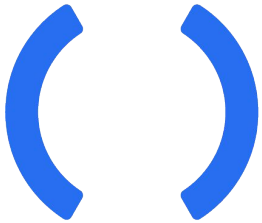
The



OPEN
GOVERNMENT
PRODUCTS

Experiment:

Agile in government?

Introduction: Rahul Daswani



















DISG is a joint office of











Agile Organisation Design in practice

Learnings from an experimental team on building a high-performing, nimble public sector organisation



OGP is experimental team of engineers, designers, data scientists, & product managers who **build technology for the public good.**































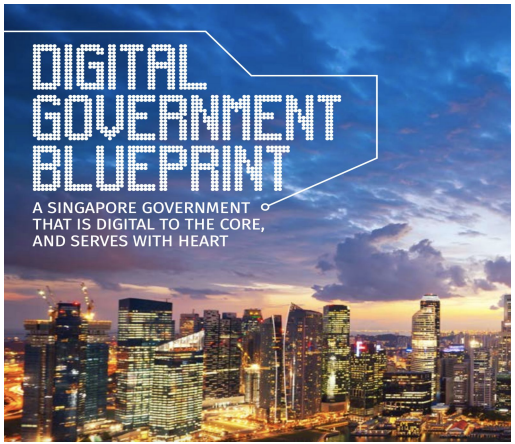
parking.sg | homer.gov.sg | mc.gov.sg | pay.gov.sg | data.gov.sg | form.gov.sg | isomer.gov.sg | id.gov.sg | redeem.gov.sg | postman.gov.sg | go.gov.sg | opendoc.sg | vault.gov.sg

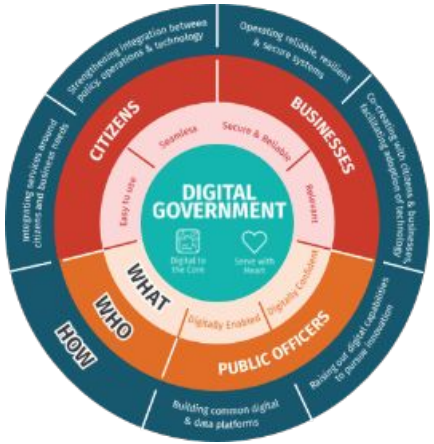
Part 1: Identifying the Need


SMART NATION
Transforming Singapore through Technology

Smart Nation aims to create a digital government:

- "Digital to the core" → using technology and data to **transform the way citizens and businesses are served, and how public officers work**
- "Serves with heart" → automate work where possible in order to provide a personal touch to **enrich citizen's experience**

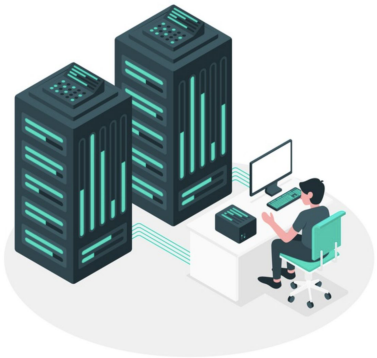




However, many of our government's digital products are sub-par compared to industry standards.



Security



Reliability



Usability

Images designed by Freepik

Security vulnerabilities and leaks compromise Singaporeans' data

BBC Sign in | Home | News | Sport | Reel | Worklife | Tra

NEWS

Home | US Election | Coronavirus | Video | World | Asia | UK | Business | Tech | Science | Stories

Asia | China | India

Singapore personal data hack hits 1.5m, health authority says

20 July 2018

ST SINGAPORE POLITICS ASIA WORLD VIDEOS LIFESTYLE FOOD FORUM OPINION BUSINESS MORE

SINGAPORE › Courts & Crime Education Housing Transport Health Manpower Environment

Passwords and usernames of staff from MOH, MOE and other agencies stolen and put up for sale by hackers

Personal data of 850 national servicemen and Mindef staff stolen in targeted cyber attack

News, wherever you are.
Stay updated with our Telegram service. JOIN our channel at t.me/todayonlinesg.

We set you thinking

TODAY

WEDNESDAY 29 JANUARY 2020

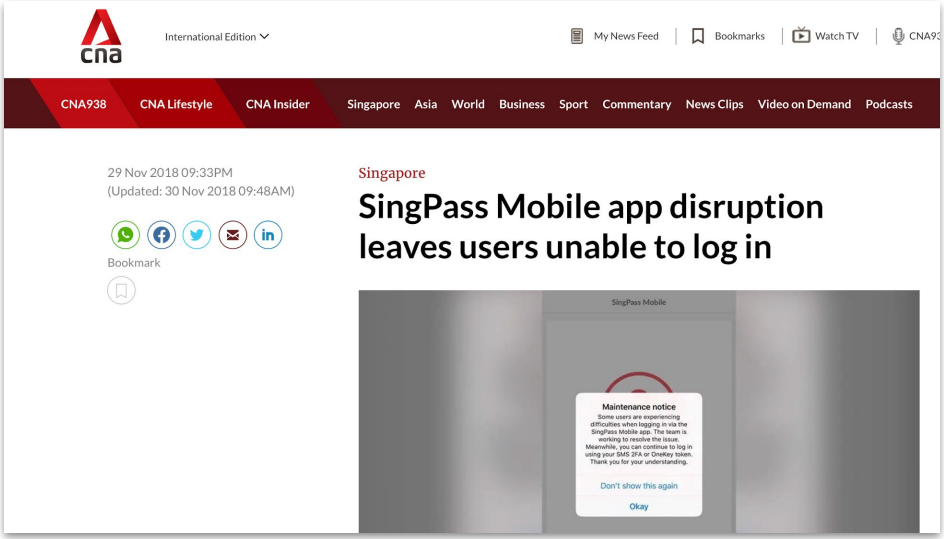
Cut through the clutter.
Subscribe to our email newsletter for the day's essential news, straight to your inbox.

Singapore World Big Read Opinion Gen Y Speaks Features Visuals Brand Spotlight 8 DAYS

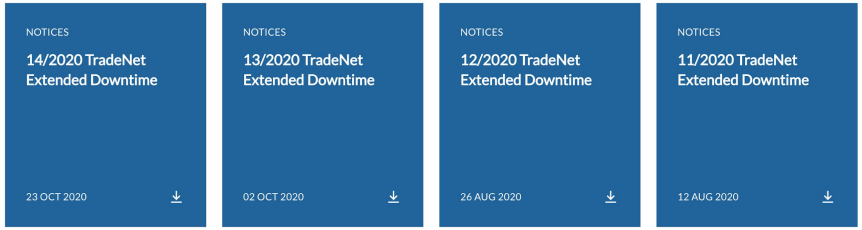
Personal data of 808,000 blood donors compromised for nine weeks; HSA lodges police report

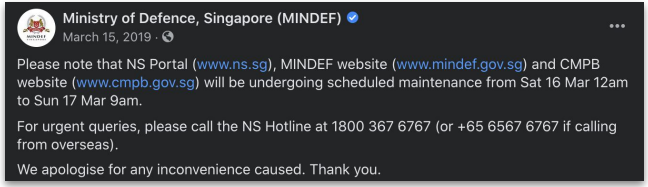


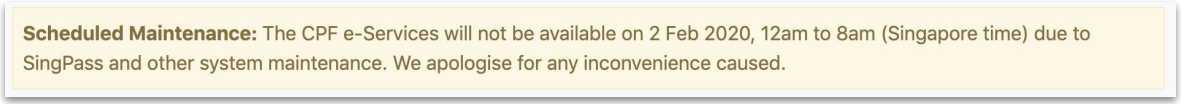
Government digital services are often unreliable

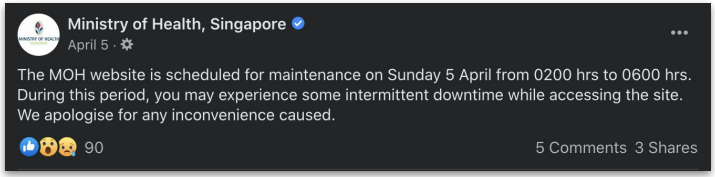












Users are often left frustrated when using these digital services



Sample of common government app ratings on the App Store

2.1 • 424 Ratings

3.4 • 119 Ratings

2.1 • 588 Ratings

2.5 • 577 Ratings

The rapidly evolving tech landscape poses both challenges and opportunities for Singapore government



Cloud software solutions and AI are used increasingly in all modern organisations



Global talent war to find, attract, hire, and retain top tech talent



To keep pace with innovation, tech companies are at the forefront of **new organisation practices, processes and design**

Images designed by Freepik

Virtually all organisations are using commercially available cloud software, and/or building software on the cloud

STAMFORD, Conn., June 22, 2016

Gartner Says By 2020, a Corporate "No-Cloud" Policy Will Be as Rare as a "No-Internet" Policy Is Today

Hybrid Will Be the Most Common Use of the Cloud

By 2020, a corporate "no-cloud" policy will be as rare as a "no-internet" policy is today, according to Gartner, Inc. Cloud-first, and even cloud-only, is replacing the defensive no-cloud stance that dominated many large providers in recent years. Today, most provider technology innovation is cloud-centric, with the stated intent of retrofitting the technology to on-premises.

"Aside from the fact that many organizations with a no-cloud policy actually have some under-the-radar or unavoidable cloud usage, we believe that this position will become increasingly





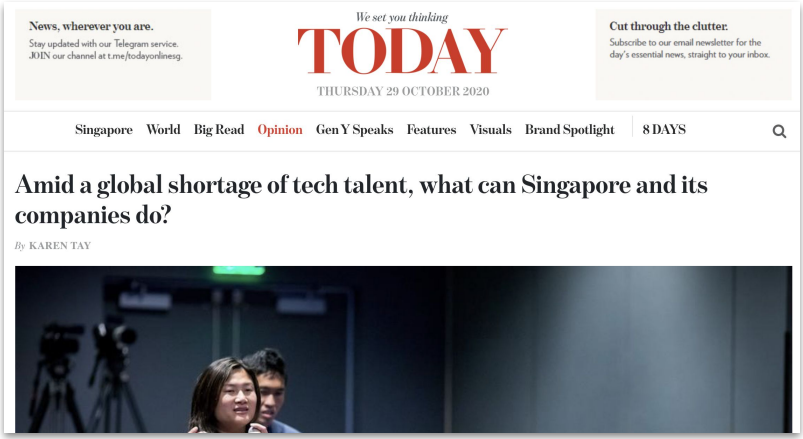
High global demand (and impact) of Top Tech Talent

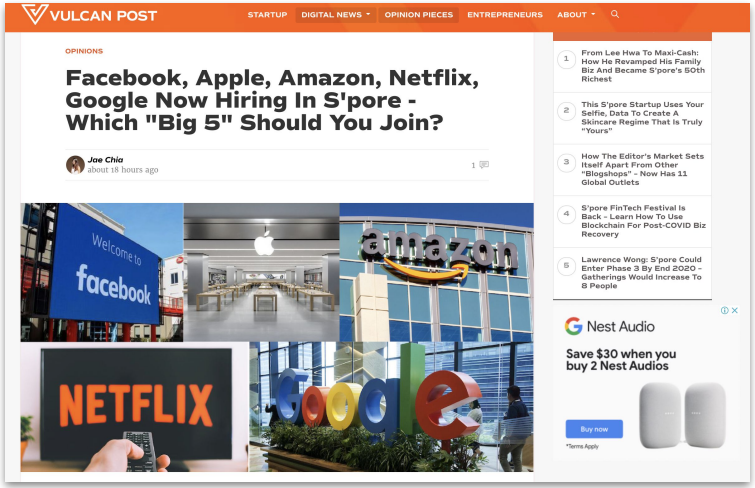
"I observed something fairly early on at Apple, which I didn't know how to explain then, but have thought a lot about it since. Most things in life have a dynamic range in which average to best is at most ***2:1****. For example if you go to New York City and get an average taxi cab driver versus the best taxi cab driver, you'll probably get to your destination with the best taxi driver 30% faster. And an automobile; What's the difference between the average car and the best? Maybe 20% ? The best CD player versus the average CD player? Maybe 20% ? So 2:1 is a big dynamic range for most things in life. Now, in software, and it used to be the case in hardware,* ***the difference between the average software developer and the best is 50:1; Maybe even 100:1*** *. Very few things in life are like this, but what I was lucky enough to spend my life doing, which is software, is like this. So I've built a lot of my success on finding these truly gifted people, and not settling for 'B' and 'C' players, but really going for the 'A' players."*

Steve Jobs

© 2019 Open Government Products

High global demand (and impact) of Top Tech Talent







© 2019 Open Government Products

Tech companies are reinventing how we think about running organisations

Forbes

Tech Leaders Run Their Companies Differently, And Their Teams Are 40% More Productive As A Result

FAST COMPANY

03.13.17 | WORK SMART

Why Employees At Apple And Google Are More Productive

It's a mix of organization, priorities, trust, and leadership.

