Transforming Corporate Shared Services in Singapore

DENNIS LUI
CHIEF EXECUTIVE, VITAL SHARED SERVICES
MINISTRY OF FINANCE

June 2023

AT A GLANCE

VITAL shared services

~500 employees

Serving more than 100,000 public servants across more than 100 Government agencies

1,500,000 annual transactions

Overall service accuracy and timeliness of 99.9%

Overall service satisfaction of 94%

OUR KEY SERVICES

- HUMAN RESOURCE
- PAYROLL & CLAIMS
- LEARNING SERVICES
- PROCUREMENT
- TRAVEL MANAGEMENT
- FINANCE SERVICES

OUR ROLES

CENTRAL AGENCY FOR CORPORATE SHARED SERVICES

ROBOTICS AND AUTOMATION LEAD FOR CORPORATE & ADMIN SERVICES

OUR STAKEHOLDERS

Public Service Officers

VITAL interacts mostly with our Service Partners' HR and Finance teams, with *some* direct interactions with public officers, e.g. signing of letter of appointment, scholarship / training deeds, claims-related enquiries, etc.

Service Partners

Public Agencies served by VITAL

Ministries | **Statutory Boards** | **Organs of State**

Central Agency for Corporate Shared Services

VITAL shared services — *Robotics & Automation Lead for Corporate & Admin*

Policy-Ops-Tech Nexus

Partners

MOF Ministry of Finance Singapore; Public Service Division, Prime Minister's Office; AGD Accountant-General's Department; GovTech Singapore

Vendors, Industry Bodies, Academia, etc.

Policy / System Owners | **Non-public sector partners**

Agencies Using VITAL's Services

Departments and Organs of States (Slide 1 of 2)

Agencies Using VITAL's Services

Departments and Organs of States (Slide 2 of 2)

VITAL shared services

Singapore Police Force — Safeguarding Every Day

Singapore Prison Service

Ministry of Law — Insolvency Office — Singapore

Ministry of Law — Singapore

Ministry of Manpower

MND Singapore

Early Childhood Development Agency

MSF — Ministry of Social and Family Development

Ministry of Sustainability and the Environment — Singapore

Department of Statistics Singapore — Empowering You with Trusted Data

MTI — Ministry of Trade and Industry Singapore

Ministry of Transport — Connecting Singapore

Parliament — Singapore

CPIB — Swift and Sure

Elections Department Singapore

Prime Minister's Office Singapore

National Research Foundation — Prime Minister's Office Singapore

NSCS — National Security Coordination Secretariat

S&TPPO — Public Sector Science & Technology Policy & Plans Office — Prime Minister's Office Singapore

Public Service Division — Prime Minister's Office

Smart Nation Singapore

Strategy Group — Prime Minister's Office — Singapore

Majulah Singapura

Agencies Using VITAL's Services

Statutory Boards (Slide 1 of 2)

VITAL shared services

ACRA Accounting And Corporate Regulatory Authority

Agency for Science, Technology and Research Singapore

board of architects singapore

Building and Construction Authority

Central Provident Fund Board Singapore

CAAS Civil Aviation Authority of Singapore

Civil Service College Singapore

CCCS Competition & Consumer Commission Singapore

CEA Council for Estate Agencies

DSTA Defence Science & Technology Agency

EDB Singapore

Energy Market Authority Smart Energy, Sustainable Future

Enterprise Singapore

GRA Gambling Regulatory Authority

GovTech Singapore

Health Promotion Board

HSA Health Sciences Authority

HTX

Housing & Development Board

IMDA Infocomm Media Development Authority

Inland Revenue Authority of Singapore

IPOS International Intellectual Property Office of Singapore

ISEAS Yusof Ishak Institute

jtc

Land Transport Authority We Keep Your World Moving

Majlis Ugama Islam Singapura (Islamic Religious Council of Singapore)

MPA Singapore

MAS Monetary Authority of Singapore

NYP Nanyang Polytechnic

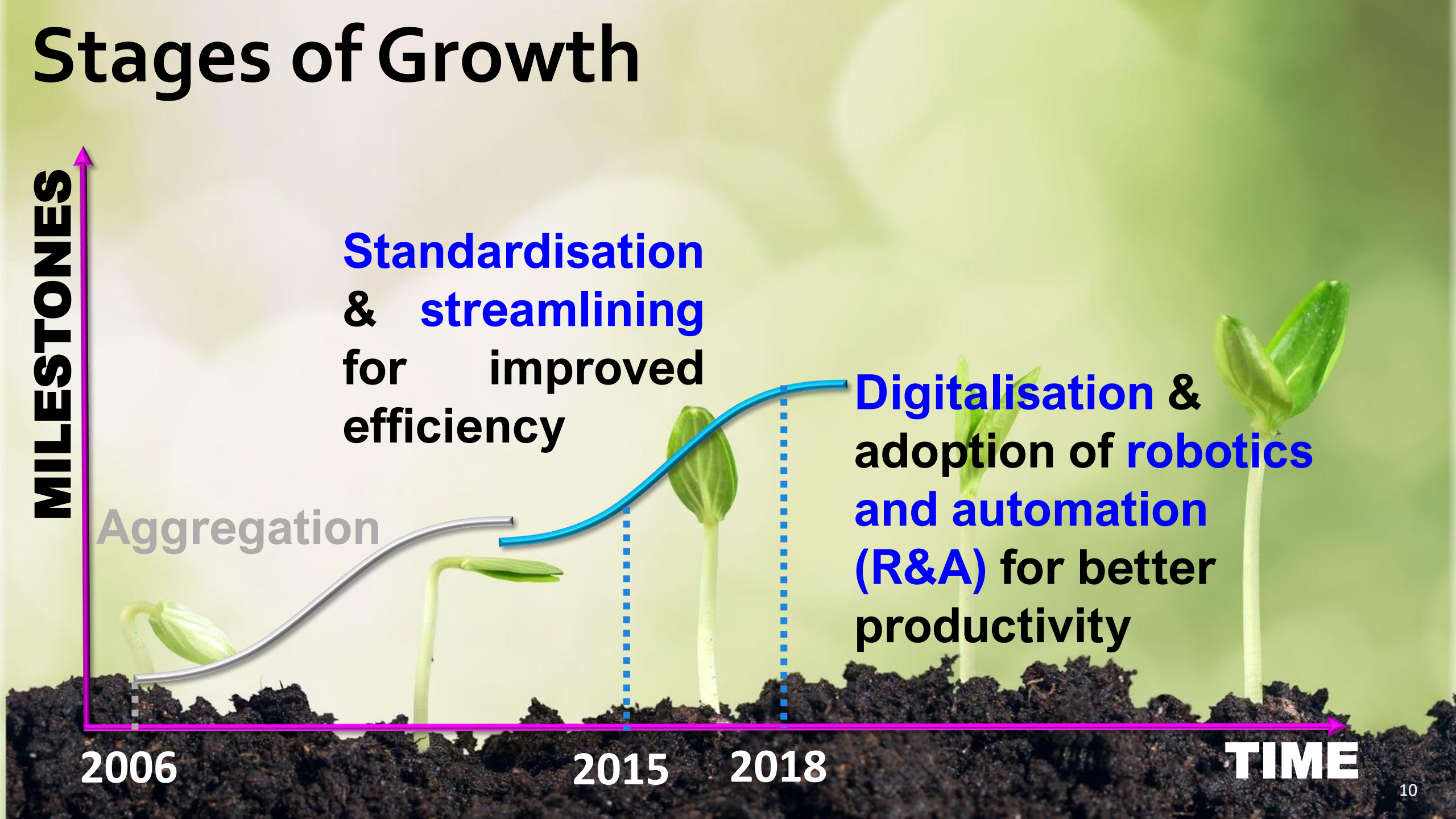
Agencies Using VITAL's Services

Statutory Boards (Slide 2 of 2)

The VITAL Story

Stages of Growth

Stages of Growth



Stages of Growth

PUTTING IT ALL TOGETHER...

