measures after past incidents * TDG: 4/5   + Generally doing a good job, but unsure of what they do not know. |
| 4 | From 1 – 5, 5 being the best, how would you assess your IT teams’ collaboration across the organisation to manage and respond to issues or incidents related to ABT and CRM systems? | * Low 3/5 * Cohesiveness can be improved across TDG and Infra teams especially when it comes to resolving issues * PMO has stepped in to serve as a neutral party during discussions where both TDG and Infra have different view points * EZ-Link currently working in an agile manner, but are inhibited by many protocols by IT Ops team (e.g., IT Ops unable to provide TDG with access even though there is a requirement for fast deployment) |
| 5 | From 1 – 5, 5 being the best, how would you rate the current maturity of your processes for managing ABT & CRM systems?  From 1 – 5, 5 being the best, how would you assess controls and risk management based on the level of oversight and governance in place for ABT and CRM systems? | * Overall 3/5 * Incident management is good – retrospective process after each incident (documentation of what happened, good and bad points, areas for improvement, root cause & resolution)   + Yearly review of process * Change management (proper risk reviews & governance, not only design) is poor   + There is a need to ensure change management processes align with agile ways of working (e.g., currently, there is no proper review processes) * Additional question: Agility in terms of execution is 4/5 (but no proper processes to cope with high agility) |
| 6 | From 1 – 5, 5 being the best, how would assess level of automation in the current deployment or change management process? | * 3/5 – there is ambition from TDG to automate but blockers are from IT Ops |
| 7 | From 1 – 5, 5 being the best, how would you assess the effectiveness of the incident management and resolution process in supporting ABT and CRM systems? | * 3.5/5 (elaborated in 3 & 5) |
| 8 | From 1 – 5, 5 being the best, how would you assess the maturity of the technology stack currently powering the ABT and CRM systems? | * 4/5 (Nic mentioned changed from Docker to ATS) * When asked what would make it a ‘5’, Nic replied that he would check on use of APIs for calls & checks??? * How the design of microservices can be more modular * He mentioned that team currently uses a certain tool to do code refactoring |
| 9 | From 1 – 5, 5 being the best, how would you assess the current DR or recovery plans of the current ABT and CRM systems? | * On-prem DR – 4/5 * Cloud DR – currently relooking at the plan. With the recent incidents, have to consider what is the acceptable level of risk even with a multi-cloud strategy? |
| 10 | From 1 – 5, 5 being the best, how would you rate the effectiveness of the current vendors managing and maintaining the ABT, CRM and Azure, and are there any areas that can be improved on? | * 4/5 (F point management of CRM) * Metrics for success of vendors: SLA & responsiveness |
| 11 | From 1 – 5, 5 being the best, how would you rate the cyber or security resiliency of the current ABT and CRM systems? | * 4/5 Ratings are based on audit findings by KPMG & Microsoft * Unsure of team’s readiness & capability to respond as they have not experienced a cybersecurity breach * To find out more from working team about outcome of tabletop exercise |