CHANGE MANAGEMENT

Digital Transformation Is Not About Technology

Harvard Business Review

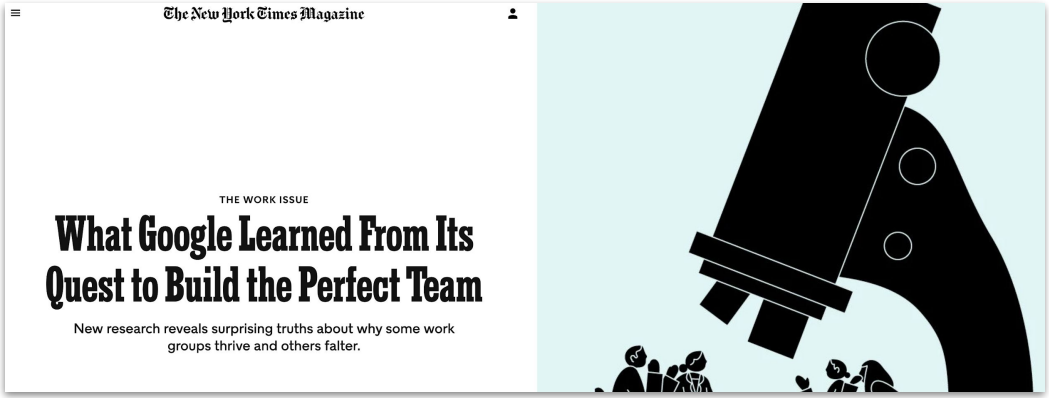
by Behnam Tabrizi, Ed Lam, Kirk Girard, and Vernon Irvin

MARCH 13, 2019

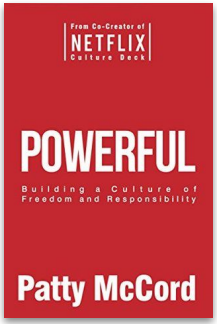
Silicon Valley start-ups are known for their agile decision making, rapid prototyping and flat structures. The process of digital transformation is inherently uncertain: **changes need to be made provisionally and then adjusted; decisions need to be made quickly; and groups from all over the organization need to get involved** . As a result, traditional hierarchies get in the way. It's best to adopt **a flat organizational structure** that's kept somewhat separate from the rest of the organization.

© 2019 Open Government Products

Tech companies are reinventing how we think about running organisations











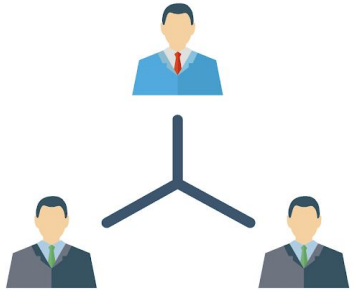
However, we have barriers limiting how the Singapore Government can address these problems and opportunities



Legacy government systems are **not compatible with latest cloud technologies**



Regulations on architecture, security, IT management, HR, Procurement **stymie our modernisation efforts**



Technical expertise is brought in too little and too late into strategic decision making for many digitalisation efforts

What if we built an organisation that operated like a **modern tech company** but worked on **public sector problems** ?

Our Mission

EXPERIMENT
with new practices with the goal of delivering good tech products

EXEMPLIFY
these practices in our own operation and document them extensively

EVANGELISE
the adoption of the best of these practices to the rest of the public service

We’re experimenting in three areas

1. **How to build good tech products:** Using off-the-shelf cloud services, building products on the cloud, bringing modern production, engineering, design, and cybersecurity practices to bear

2. **How to run good tech product teams**: Finding people with the right capabilities, organising them into teams, and then pushing autonomy and decision-making down to them to make better tech product decisions

3. **How to run a good tech organisation**: Reshaping our people practices, ways of work, and how we design and run the organisation

Part 2: Designing the Organisation

Breaking down the elements of our organisation

Our Organisation

Strategy
What is our overall direction?

People & Rewards
How do we identify, hire, develop, assess, and reward the right people?

Structure
How do we organise authority and autonomy in the org?

Processes
How do we decision-make, ideate, problem-solve, and operate?

Tools
How do we leverage technology to work effectively?

Resourcing
How do we secure and allocate money and people?

Our Mission

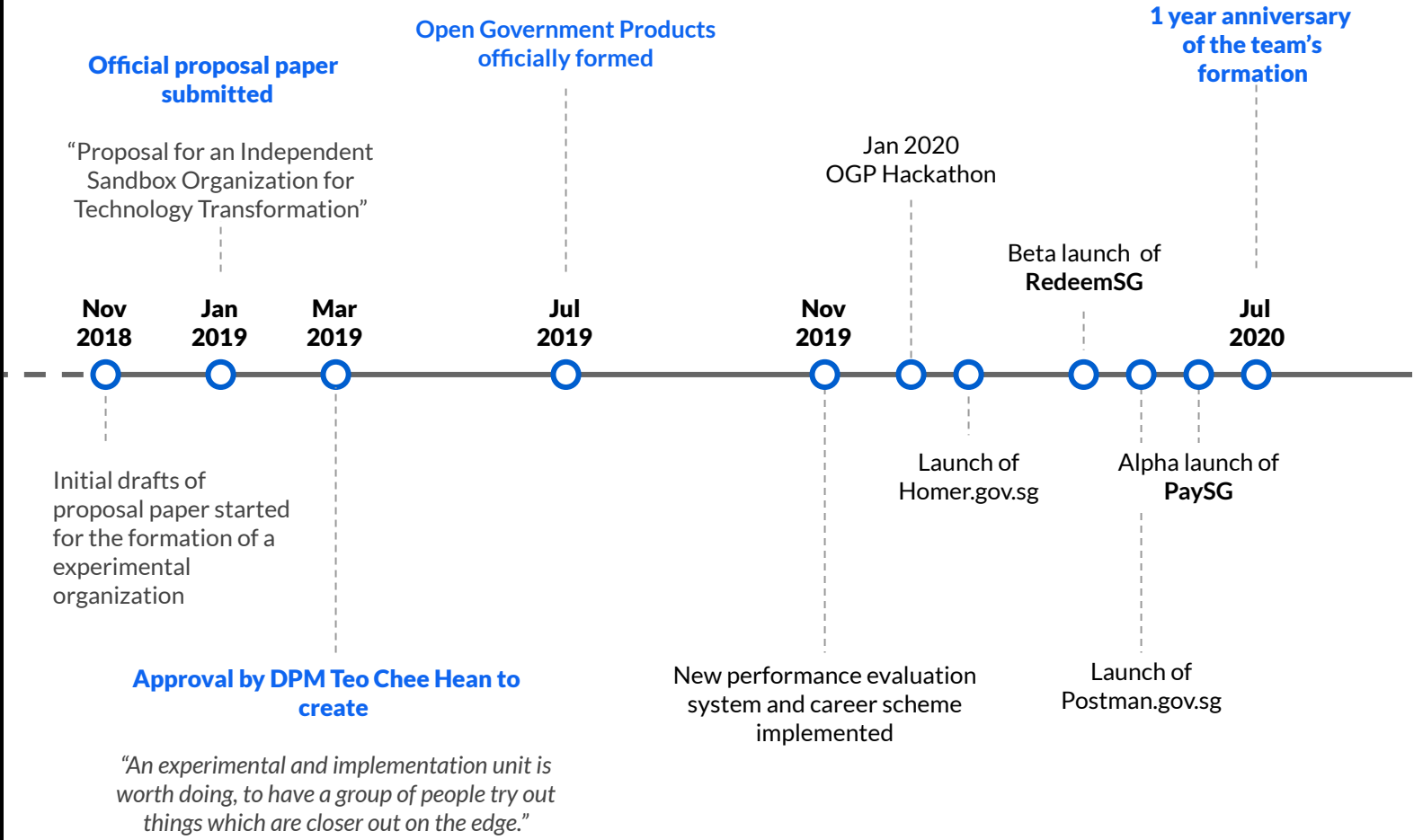
EXPERIMENT
with new practices with the goal of delivering good tech products

EXEMPLIFY
these practices in our own operation and document them extensively

EVANGELISE
the adoption of the best of these practices to the rest of the public service

Modified from Jay Galbraith's Star Model

Team existed as a department within the Data Science Division in charge of building data.gov.sg

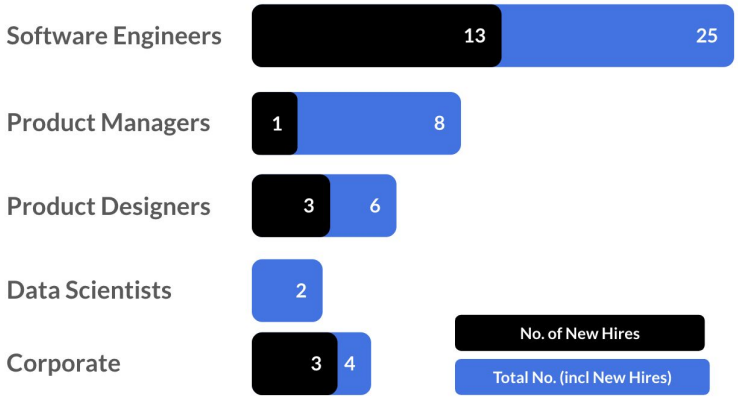


We rebuilt the way we do hiring

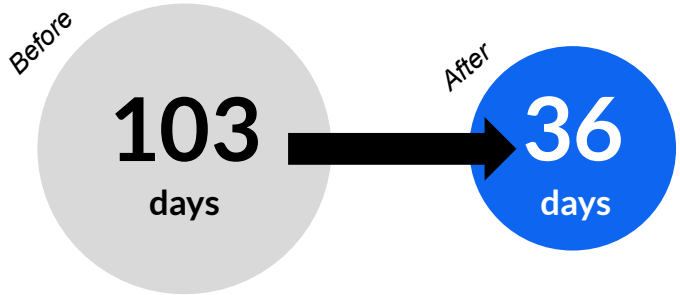
Things we've done include:

- Targeted outreach and reputation-building by sharing OGP work with tech communities
- Rebuilt assessment process to ensure thorough technical assessment by engineer-interviewers
- Using structured interviewing, assessment metrics, and evaluation committees to make a decision on each hire across the team
- Streamlining hiring steps, e.g. reference checks, medical screening, administrative tasks, to move as quickly as possible

Changes to OGP headcount since July 2019



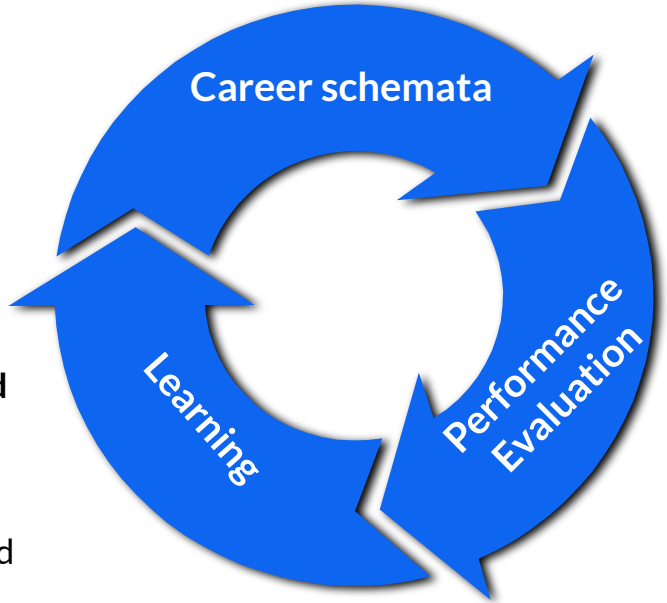
Time taken from candidate application to offer letter