VITAL shared services

Vision

A globally recognized leader in corporate shared services

Mission

To transform and deliver corporate shared services for the Singapore Public Service

Strategic Pillars

PEOPLE

Resize, ***reskill*** and ***reshape*** VITAL's workforce to *empower employees* to create value for stakeholders.

PLATFORM

Strengthen ***systems*** and ***structures*** to make VITAL an effective *ops-tech corporate services innovation* platform.

PARTNERS

Expand and cultivate VITAL's ***ecosystem of partners*** to *catalyse* and *facilitate* corporate services transformation across WoG.

Values

Visionary **I**nnovation **T**eamwork **A**gility **L**eadership

Public Service Values

Integrity **Service** **Excellence**

Tech in our 3 Strategic Pillars

RECAP: THE FUTURE

CLOUD FIRST

Aligned with Whole-of-Govt direction to draw on Cloud capabilities & solutions as part of wider transformation.

EXPLORATION

Exploiting emerging digital, data and automation technology to reinvent VITAL's service delivery & business model.

LEVERAGING CENTRAL PLATFORMS

Leveraging GovTech's Standard Products Suite, Data Science & Central AI products, SG Tech Stack and bulk tenders to expedite delivery.

LEARNING FROM THOUGHT LEADERS

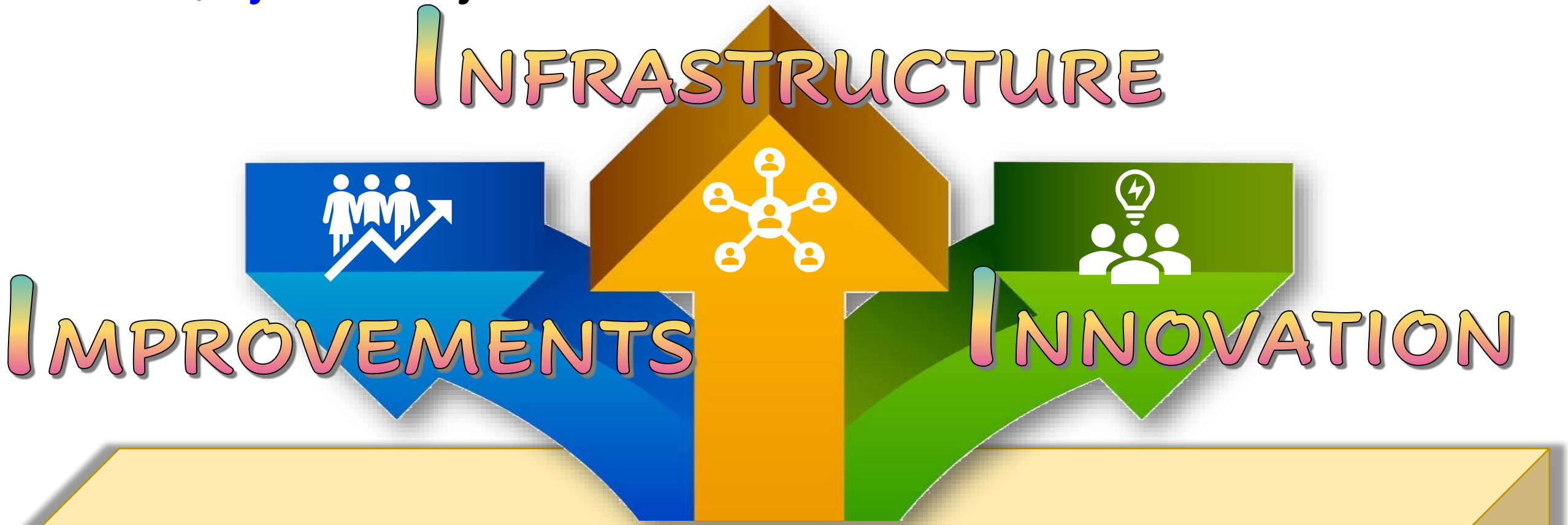
Actively seeking to learn and implement best practices from leading organisations in the private and public sector to VITAL.

Source: The Singapore Story, VITAL's Automation Journey
VITAL Shared Services Presentation October 2021

What does it mean for VITAL to become a Platform?

VITAL is a corporate services policy-ops-tech "innovation centre" staffed by VITALites equipped with the right skills, knowledge and attitudes, working closely with public and non-public sector partners to create value for our stakeholders

A Platform for …



FUNCTIONAL LEADERS & AGENCIES

VITAL shared services

NON-PUBLIC SECTOR PARTNERS

Enhancing VITAL's RPA Setup To Cloud Native Platform

2017-2018 | **2019-2021** | **2022 & beyond**

Localised RPA Setup
Individual Product Installation

No Orchestrator
(i.e. RPA control centre)

Studio & Attended Robot

Officers' Laptop/Desktop

Enterprise RPA Setup
Individual Product Installation

Orchestrator

Virtual Machine

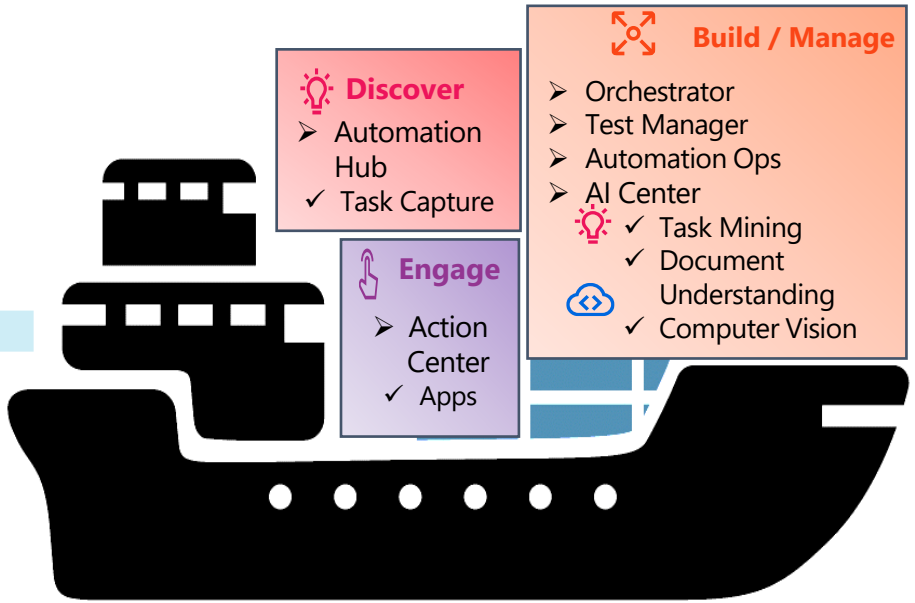
Connected and monitored by the Orchestrator in the Server room