© 2020 Open Government Products

Shifting to objective and transparent performance management

1. Clear, objective, demonstrable descriptions of **competencies for each job type**



2. Twice-yearly transparent performance appraisal process based on multiple data points of **demonstrated performance**

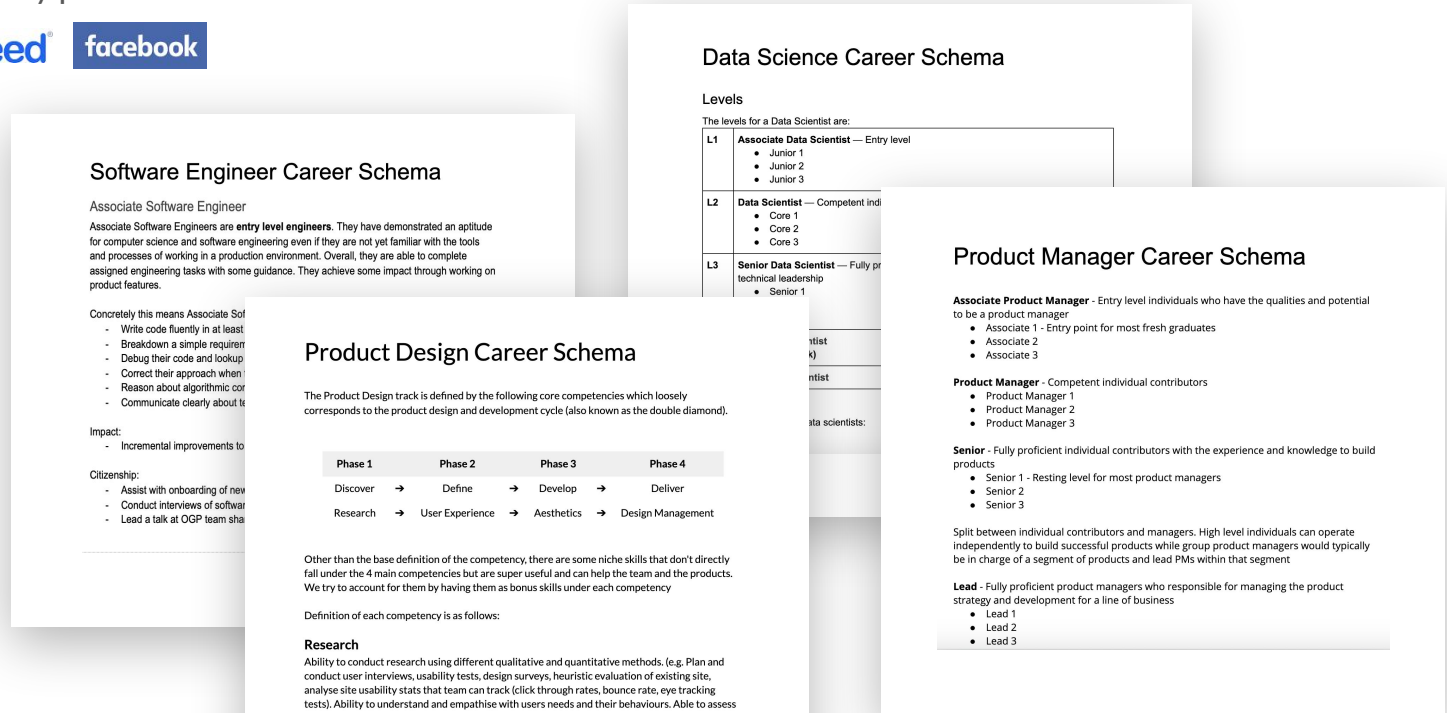
3. **Learning culture focused on developing competencies**, with **feedback loop to keep career schemata** updated with emerging needs

© 2020 Open Government Products

We defined distinct technical career tracks (and salaries on par with industry to go along with it)

Validated with industry partners

Google indeed facebook



Software Engineer Career Schema

Associate Software Engineer

Associate Software Engineers are **entry level engineers**. They have demonstrated an aptitude for computer science and software engineering even if they are not yet familiar with the tools and processes of working in a production environment. Overall, they are able to complete assigned engineering tasks with some guidance. They achieve some impact through working on product features.

Concretely this means Associate Sof
- Write code fluently in at least
- Breakdown a simple requiren
- Debug their code and lookup
- Correct their approach when
- Reason about algorithmic cor
- Communicate clearly about te

Impact:
- Incremental improvements to

Citizenship:
- Assist with onboarding of new
- Conduct interviews of softwar
- Lead a talk at OGP team sha

Data Science Career Schema

Levels

The levels for a Data Scientist are:

L1	**Associate Data Scientist** — Entry level • Junior 1 • Junior 2 • Junior 3
L2	**Data Scientist** — Competent indi • Core 1 • Core 2 • Core 3
L3	**Senior Data Scientist** — Fully pr technical leadership • Senior 1

ntist
k)
ntist

ata scientists:

Product Design Career Schema

The Product Design track is defined by the following core competencies which loosely corresponds to the product design and development cycle (also known as the double diamond).

Phase 1		Phase 2		Phase 3		Phase 4
Discover	→	Define	→	Develop	→	Deliver
Research	→	User Experience	→	Aesthetics	→	Design Management

Other than the base definition of the competency, there are some niche skills that don't directly fall under the 4 main competencies but are super useful and can help the team and the products. We try to account for them by having them as bonus skills under each competency

Definition of each competency is as follows:

Research

Ability to conduct research using different qualitative and quantitative methods. (e.g. Plan and conduct user interviews, usability tests, design surveys, heuristic evaluation of existing site, analyse site usability stats that team can track (click through rates, bounce rate, eye tracking tests). Ability to understand and empathise with users needs and their behaviours. Able to assess

Product Manager Career Schema

Associate Product Manager - Entry level individuals who have the qualities and potential to be a product manager
- Associate 1 - Entry point for most fresh graduates
- Associate 2
- Associate 3

Product Manager - Competent individual contributors
- Product Manager 1
- Product Manager 2
- Product Manager 3

Senior - Fully proficient individual contributors with the experience and knowledge to build products
- Senior 1 - Resting level for most product managers
- Senior 2
- Senior 3

Split between individual contributors and managers. High level individuals can operate independently to build successful products while group product managers would typically be in charge of a segment of products and lead PMs within that segment

Lead - Fully proficient product managers who responsible for managing the product strategy and development for a line of business
- Lead 1
- Lead 2
- Lead 3

© 2020 Open Government Products

We overhauled the way we do performance management

OGP's performance appraisal approach focuses on being

1. **Fair** - making sure the system is **consistent** (uses the same standard), **specific**, and encourage **honesty** (since performance is normative, and requires describing)
2. **Objective** - a system that is able to be used for people to measure their performance against, rather than relatively to other people
3. **Comprehensive** - the system should use data from a variety of sources, to mitigate biases and blind spots as well as provide concrete feedback for improvement

We assess people based on their current level of performance (as opposed to potential), and reward their outperformance with commensurate bonuses and/or promotions immediately after assessment.

PERFORMANCE APPRAISAL SEP 2020

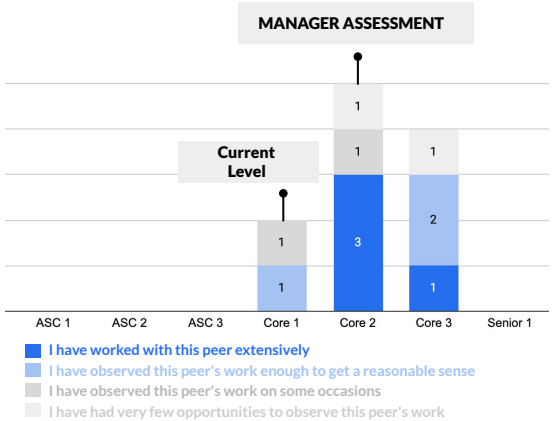
Jonathan Tan

CURRENT LEVEL
SWE 1

D/OGP'S ASSESSMENT
SWE 2

PROMOTION *effective Oct 2020*
SWE 2

FAQ
go.gov.sg/ogp-peer-levelling



MANAGER'S FEEDBACK

"Jonathan has shown great engineering management skills on the Zapfire team. The team appreciates his clear communication and creation of an environment where team members feel able to express their ideas. Technically, he's a strong individual contributor and has demonstrated he is able to design infrastructure for the complex needs of the project. His main area of improvement from here is in gaining more familiarity with different models of production architectures."

STRENGTHS

- Able to work very quickly, turning around features very quickly even in unfamiliar areas
  - Generates multiple ideas on architecture including planning and execution of Zapfire cloud infra to new VPC setup
  - Demonstrated his ability to triage, diagnose, and resolve complex production issues by searching through logs to identify the problem, communicating to appropriate personnel, carrying out the appropriate fix, and then communicating incident response to the team
- Strong engineering management and leadership
  - Able to communicate clearly and even facilitate collaboration and empathy between technical, non-technical, and user domains
  - Works to onboard and mentor junior engineers, understand their interests, and communicate well
- Able to debug with fix esoteric bugs in production, demonstrating good understanding of the system

AREAS FOR IMPROVEMENT

- Can continue to grow his experience in terms of different architectural design options. Current approaches across different projects are fairly similar, could consider wider breadth of designs.
- More proactive eng leadership of a team such as establishing coding conventions or standards
- Could better prioritize time spent on decision making. Know which decisions can be deep dived later, and which decisions might need more consideration of trade-offs before coming to conclusions

OGP Feedback on Sep 2020 Perf Appraisal exercise

	Avg Score for Nov 2019 perf appraisal exercise (/10)	Avg Score for Sep 2020 perf appraisal exercise (/10)	Difference
What was your **overall experience** of the performance appraisal process?	7	7.6	+0.6
How **fair** do you feel the current performance appraisal process is?	6.6	7.1	+0.5
How **effortful** (time and effort taken) was the process of giving and collecting peer feedback? (10 = effortless)	4.7	6.2	+1.5
How was the **quality of the feedback** you received at the conclusion of the performance appraisal exercise?	7.2	7.4	+0.2
How was the **quantity of the feedback** you received at the conclusion of the performance appraisal exercise?	6.4	8.0	+1.6
How well do you **understand the rationale** for the level/bonus/promotion decision which you were given?	7.5	8.3	+0.8
How **clear was the communication** about the perf appraisal exercise (ie instructions, timelines, process)?	8.4	9.1	+0.7

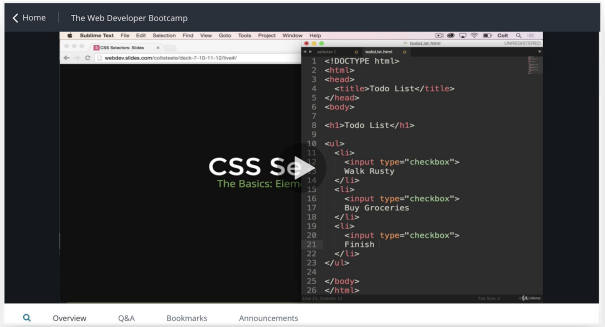
Effort, quality and quantity of feedback improved through:
1. design of new field in peer appraisal forms to share verbatim feedback with recipients
2. Design of 'areas of improvement' question to add 'to get to next level'
3. Adjustment of number of peer feedback to ~10 per person (from ~25 in Nov 2019)

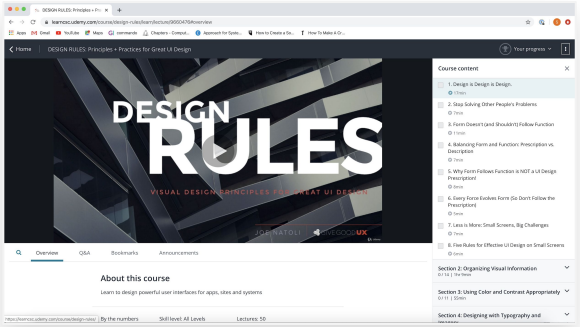
© 2020 Open Government Products

We create a culture for #OpenLearning for Staff Development

We have dedicated time (every Friday, as well as the whole of December) for learning, with specific outcomes e.g. course completion

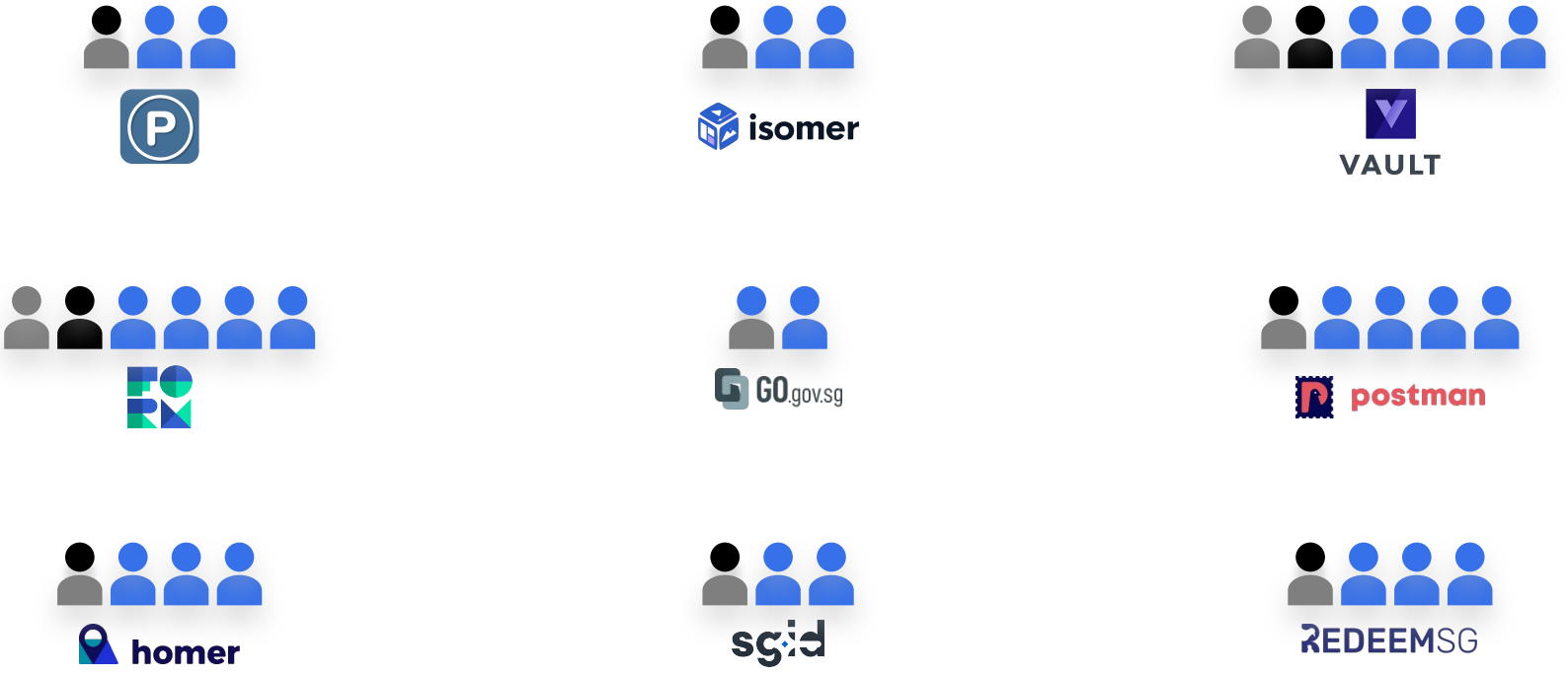
Focused on cross-functional learning, to build common language *(e.g. Engineers took Design courses)*



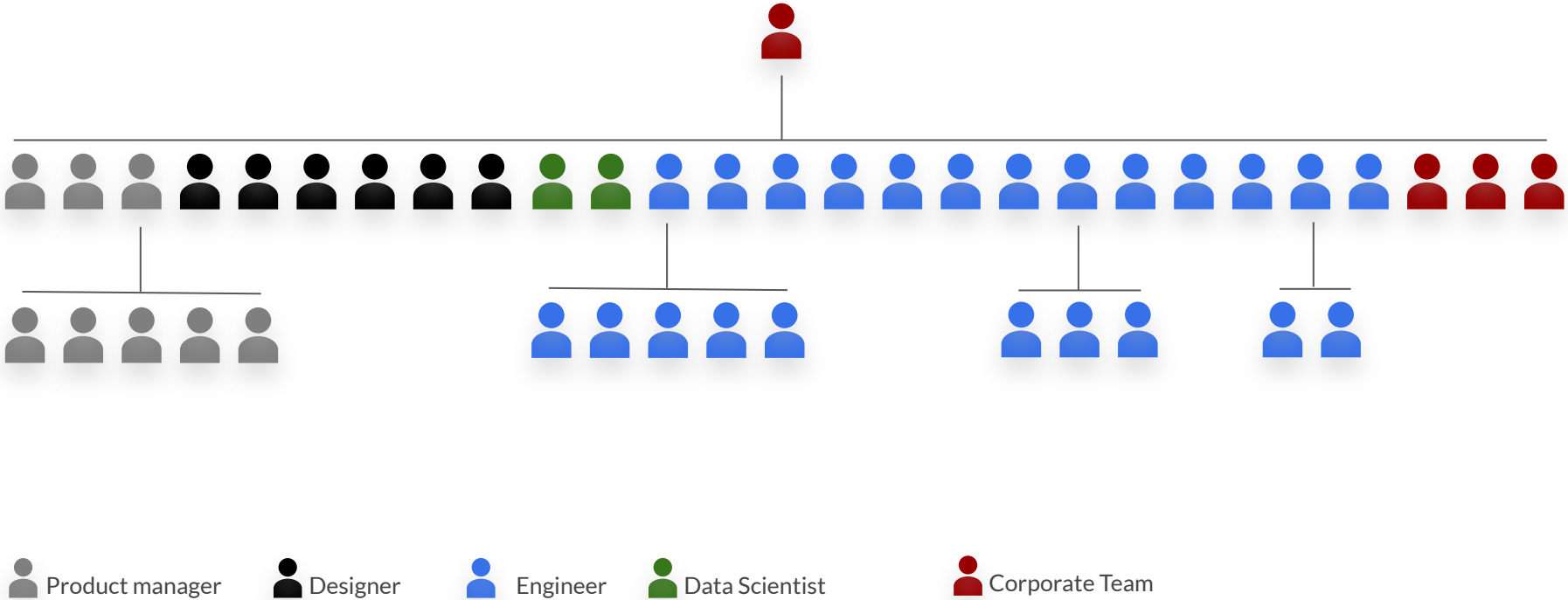


Design Course	
SWE Student	**Design Mentor**
Ian	Fiza
Nikhil	Yi Xin
Yong Jie	Fiza
Kaiwen	Fiza
Jie Hao	Sarah S
Shao Wei	Sarah S
Shi Mei	Pearly
Yuanruo	Yi Xin
Preston	Yi Xin
Azima	Sarah S

We work in lean, cross-functional product teams



We keep the hierarchy flat and focus middle management responsibility on officer development (not decision-making)



We push autonomy for direction-setting and decision-making down to the product teams

These teams have the right mix of capabilities as well as exposure to the day-to-day groundwork of product development to make the best decisions

Go.gov.sg Team Retrospective

15 June 2020

Period: Last quarter. Start of April to now
Reference: Go working doc

Things that went well

- Leonard
  - F
  - G
  - F
  - D
  - G
  - Q
- Jason
  - O
  - C
  - G
- Yong Jie
  - F

RedeemSG Product Vision 2021

Goal of this Note

The goal of this note is to map out possible options for RedeemSG and propose the direction we should go towards in the next year to a few years time frame for the team's discussion

What we determined to be our vision

> **FOR** *campaign organizers and charities,* **WHO HAS** *to do lots of manual work to track redemption, RedeemSG* **IS A** *off the shelf product* **THAT** *allows any agency to easily track redemption of goods and vouchers.*



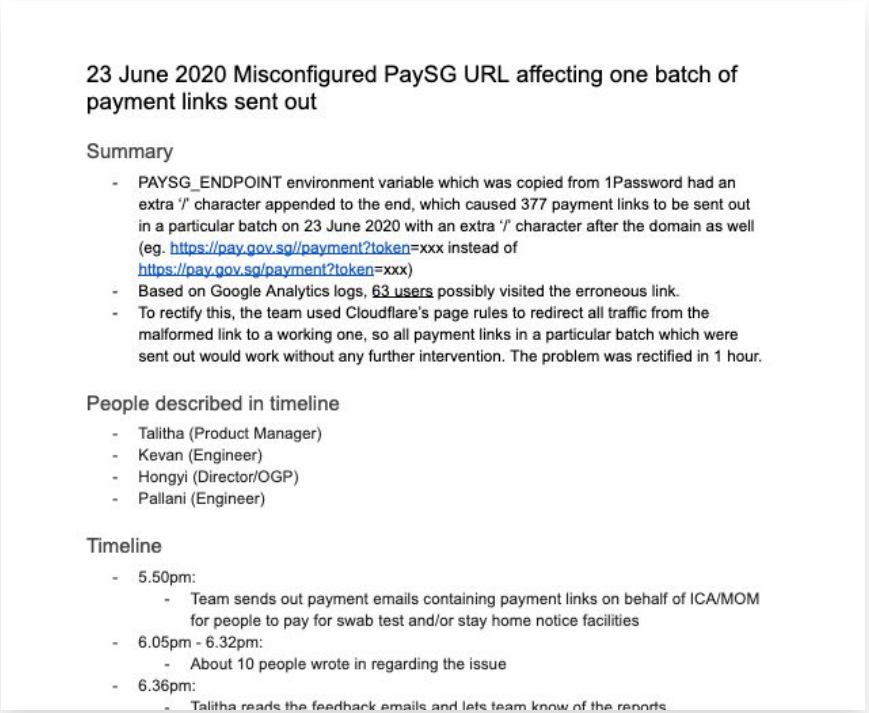
Post-mortem culture

Failures are an inevitable part of innovation

They provide great data to make products, services, and organizations better

Postmortems capture and share the lessons of failure

Prevent repeat outages.



23 June 2020 Misconfigured PaySG URL affecting one batch of payment links sent out

Summary

- PAYSG_ENDPOINT environment variable which was copied from 1Password had an extra '/' character appended to the end, which caused 377 payment links to be sent out in a particular batch on 23 June 2020 with an extra '/' character after the domain as well (eg. https://pay.gov.sg//payment?token=xxx instead of https://pay.gov.sg/payment?token=xxx)
- Based on Google Analytics logs, 63 users possibly visited the erroneous link.
- To rectify this, the team used Cloudflare's page rules to redirect all traffic from the malformed link to a working one, so all payment links in a particular batch which were sent out would work without any further intervention. The problem was rectified in 1 hour.

People described in timeline

- Talitha (Product Manager)
- Kevan (Engineer)
- Hongyi (Director/OGP)
- Pallani (Engineer)

Timeline

- 5.50pm:
  - Team sends out payment emails containing payment links on behalf of ICA/MOM for people to pay for swab test and/or stay home notice facilities
- 6.05pm - 6.32pm:
  - About 10 people wrote in regarding the issue
- 6.36pm:
  - Talitha reads the feedback emails and lets team know of the reports

Why was this not detected earlier?