Unattended Bots

Studio / Attended Robot

Officers' Laptop

Centralised RPA Cloud Native Setup
Automation Suite



Benefits

- Centralised Delivery of Corporate Shared Services
- Enable Compatibility and Compliance
- Enable Agility and Tech Exploration
- Reap Economies of Scale and Lower Barriers
- Facilitate Monitoring

Central Infrastructure

- *"automation-fueled transformation is a game changer for this era"*
- *Learn from the best practices in private sector*
- *Open to work with all suitable vendors/technologies*

Robert Enslin (He/Him) • 1st
Co-CEO UiPath
9h •

Like ERP in the '90s, the internet in the 2000s, and the cloud in the teens, #automation-fueled transformation is a game changer for this era.

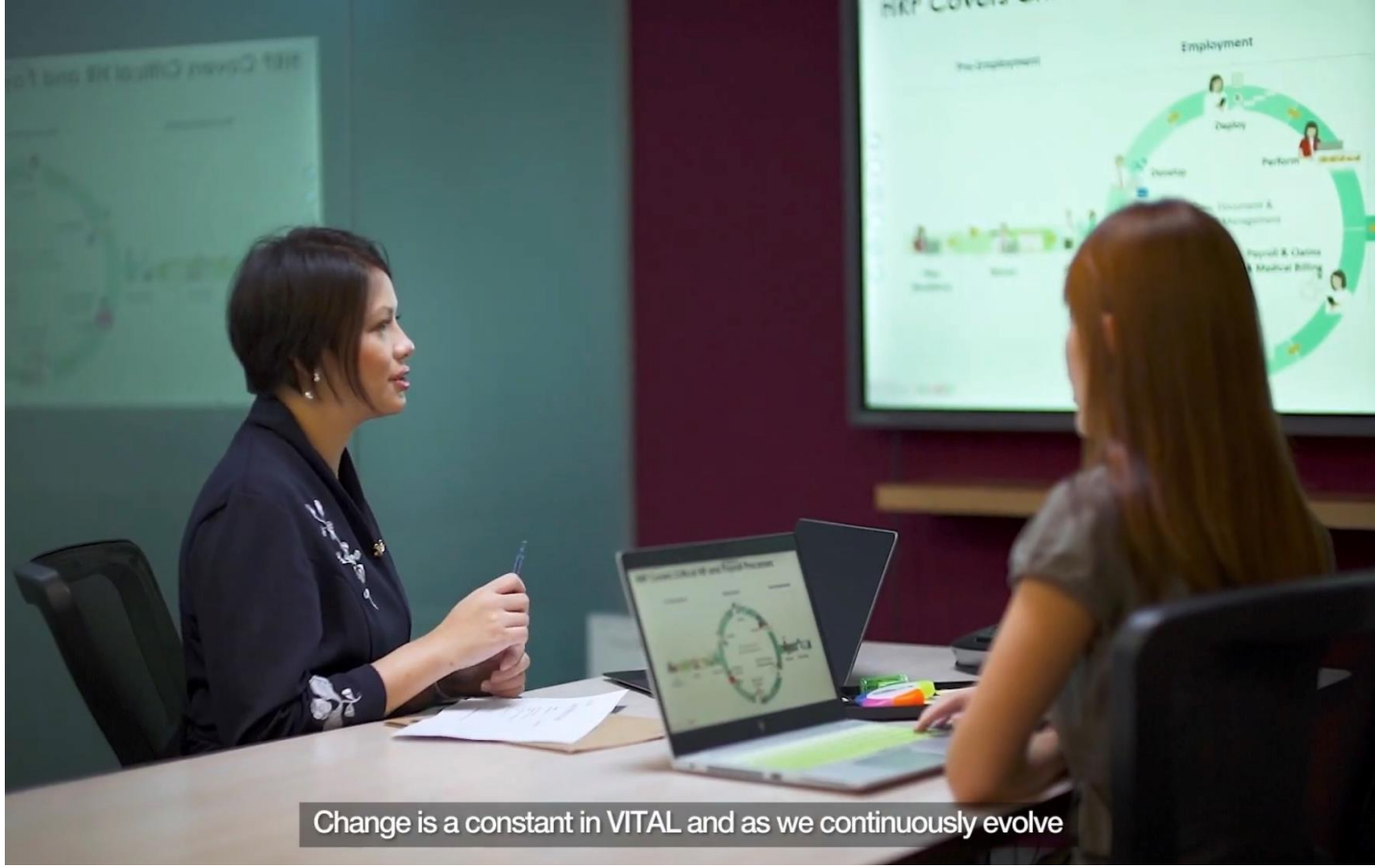
At our #UiPathFORWARD 5 event, customers like Dennis Lui, Chief Executive of VITAL (Ministry of Finance), James Furlong, VP of Supply Chain Management & Projects at PUMA Group, and Sidney Madison Prescott, MBA, Global Head of Intelligent Automation at Spotify spoke about the transformational outcomes their organizations have achieved with UiPath.

For example, at VITAL, Singapore Public Service's central agency for corporate shared services, automation has been the core of the organization's digital roadmap since 2017. Today, they employ over 100,000 people across 100 agencies and plan to give each employee "instant access to standardized, ready-to-deploy robots and solutions." Their growing number of citizen developers have been hard at work creating automations within the agency and have improved productivity by 66%.

This is just one example of how automation is shifting from a tool to a way of operating and a way of innovating – making work more enjoyable for everyone. More on my observations from my first UiPath FORWARD.

Building a Robust Ecosystem of Partners

From "Processors" of Transactions...



...to Corporate Services Professionals

Specialist Diploma in Data Analytics

Programme: **4 modules** spread over approximately **5 months**

8 days of classroom learning and 2 consultation sessions (30 mins per session) for each module

264 hours

Modules

- Programming for Analytics
- Data Visualisation and Storytelling
- Data Wrangling
- Descriptive Analytics

Robotics Process Automation

Design Thinking

Data Analytics

Uplifting and Upskilling our People!