- The endpoint is configured as an environment variable for the script which sends the emails.
- When the script was run on 24/06/2020, the environment variable was misconfigured
- We have a check in the script for the existence of the environment variable but do not check the value.
- The misconfiguration was in the value
- This did not show up in the previous batches because it was run by another engineer

How this will be prevented in the future

We run an annual hackathon for all OGP officers to work on grounds-up projects and prototypes





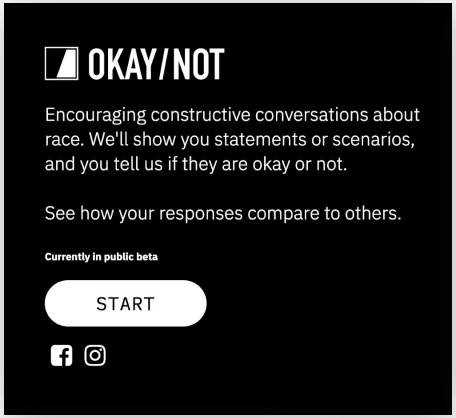




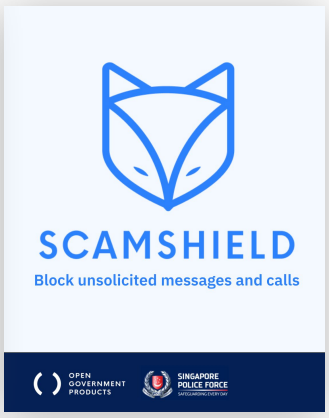
28 hackathon projects

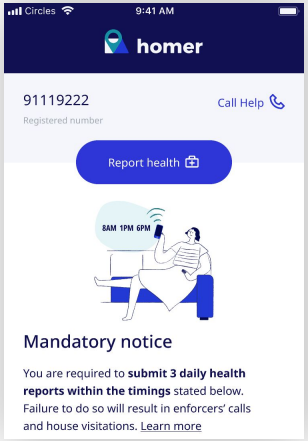
7 are now live products

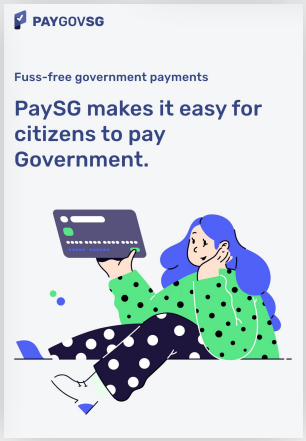
AnythingMapper
AskGov
Automated triage for patients
Ctrl Shift
eDOT
Find My Patient
Food Facts SG
Homer
KILL BILL
Medi-card
Mrt commuter simulator
Okay/Not
PaySG
Performance Appraisal Party
Plantree
PoOps - Porter Ops
Postman
qRSTU
qtpie - Polyclinic Queue Times
RedeemSG
Refactoring FormSG frontend
Return Your Trays
ScamShield
Sea without the sea
Send.go.gov.sg
Super staffer!
Touchpoint version 2
Traintraintrain Hawkers

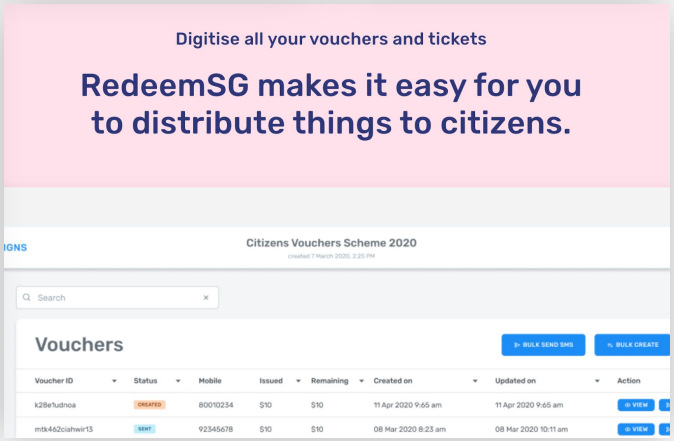








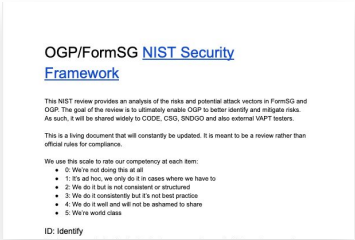




Creating regulatory space - redefining and updating governance standards



Accountability to Snr Mgmt: OGP Supervisory Panel accountable for OGP governance and operations



OGP/FormSG NIST Security Framework

This NIST review provides an analysis of the risks and potential attack vectors in FormSG and OGP. The goal of the review is to ultimately enable OGP to better identify and mitigate risks. As such, it will be shared widely to CODE, CSG, SNDGO and also external VAPT testers.

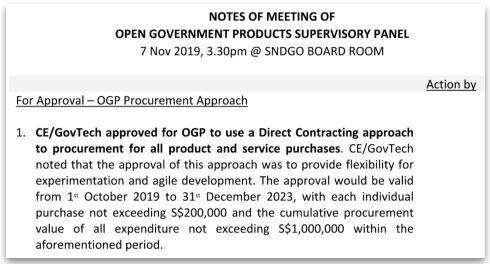
This is a living document that will constantly be updated. It is meant to be a review rather than official rules for compliance.

We use this scale to rate our competency at each item:

- 0: We're not doing this at all
- 1: It's ad hoc, we only do it in cases where we have to
- 2: We do it but is not consistent or structured
- 3: We do it consistently but it's not best practice
- 4: We do it well and will not be ashamed to share
- 5: We're world class

ID: Identify

IM8 (ICT&SS): Waiver from IM8 with separate governance for product engineering, architecture, and security



NOTES OF MEETING OF
OPEN GOVERNMENT PRODUCTS SUPERVISORY PANEL
7 Nov 2019, 3.30pm @ SNDGO BOARD ROOM

Action by

For Approval – OGP Procurement Approach

1. **CE/GovTech approved for OGP to use a Direct Contracting approach to procurement for all product and service purchases**. CE/GovTech noted that the approval of this approach was to provide flexibility for experimentation and agile development. The approval would be valid from 1st October 2019 to 31st December 2023, with each individual purchase not exceeding S$200,000 and the cumulative procurement value of all expenditure not exceeding S$1,000,000 within the aforementioned period.

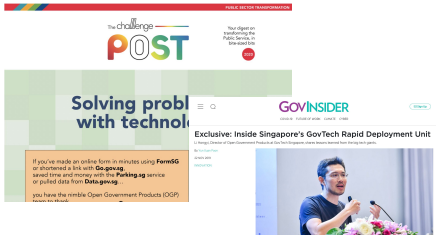
Procurement: Use of Direct Contracting for product and service purchases



Finance: Use of Corporate Credit cards for subscription service payments



HR: Rebuilt our policies and processes from grounds-up outside of existing Govtech practices



Branding & Outreach: Separate branding + governance of outreach and public comms

Images designed by Freepik

We document the way we do everything



Development Guide

Inspired by Production Guide

This document lays out the core things that should be considered when develo software. Do not follow it literally; use discretion.

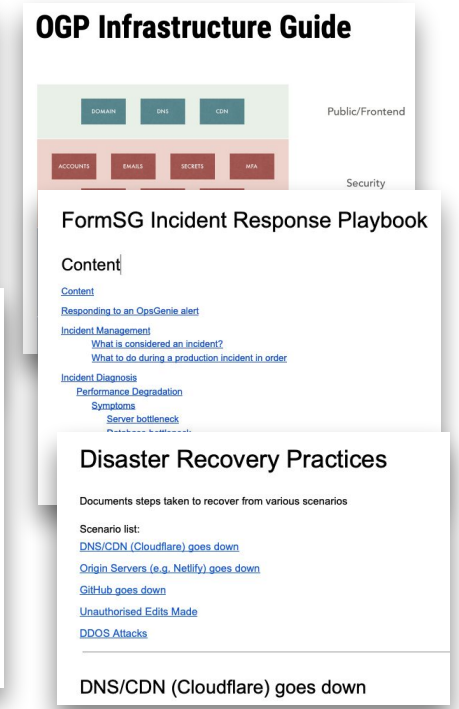
Development Guide
- Don't reinvent the wheel
- Don't over-engineer
- Build prototypes and develop iteratively
- Do code reviews
- Test your code
- Use version control
- It's your responsibility!
- Freedom to choose

Production Guide for Digital Services

Running a service in production introduces substantially more complexity than in a development environment. To achieve the desired level of reliability, security, and maintainability means setting up auxiliary systems to support the main service. This document lays out the core things that should be considered.

- Domain Configuration
- Secured Perimeter
- Availability Monitoring
- Alert Systems
- User Feedback Mechanisms
- Logging
- Error Monitoring
- Decoupled End-to-End Checks
- Redundant Infrastructure
- Test Setup
- DDOS Protection & Caching
- Incremental Rollout System

This is not meant to be an exhaustive list. It is just a framework to help developers know what bases need to be covered in roughly the order of importance. As with most things, the specific requirements will depend on the project. So will the choice of specific implementation. Decide for yourself what needs to be done and do not treat this document like an instruction manual.



OGP Infrastructure Guide

FormSG Incident Response Playbook

Content

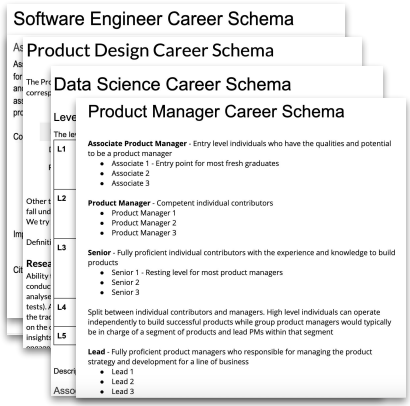
Content
Responding to an OpsGenie alert
Incident Management
What is considered an incident?
What to do during a production incident in order
Incident Diagnosis
Performance Degradation
Symptoms
Server bottleneck

Disaster Recovery Practices

Documents steps taken to recover from various scenarios

Scenario list:
DNS/CDN (Cloudflare) goes down
Origin Servers (e.g. Netlify) goes down
GitHub goes down
Unauthorised Edits Made
DDOS Attacks

DNS/CDN (Cloudflare) goes down



Software Engineer Career Schema

Product Design Career Schema

Data Science Career Schema

Product Manager Career Schema

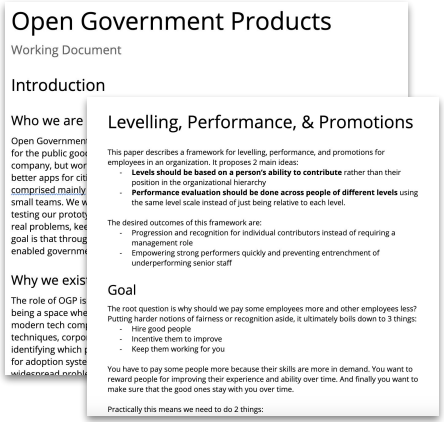
Associate Product Manager - Entry level individuals who have the qualities and potential to be a product manager
- Associate 1 - Entry point for most fresh graduates
- Associate 2
- Associate 3

Product Manager - Competent individual contributors
- Product Manager 1
- Product Manager 2
- Product Manager 3

Senior - Fully proficient individual contributors with the experience and knowledge to build products
- Senior 1 - Resting level for most product managers
- Senior 2
- Senior 3

Split between individual contributors and managers. High level individuals can operate independently to build successful products while group product managers would typically be in charge of a segment of products and lead PMs within that segment

Lead - Fully proficient product managers who responsible for managing the product strategy and development for a line of business
- Lead 1
- Lead 2
- Lead 3



Open Government Products

Working Document

Introduction

Who we are

Why we exis

Levelling, Performance, & Promotions

This paper describes a framework for levelling, performance, and promotions for employees in an organization. It proposes 2 main ideas:
- **Levels should be based on a person's ability to contribute** rather than their position in the organizational hierarchy
- **Performance evaluation should be done across people of different levels** using the same level scale instead of just being relative to each level.

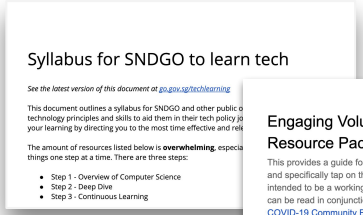
The desired outcomes of this framework are:
- Progression and recognition for individual contributors instead of requiring a management role
- Empowering strong performers quickly and preventing entrenchment of underperforming senior staff

Goal

The root question is why should we pay some employees more and other employees less? Putting harder notions of fairness or recognition aside, it ultimately boils down to 3 things:
- Hire good people
- Incentive them to improve
- Keep them working for you

You have to pay some people more because their skills are more in demand. You want to reward people for improving their experience and ability over time. And finally you want to make sure that the good ones stay with you over time.

Practically this means we need to do 2 things:



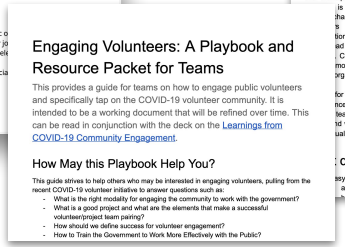
Syllabus for SNDGO to learn tech

See the latest version of this document at go.gov.sg/techlearning

This document outlines a syllabus for SNDGO and other public o technology principles and skills to aid them in their tech policy jo your learning by directing you to the most time effective and rel

The amount of resources listed below is **overwhelming**, especia things one step at a time. There are three steps:

- Step 1 - Overview of Computer Science
- Step 2 - Deep Dive
- Step 3 - Continuous Learning

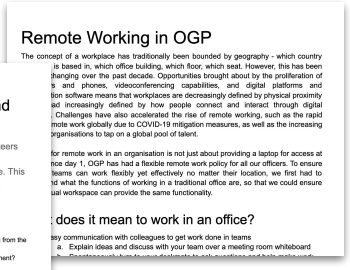


Engaging Volunteers: A Playbook and Resource Packet for Teams

This provides a guide for teams on how to engage public volunteers and specifically tap on the COVID-19 volunteer community. It is intended to be a working document that will be refined over time. This can be read in conjunction with the deck on the Learnings from COVID-19 Community Engagement.

How May this Playbook Help You?

This guide strives to help others who may be interested in engaging volunteers, pulling from the recent COVID-19 volunteer initiative to answer questions such as:
- What is the right modality for engaging the community to work with the government?
- What is a good project and what are the elements that make a successful volunteer/project team pairing?
- How should we define success for volunteer engagement?
- How to Train the Government to Work More Effectively with the Public?



Remote Working in OGP

The concept of a workplace has traditionally been bounded by geography - which country is based in, which office building, which floor, which seat. However, this has been changing over the past decade. Opportunities brought about by the proliferation of and phones, videoconferencing capabilities, and digital platforms and tion software means that workplaces are decreasingly defined by physical proximity ad increasingly defined by how people connect and interact through digital . Challenges have also accelerated the rise of remote working, such as the rapid mote work globally due to COVID-19 mitigation measures, as well as the increasing organisations to tap on a global pool of talent.

for remote work in an organisation is not just about providing a laptop for access at nce day 1, OGP has had a flexible remote work policy for all our officers. To ensure eams can work flexibly yet effectively no matter their location, we first had to d what the functions of working in a traditional office are, so that we could ensure ual workspace can provide the same functionality.

does it mean to work in an office?

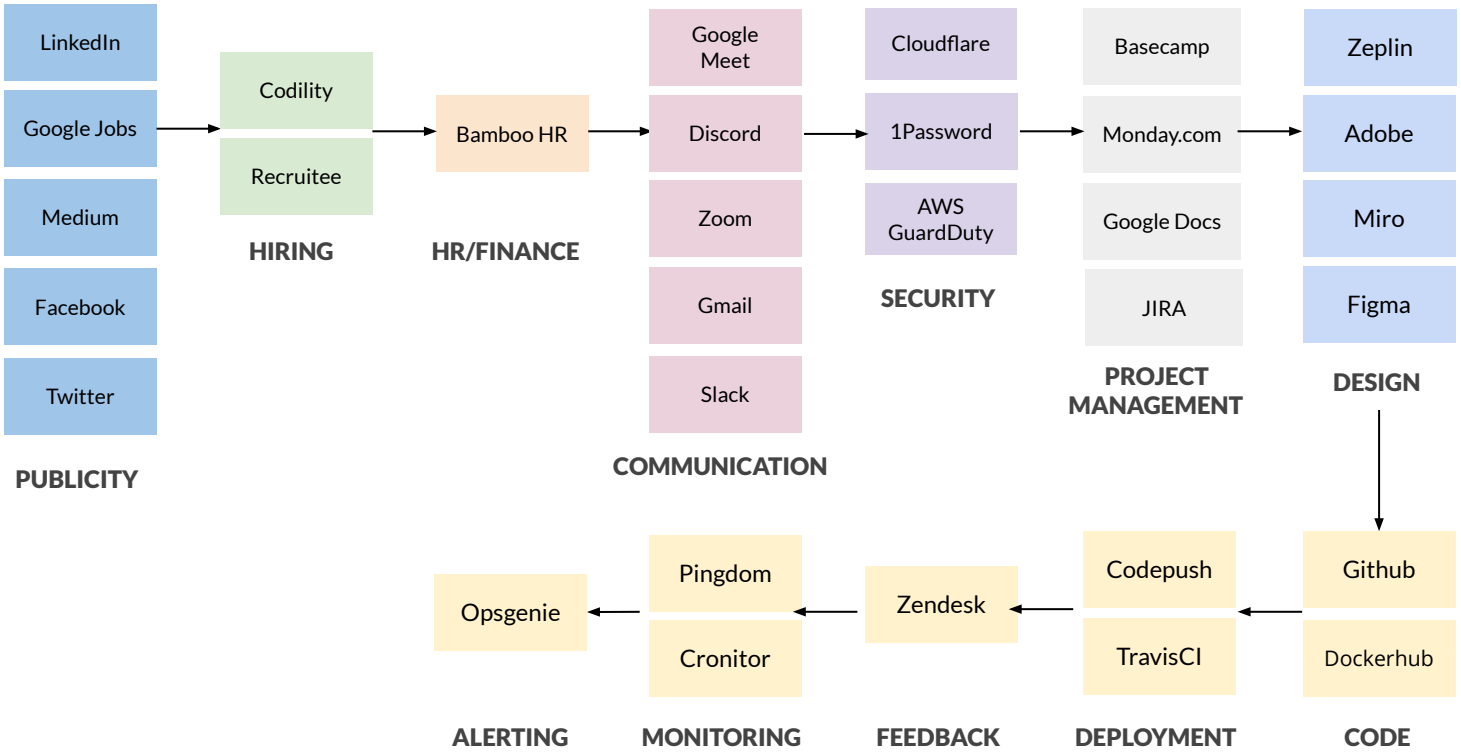
ey communication with colleagues to get work done in teams
a. Explain ideas and discuss with your team over a meeting room whiteboard

How we build and maintain good products

How we run the organisation

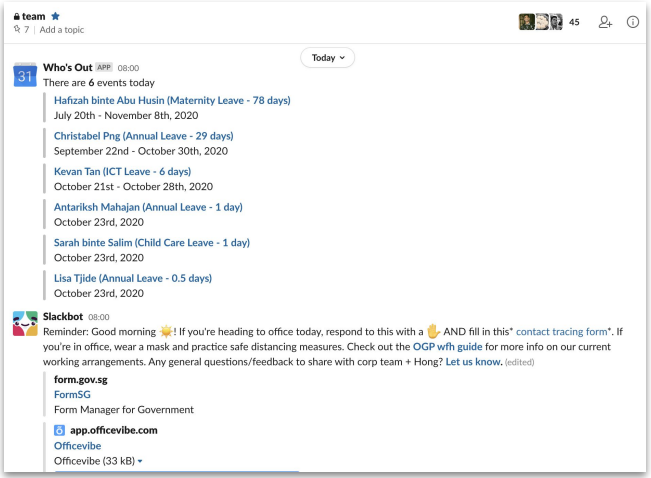
(People Ops, Operations, Marketing, and everything in between)

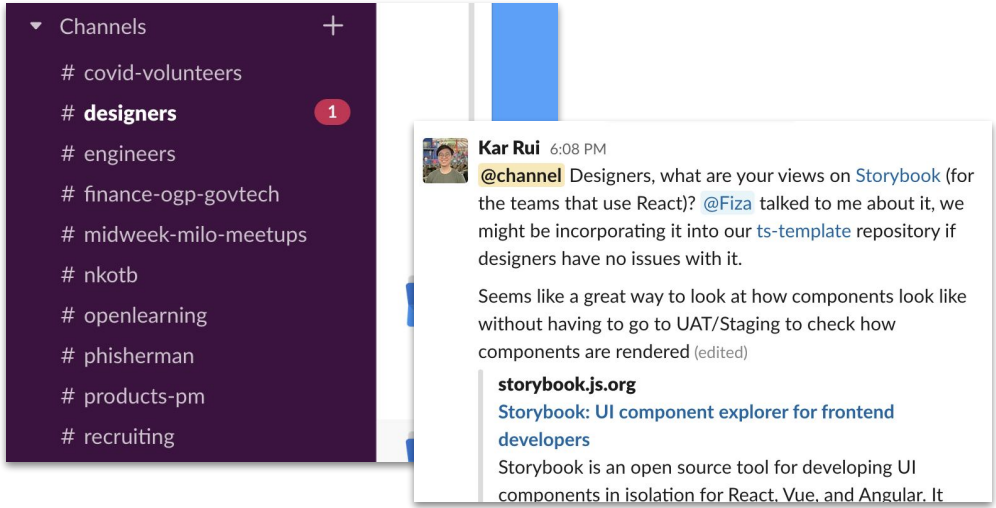
We use *off-the-shelf* cloud software



We use SaaS tools to improve officer productivity and equip ourselves for remote/hybrid work

How Slack helps us work better:



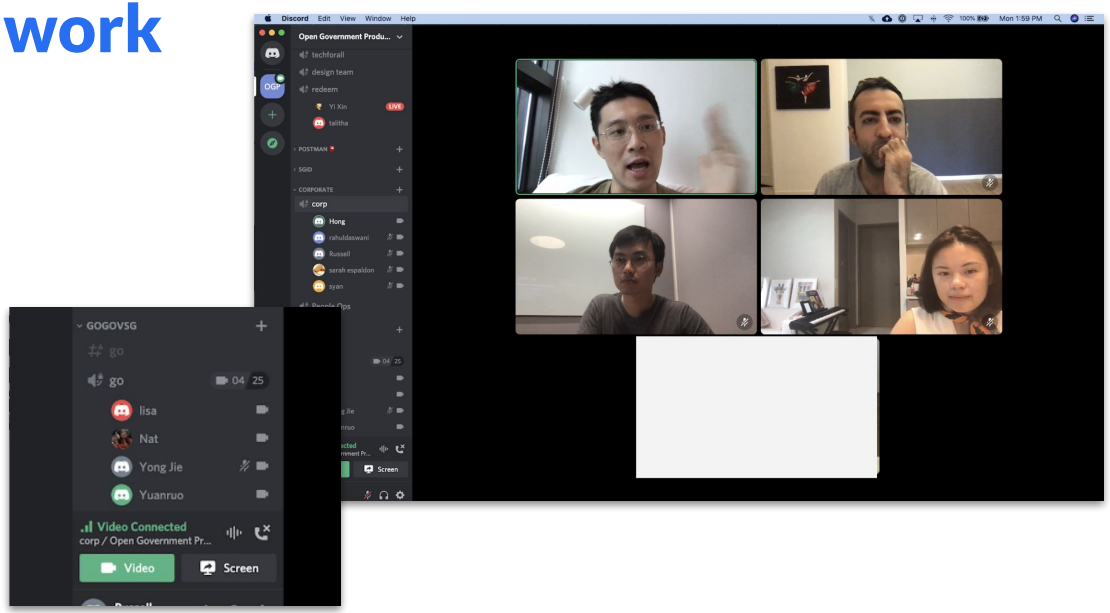


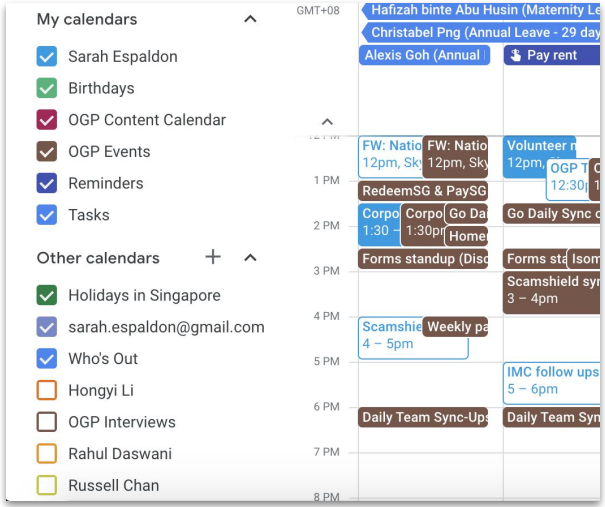
Slack: Messages and automated reminders across the organisation

Slack: Discussions in specific channels which are discoverable by all - even new officers

© 2020 Open Government Products

We use various digital tools to improve officer productivity and equip ourselves for remote/hybrid work



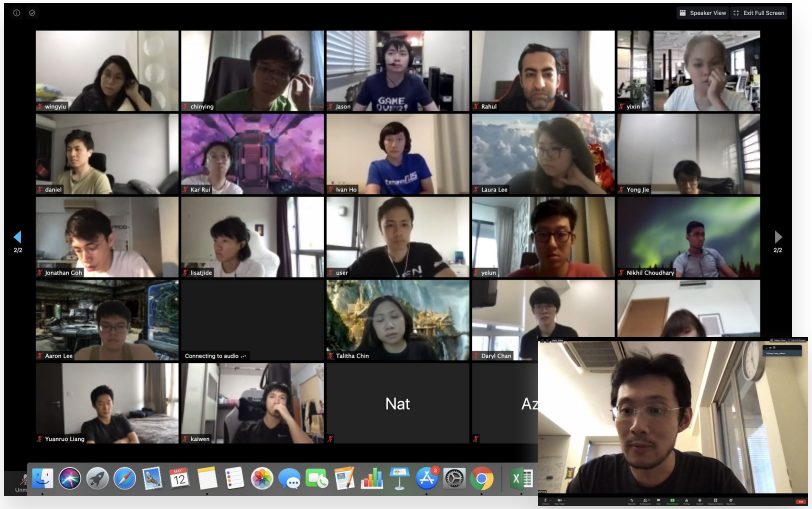


Discord: Impromptu video chats and always-on channels which anyone can drop into for quick check-ins and questions