Certificate in Data Analytics

Programme: **5 short courses** that culminate into a 2-day **Data Hackathon** over approximately **4 months**

2-day self-paced online learning for Mathematics course

3-day classroom learning and 1 consultation session (30 mins) for each of the remaining course

Data Storytelling & Design

Mathematics for Data Analytics

Programming for Analytics

Data Visualisation Primer

Business Concept & Insights

Data Hackathon (2-Day)

Courses

126 hours

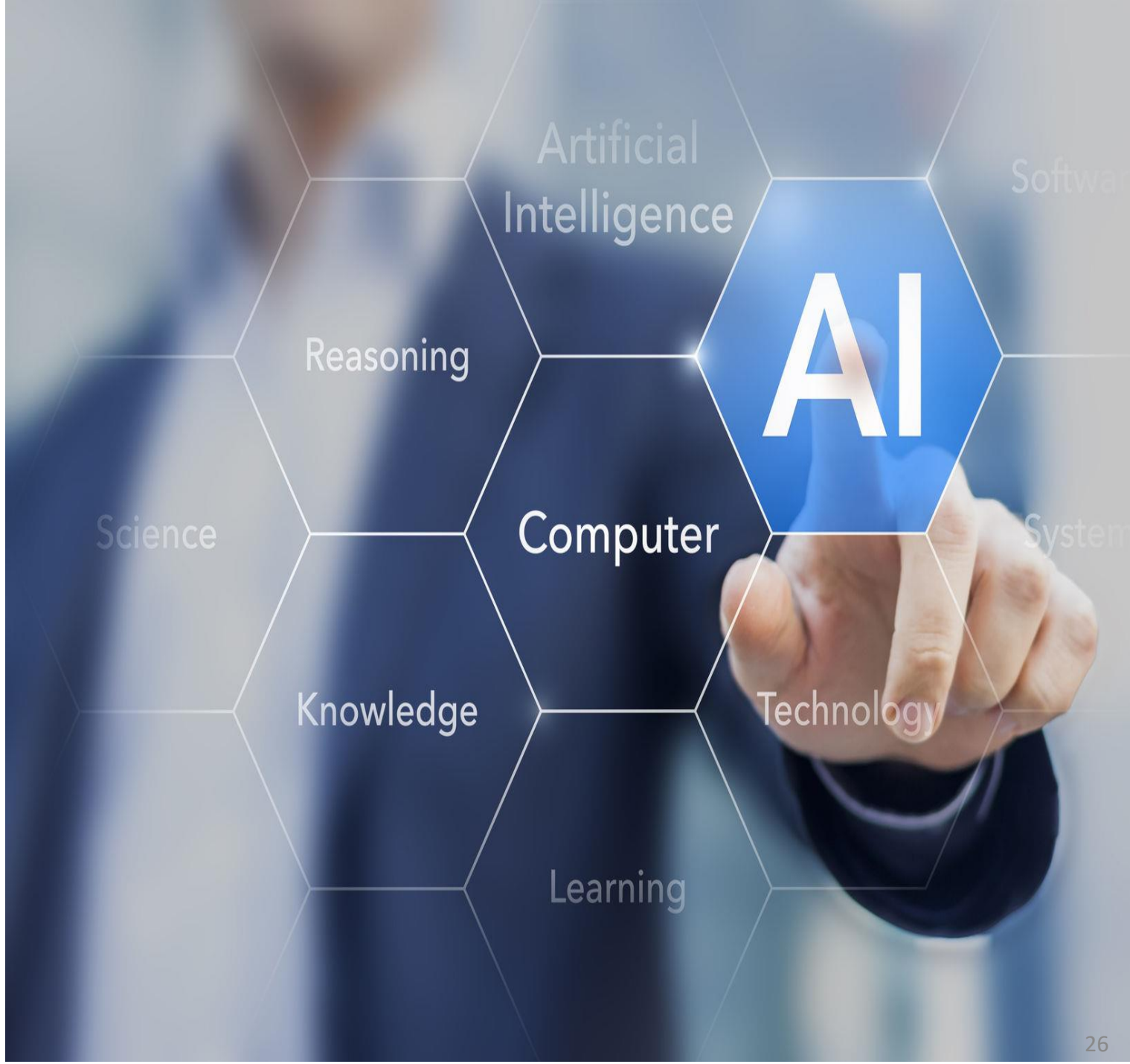
Robotics Process Automation

Design Thinking

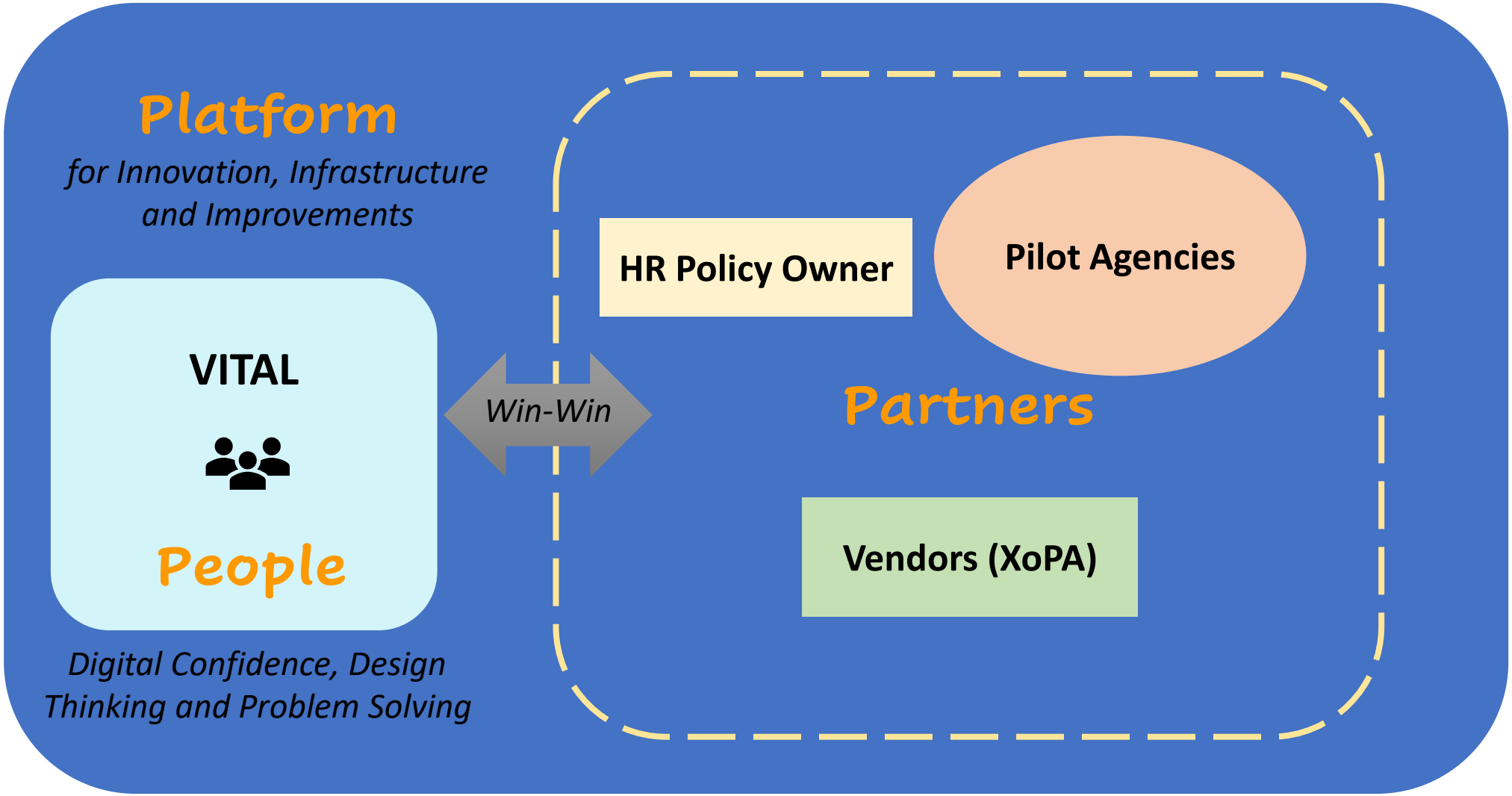
Data Analytics

Uplifting and Upskilling our People!

AI-Enabled Recruitment Pilot



Putting it all together
AI Recruitment Tech Pilot – A Case In Point



Background

Current Recruitment Landscape

Pressure to recruit faster and better quality candidates

- War for talent has never been fiercer
- Fastest offer wins

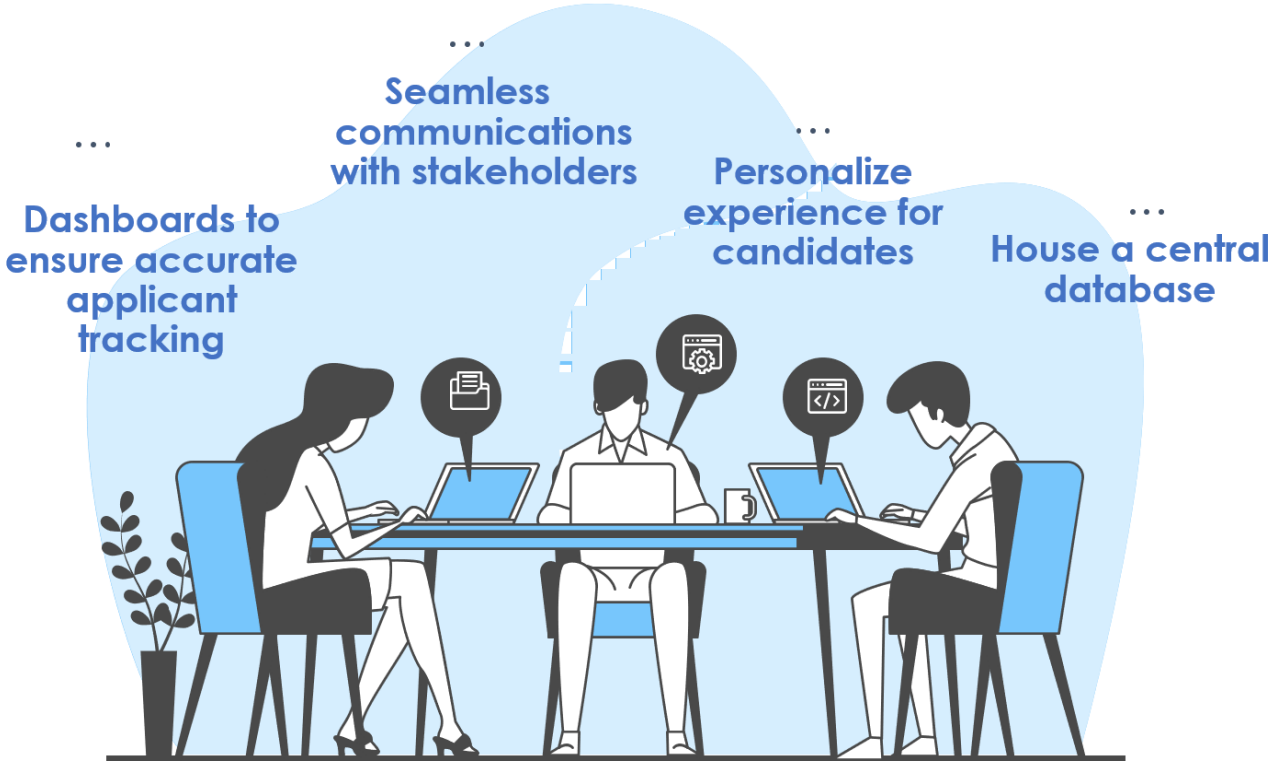
Hire and forget

- No centrally managed database of past/unsuccessful applications (which is an untapped pool of candidates for WOG agencies)
- Only look at candidates who have applied to a job

Happening in silos and lack technology adoption

- Lack of common database to facilitate information exchange across agencies
- Underutilisation of technology to facilitate the recruitment process and derive at the best match efficiently

What recruiters want in an AI-powered system



The Recruiter's Journey

1. Job Posting

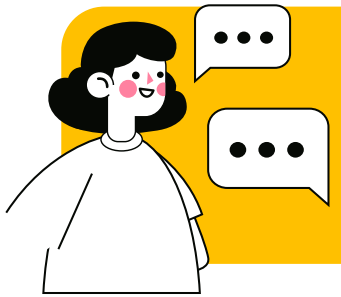
Posting on Careers@gov – HRP and Cumulus recruitment portal

2. Shortlisting

Finding the right candidate by manually combing through applications and resumes

3. Surface Resume

Shortlisted resumes are often passed to line managers for further evaluation



4. Interviews

Candidate undergoes various rounds of interview with different stakeholders

5. Screening

Conducting security, background and referral checks

6. Offer

Offer and negotiation of contract

The Recruiter's Painpoints

2. Shortlisting

Finding the right candidate by manually combing through applications and resumes

3. Surface Resume

Shortlisted resumes are often passed to line managers for further evaluation

- Shortlisting ranges from hours to days to complete due to sheer number of applicants
- Tedious to track and update candidate's status on separate tools (e.g. another ATS / sharepoint /excel)

4. Interviews

Candidate undergoes various rounds of interview with different stakeholders

5. Screening

Conducting security, background and referral checks

- Coordination with candidates and stakeholders for interview
- Lengthy and manual checks and clearance process

The Jobseeker's Journey

01

Create Account

On HRP – Careers@ Gov
On Cumulus – Workday Recruitment

02

Job Search

Apply search filters
Read JD and submit application

03

Wait

Continuously check for updates in HRP/Cumulus

04

Interview

Prepare for assessment and Interviews

05

Offer/Reject

Accept/reject on HRP/Cumulus and signing of letter of appointment if accept

The Jobseeker's Painpoints

01

Lack of Clarity

1. Unclear application status and timelines
2. Unclear reasons why they have been rejected

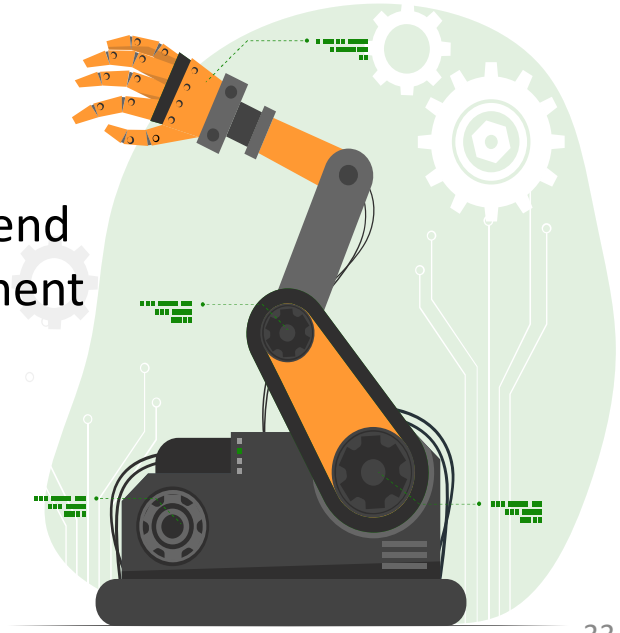
02

Uncertainty

1. Unsure if they are a good match
2. Unsure if they are considered for other suitable positions

VITAL Rising To The Occasion

- Agencies face similar challenges – the need to do more with less resources
- Demands of various departments and initiatives need to be prioritised
- Naturally adverse to transiting to shared services
  - Downsizing of agencies workforce
  - Reduction in agencies budget