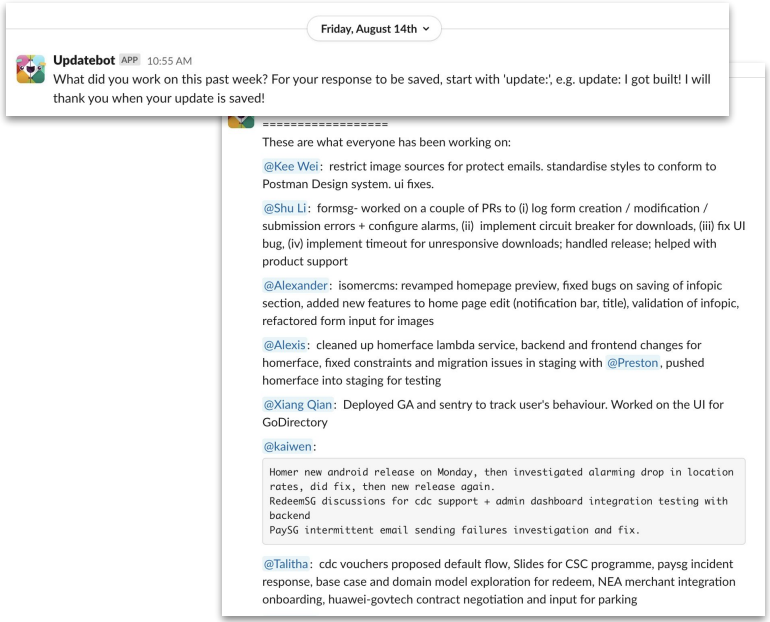
Google Calendar: Searchable calendars for easy scheduling; central organisation calendar for regular team sync-ups which anyone can join

© 2020 Open Government Products

We use various digital tools to improve officer productivity and equip ourselves for remote/hybrid work



Zoom: Daily team sync-ups to wind down the workday and share quick updates across the team on what's going on



Updatebot (Slackbot): Weekly informal updates on work done across the team for info sharing and alignment

© 2020 Open Government Products

Cost of Cloud Services

pingdom	**S$154** per month for the entire organisation
recruitee	**S$106** per month for the entire organisation
slack	**$11** per user per month
G Suite	**$8** per user per month

© 2020 Open Government Products

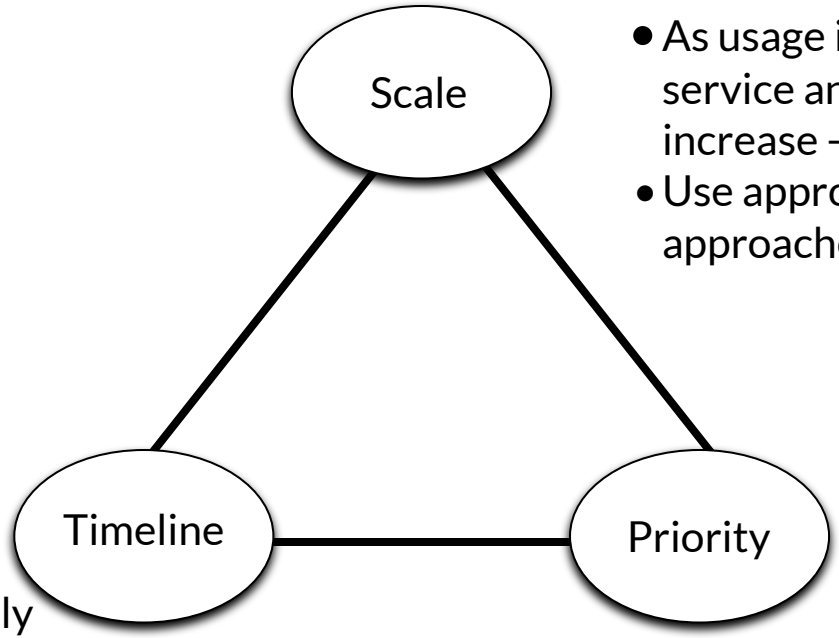
OGP is run on Block Budget and Manpower

OGP was formed in Jul 2019, with a **3-year runway for experimentation**

Block budget and **headcount** allocated for OGP (~2% of overall resources), rather than specific products

Majority of costs on EOM and subscriptions to cloud services

Principles for resource allocation (budget)

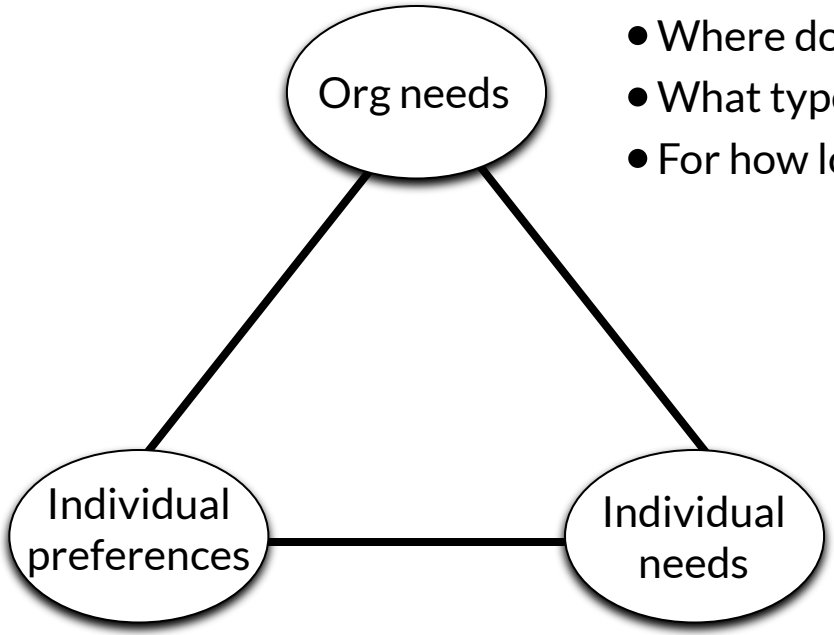


- As usage increases, cost of cloud service and other SaaS solutions increase - when do clients pay?
- Use appropriate procurement approaches

- Plan budgets (through AORs) for <1 year
- Track metrics and spending at least monthly

- Emergent: Which products and features will result in the most public good?
- What do clients/users need most?

Principles for resource allocation (manpower)

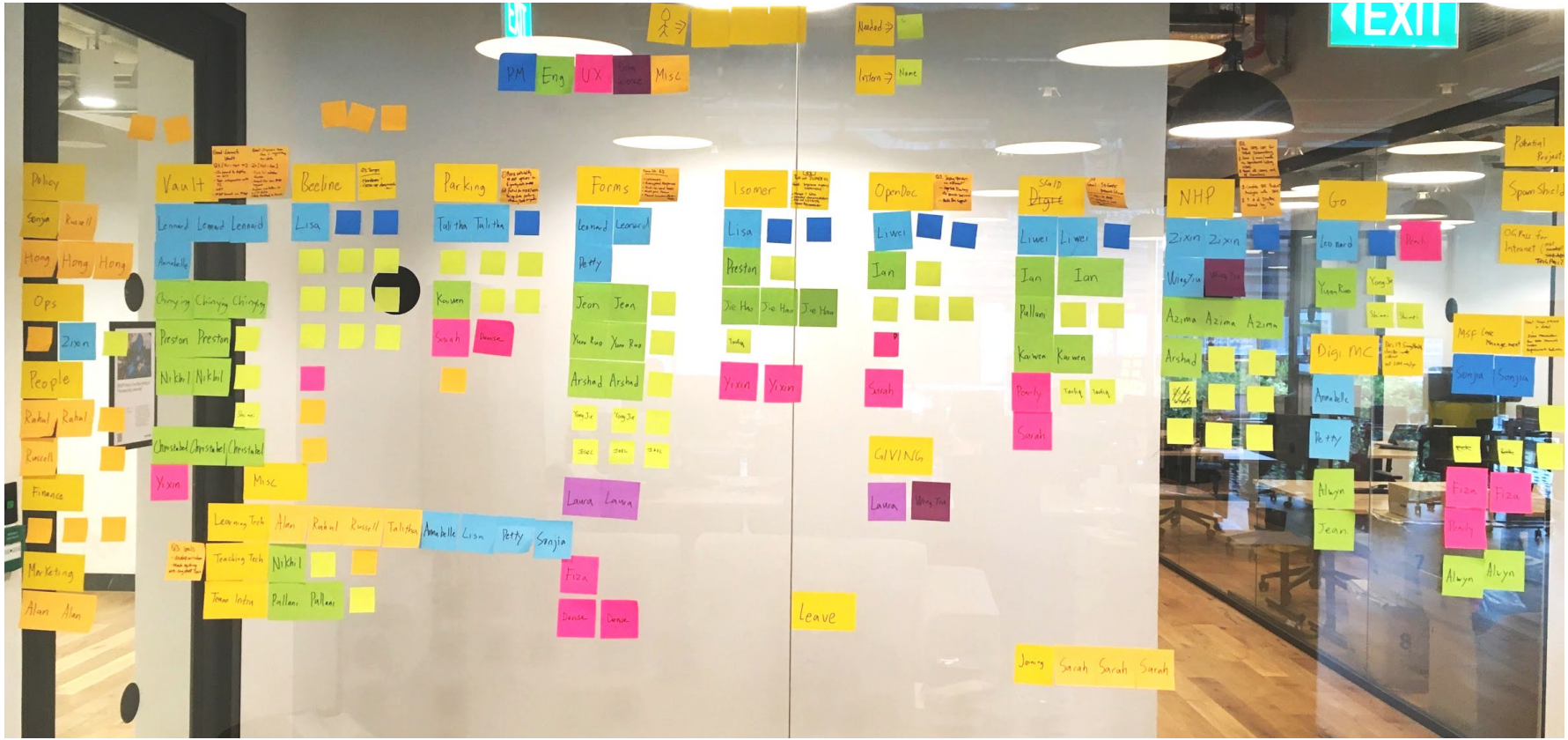


- Where do we need resources?
- What type of resources?
- For how long?

- What aspirations might people want to work towards?
  - Types of roles
  - Focus areas for products

- What opportunities do people need to level up?
- How to balance longer term skill development with opportunistic events?