- VITAL faces similar challenges, however we saw technology as a means to that end
- VITAL's culture of innovation and experimentation helps foster an environment where we are open to trying and failing
- Embarked on several pilots with an objective to streamline work processes
- Conducted pilots for **AI (XOPA)**

VITAL's Artificial Intelligence (AI) Recruitment Pilot

- VITAL embarked on a pilot in Dec 21
- Till date, we have 12 agencies onboard
- Objective is to create a seamless recruitment shortlisting and selection process using AI

X0PA's Solution

Jobs

- Push jobs to job portals and Linkedin
- Import resumes from job portals & Linkedin
- Manage applications in one place
- Create and nurture talent pool for future vacancies

Applications

- Screen, score, rank with AI based on CV relevance, loyalty & performance
- Recommend candidates from talent pool
- Candidate's dashboard is updated to show if they are being shortlisted for other positions

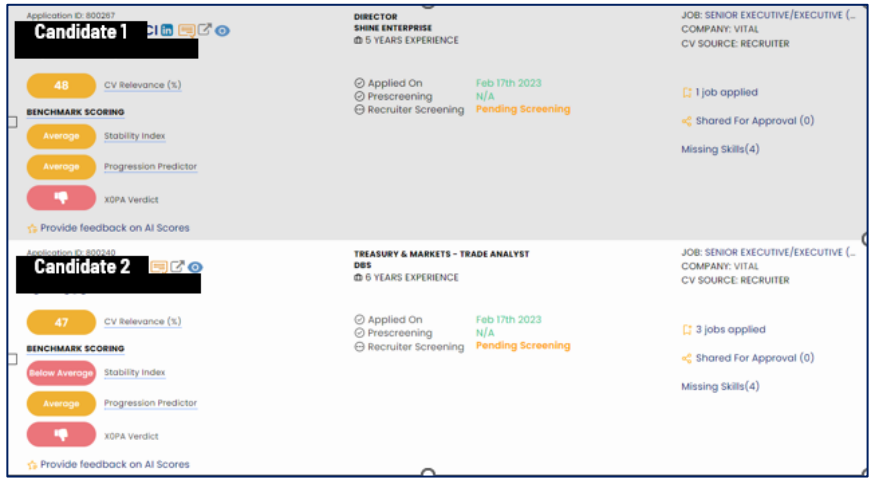
Assessments

- X0PAROOM is used for assessments and video interviews
- Can be administered to all candidates with one click
- Cognitive and textual analytics with AI
- Inclusive hiring with masking of personal details

AI-Driven Recruitment

1. AI Driven Metrics

To complement holistic decision making



Extract of a research officer role

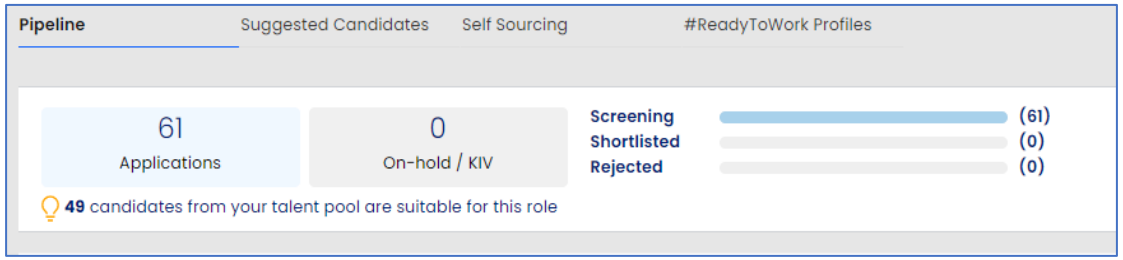
1

2

3

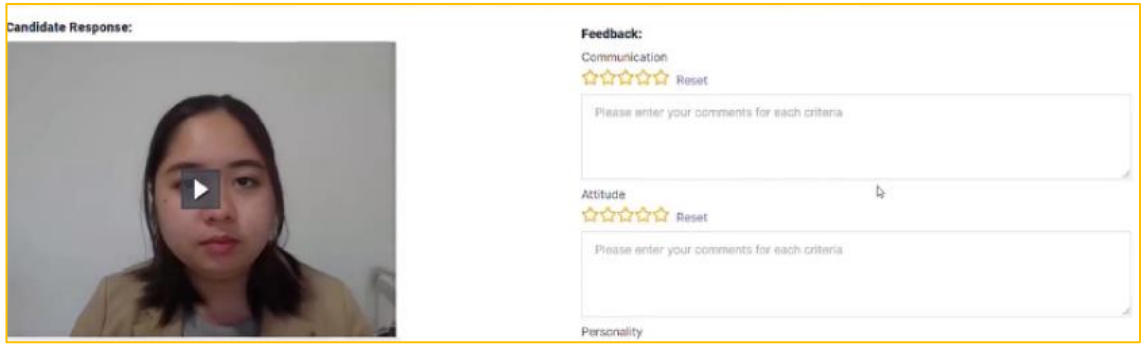
2. AI Retargetting

AI also recommends from talent pool



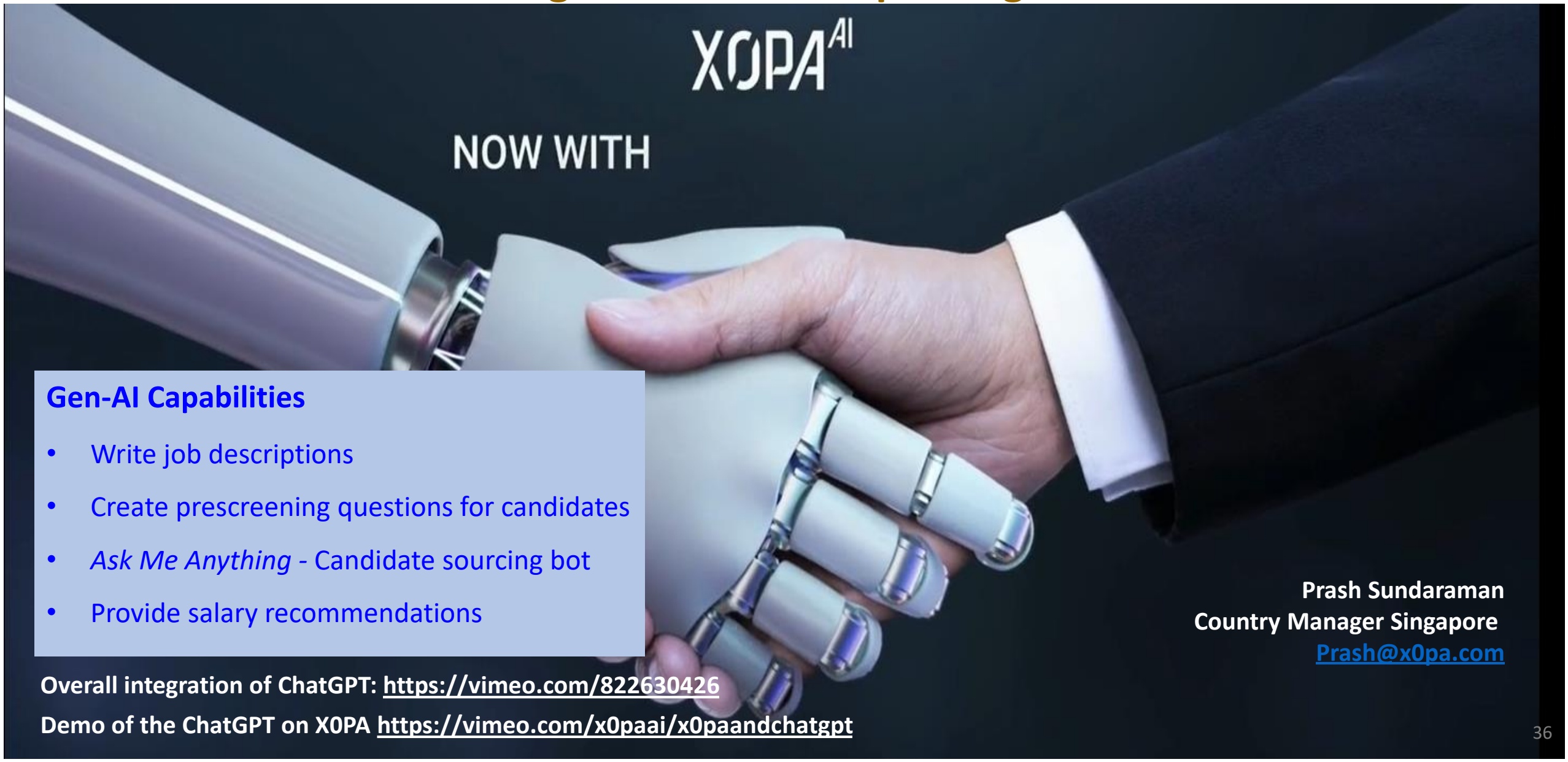
3. Automation of Assessments

Complementary scoring from video interviews



AI-Driven Recruitment

X0PA AI with ChatGPT Integration - Power up Hiring



Gen-AI Capabilities

- Write job descriptions
- Create prescreening questions for candidates
- *Ask Me Anything* - Candidate sourcing bot
- Provide salary recommendations

Prash Sundaraman
Country Manager Singapore
Prash@x0pa.com

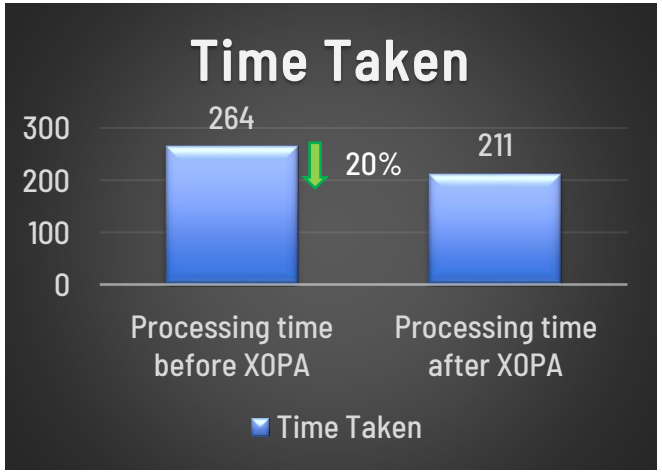
Overall integration of ChatGPT: https://vimeo.com/822630426

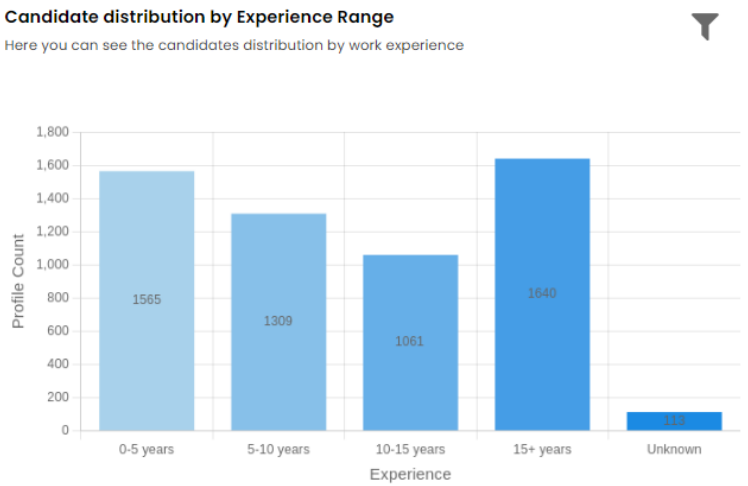
Demo of the ChatGPT on X0PA https://vimeo.com/x0paai/x0paandchatgpt

Benefits

Reduction in processing time for shortlisting

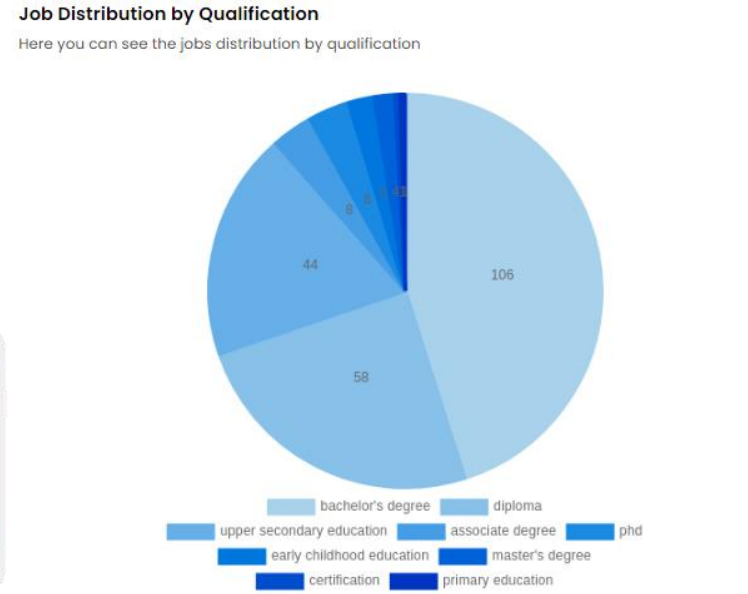
- AI scores are immediately reflected on a dashboard
- Recruiters can see how many candidates are in the pipeline
- Seamless dashboard reporting
- Shorter waiting time for jobseekers





Performing recruitment on the fly

- AI recruitment system is real-time and scores candidates as they apply
- System is available 24 hrs 7 days a week and easily accessible on multiple devices – need not be limited to only performing on office laptops

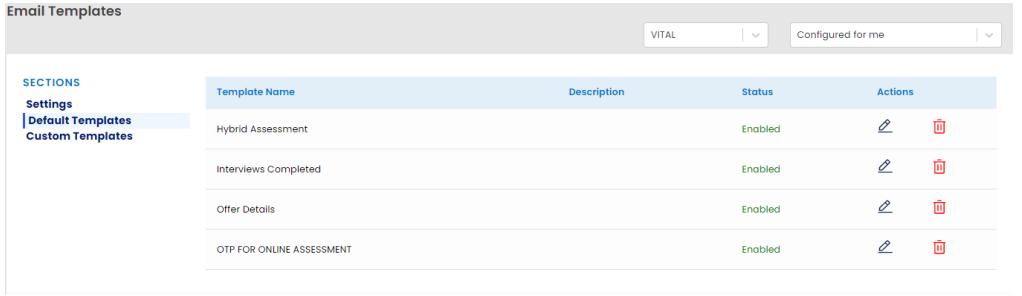


Screenshots of XOPA's dashboard of hiring demographics

Benefits

Enhancing the recruitment experience

- Customized messages and notifications for candidates at different stages along the recruitment process
- Enhancing the image of public service – to be seen as the choice employer



Screenshot of the ability to customized communication templates

X0PA is AI Verify certified

- X0PA has been certified by IMDA on 3 components
  - Business viability and sustainability
  - AI ethic principles
  - Innovation and growth of product
- Through IMDA's rigourous assessment in the form of submitting P&L statements, conducting reference checks on clients and assessing strategic outcomes, X0PA managed to attain AI Verify status

AI Governance Testing Framework & Toolkit

- Launched by Singapore's IMDA and PDPC* to promote transparency on the use of AI.
- Verifies the performance of an AI system against the developer's claims and with respect to internationally accepted AI ethics principles (e.g. from EU and OECD).
- Independent third-party verification to help companies assess AI solutions' performance and trustworthiness.
- Standardized assessment framework that covers the technical robustness, fairness, ethics, and explainability of AI solutions.
- Companies that participate in the program can use the AI Verify mark to demonstrate implementation of responsible AI in an objective and verifiable manner.
- X0PA is the first and the only HRtech company to have achieved the AI Verify status for ethical, responsible and explainable AI.

AI Verify Framework (AI Verify Framework.pdf)

*IMDA: Infocomm Media Development Authority PDPC: Personal Data Protection Commission

- AI Governance Testing Framework and Toolkit is currently available as a Minimum Viable Product (MVP) for system developers and owners who want to be more transparent about the performance of their AI systems through a combination of technical tests and process checks.

TRANSPARENCY ON USE OF AI AND AI SYSTEMS So that individual are aware and make informed decisions			
1. TRANSPARENCY Appropriate info is provided to individuals impacted by AI system			
UNDERSTANDING HOW AI MODEL REACHES DECISION Ensuring AI operation/results are explainable, accurate and consistent	**SAFETY & RESILIENCE OF AI SYSTEMS** Ensuring AI system is reliable and will not cause harm	**FAIRNESS / NO UNINTENDED DISCRIMINATION** Ensuring that use of AI does not unintentionally discriminate	**MANAGEMENT AND OVERSIGHT OF AI** Ensuring human accountability and control
2. EXPLAINABILITY Understand and interpret what the AI system is doing	**4. SAFETY** AI system safe: Conduct impact / risk assessment; Known risks have been identified/mitigated	**6. FAIRNESS** No unintended bias: AI system makes same decision even if an attribute is changed; Data used to train model is representative	**7. ACCOUNTABILITY** Proper management oversight of AI system development
3. REPEATABILITY / REPRODUCIBILITY AI results consistent: Be able to replicate an AI system's results by owner / 3rd-party	**SECURITY** Cybersecurity of AI systems	**DATA GOVERNANCE** Source and quality of data: Good data governance practices when training AI models	**8. HUMAN AGENCY AND OVERSIGHT** AI system designed in a way that will not decrease human ability to make decisions
	5. ROBUSTNESS AI system can still function despite unexpected inputs		**INCLUSIVE GROWTH, SOCIETAL & ENVIRONMENTAL WELL-BEING** Beneficial outcomes for people and planet

Figure 1 Initial set of AI ethics principles for MVP

Cost Control Strategy – Win-Win Partnership

How VITAL Benefits

Platform to

a) experiment and apply emerging AI technology to corporate functions which could potentially be scaled up across agencies
b) incorporate recommended features for “free”!
c) enjoy competitive pricing by start-up

How X0PA Benefits

Platform to

a) solicit feedback on product functionalities
b) iron out issues
c) identify opportunities for improvements to develop more appealing product
d) raise profile of company
e) grow profits

Future Plans for AI-Enabled Recruitment Pilot

- To integrate with existing HR Systems
- To create a standard offer package for interested agencies to subscribe
- VITAL to value add by adopting X0PA to drive shortlisting and selection for our service partners
- Drive greater adoption of AI and Machine Learning (ML) in the Public Service

VITAL As A Global Thought Leader and Practitioner

Digitalisation and Automation – Backroom is no longer Backwater

- The Wall Street Journal – Back-Office Innovations Elevating Mission Performance
- The Business Times – Building the Hybrid Human-Digital Workforce of the Future
- Australian SSON Conference - Leapfrogging the Shared Services maturity curve through capabilities development
- UiPath Forward 5 Summit, Las Vegas – CE as distinguished speaker on automation and digital transformation
- GovInsider – Key lessons from the Singapore governments ambitious whole-of-government cloud migration strategy
- OpenGov Asia - Recognition of Excellence Award - Modernising, Transforming and Digitalising Corporate Shared Services in the Singapore Public Sector
- Deloitte Centre for Government Insights – Government Trends 2023 quoted VITAL as a thought leader in government innovation and management practices

Hybrid Work & Culture – Championing Diversity, Balance, & Hybrid Work

- Accenture's HerStories conversations – "Life in Balance – Mental Wellness"
- Shared Services & Outsourcing Network (SSON) Conference on Institutionalising a New Hybrid Workplace Culture for Successful Re-Entry

Scan to view more on our Media Library

International/ National Accolades

- 2021 SSON Asia Business Resilience Impact Award (Silver)
- 2021 Enabling Mark Award (Gold)
- 2022 SSON Business Transformation Award (Silver) and Automation Impact Award (Honorary Mention)
- 2022 & 2023 OpenGov Asia Recognition of Excellence Award for its innovative use of tech in the public sector at the forefront of digital transformation

VITAL
shared services

VITAL
shared services

THANK YOU