Resource allocation in practice: Board



Our allocation board: e-version (Q3 2020)

A	B	C	D	E	F	G	H	I	J	K	L	M	N
Corporate (Core)	**FormSG**	**Vault**	**Isomer**	**Postman**	**SGID**	**RedeemSG**	**Scam Shield**	**Go.gov.sg**	**Send**	**DigiMC**	**Homer**	**Temperature**	**Parking.sg**
	Production	Production	Production	Production	Development	Development	Development	Production	Production	Maintenance	Maintenance	Maintenance	Maintenance
Hong	Leonard	Lennard	Leonard	Leonard	Liwei	Talitha	Lennard	Lisa		Zixin	Zixin	Maintained by FormSG Team	Talitha
Hong	Sonjia	Lennard	Lisa	Petty	Liwei	Talitha	Wing Yiu	Yong Jie			Zixin		Kaiwen
Hong	Sonjia	Christabel Png	Lisa	Petty	Liwei	Yixin	Wing Yiu	Yong Jie			Laura		
Rahul	Sonjia	Christabel Png	Yixin	Sarah S	Ian	Kevan	Wing Yiu	Yong Jie			Laura		
Rahul	Fiza	Christabel Png	Yixin	Sarah S	Ian	Kevan	Aaron	Alwyn			Laura		
Rahul	Fiza	Pallani	Preston	Sarah S	Ian	Kevan		Pearly			Pearly		
Russell	Fiza	Daniel	Alwyn	Jean	Aaron	Kaiwen		Yuan Ruo			Pearly		
Russell	Yuanruo	Daniel	Alwyn	Jean	Aaron	Kaiwen		Natalie			Preston		
Russell	Yuanruo	Daniel		Jean		Pallani		Natalie			Preston		
Sarah E	Yuanruo	Nikhil		Chin Ying		Pallani		Alwyn			Jie Hao		
Sarah E	Arshad	Nikhil		Chin Ying							Jie Hao		
Sarah E	Arshad	Nikhil		Chin Ying							Jie Hao		
	Arshad			Azima							Alex		
	Antariksh			Azima							Alex		
	Antariksh			Azima							Alex		
	Antariksh			Kee Wei							Alexis		
	Kar Rui			Kee Wei							Alexis		
	Kar Rui			Kee Wei							Alexis		
	Kar Rui										Christabel Neo		
	Shu Li										Christabel Neo		
	Shu Li										Christabel Neo		
	Shu Li												

Our allocation board: e-version (Q4 2020)

Corporate (Core)	Forms	Vault	Isomer	Postman	SGID	RedeemSG	Scam Shield	Go.gov.sg	Send	DigiMC	Homer	Temperature	Parking.sg
	Production	Production	Production	Production	Development	Development	Development	Production	Production	Maintenance	Maintenance	Maintenance	Maintenance
Hong	Leonard	Lennard	Leonard	Leonard	Liwei	Talitha	Lennard	Lisa		Zixin	Zixin		Talitha
Hong	Sonjia	Lennard	Lisa	Petty	Liwei	Talitha	Wing Yiu	Yuanruo			Zixin		----------
Hong	Sonjia	----------	Lisa	Petty	Liwei	----------	Wing Yiu	Alwyn			Laura		Kaiwen
Rahul	Pearly	Christabel Png	Sarah S	Sarah S	Ian	Yixin	Wing Yiu	Alwyn			Laura		----------
Rahul	Pearly	Christabel Png	Natalie	Sarah S	Ian	Yixin	Aaron	----------			Laura		----------
Rahul	Pearly	Christabel Png	Natalie	Natalie	Ian	Yixin	----------	Yong Jie			Preston		
Russell	Yuanruo	Arshad	Preston	Jean	Aaron	Kevan	----------	Yong Jie			----------		
Russell	Yuanruo	Arshad	Preston	Jean	Aaron	Kevan		Yong Jie			----------		
Russell	Antariksh	Arshad	Jie Hao	Jean	----------	Kevan							
Sarah E	Antariksh	Daniel	Jie Hao	Chin Ying		Kaiwen							
Sarah E	Antariksh	Daniel	Jie Hao	Chin Ying		Kaiwen							
Sarah E	Kar Rui	Daniel	Alex	Chin Ying		----------							
Pallani	Kar Rui	Christabel Neo	Alex	Azima									
Pallani	Kar Rui	Christabel Neo	Alex	Azima								Maintained by FormSG Team	
Pallani	Shu Li	Christabel Neo	Alexis	Azima									
Sonjia	Shu Li	----------	Alexis	Kee Wei									
----------	Shu Li	----------	Alexis	Kee Wei									
----------	----------	----------	Alwyn	Kee Wei									

So, how has our organisation design ...

Strategy
What is our overall direction?

People & Rewards
How do we identify, hire, develop, assess, and reward the right people?

Structure
How do we organise authority and autonomy in the org?

Processes
How do we decision-make, ideate, problem-solve, and operate?

Tools
How do we leverage technology to work effectively?

Resourcing
How do we secure and allocate money and people?

.. helped us achieve our mission?

EXPERIMENT
with new practices with the goal of delivering good tech products

EXEMPLIFY
these practices in our own operation and document them extensively

EVANGELISE
the adoption of the best of these practices to the rest of the public service

























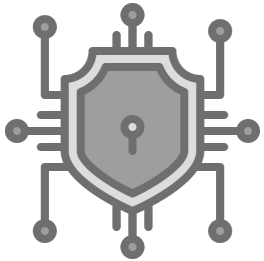


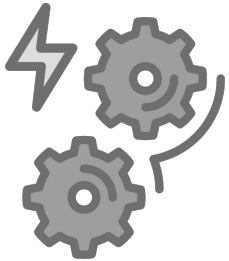




parking.sg | homer.gov.sg | mc.gov.sg | pay.gov.sg | data.gov.sg | form.gov.sg | isomer.gov.sg | id.gov.sg | redeem.gov.sg | postman.gov.sg | go.gov.sg | opendoc.sg | vault.gov.sg







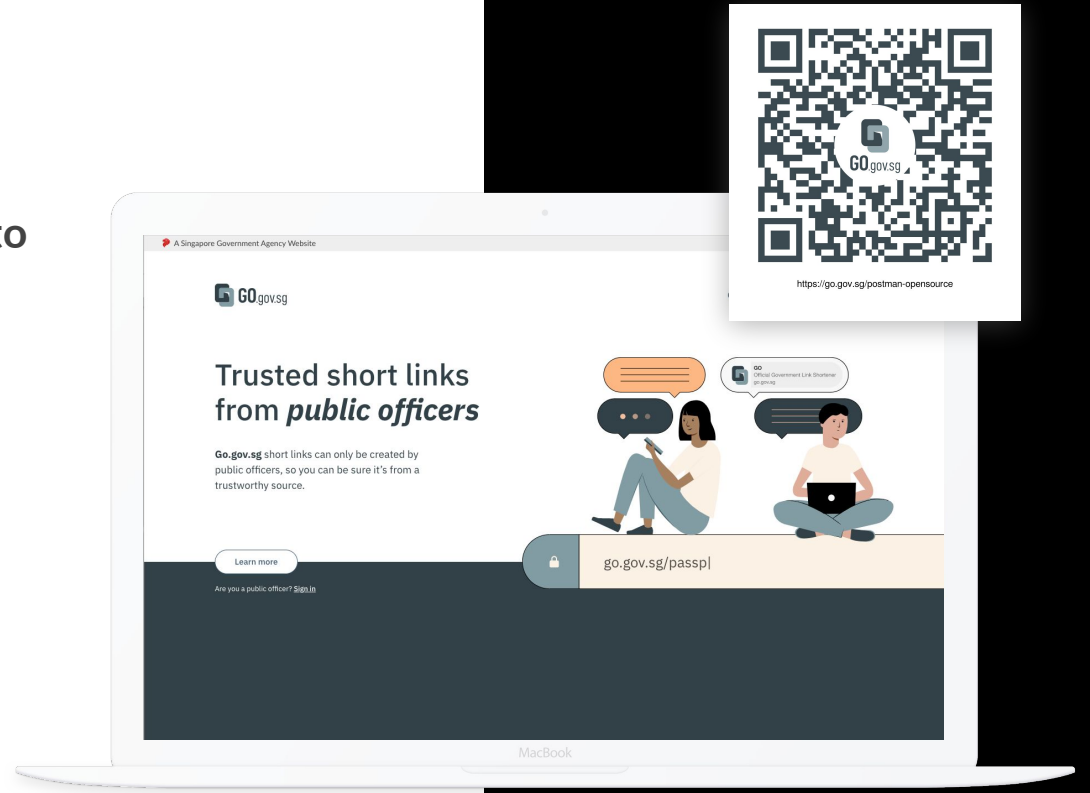
Usable & impactful digital products

Improved reliability & security

Built cheaper & faster

Go.gov.sg

Official government link shortener to protect against phishing attacks

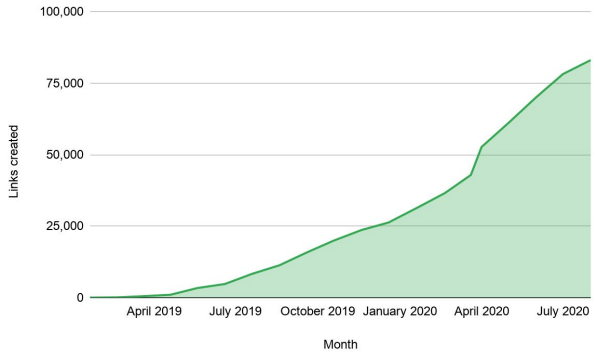


© 2020 Open Government Products

Go.gov.sg / *Metrics since launch*

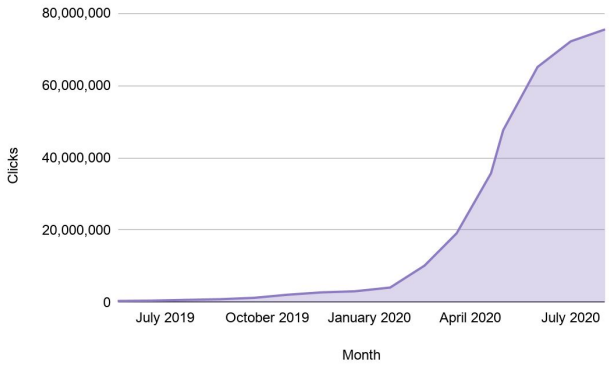
74 000

Links Created



76 million

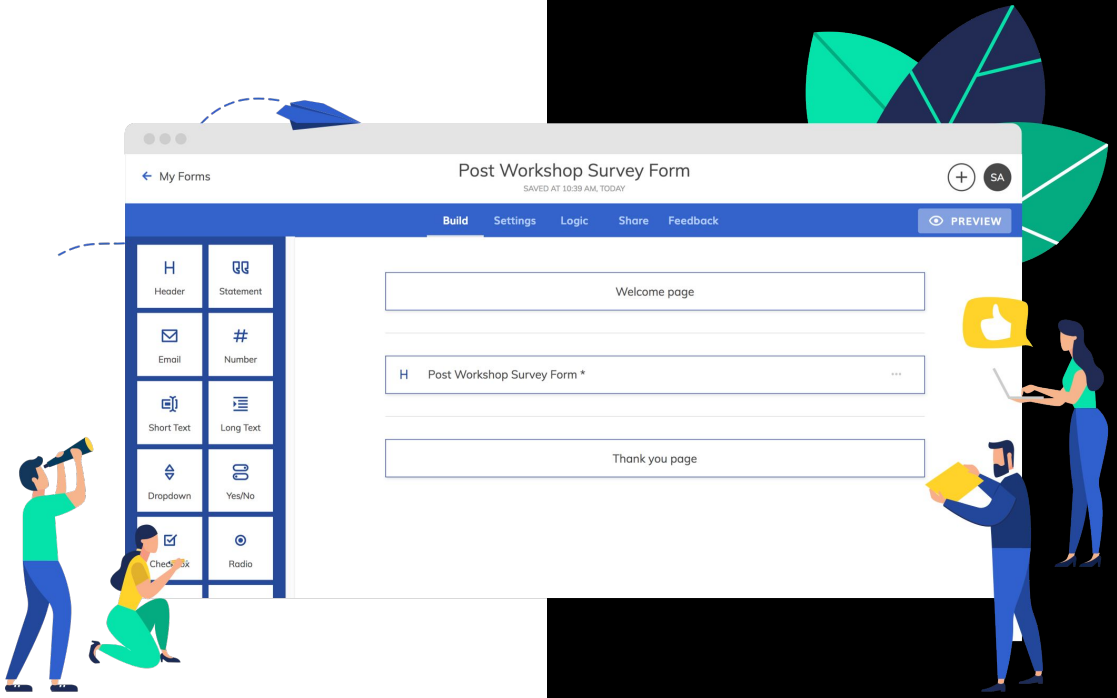
Clicks on Links



© 2020 Open Government Products

FormSG

Secure self-service digital form system



© 2020 Open Government Products

MINISTRY OF MANPOWER

MOM - Appeal to renew a Work Permit

5 mins estimated time to complete

Instructions

Only for:
- Employer.
- Person authorised by the employer.

Send us this request if you are unable to proceed with the renewal of your worker's Work Permit and would like to continue hiring the workers.

Before you start, check the reason why you are unable to renew:
- For foreign worker: http://www.mom.gov.sg/wpol

Employer's details

2. **Organisation's name**

3. **CPF submission number**

Enter CPF submission number in this format: XXXXXXXXXX-PTE-XX

Request details

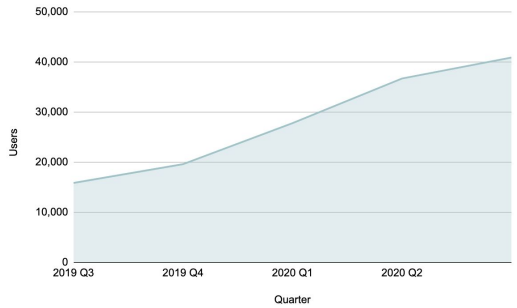
4. **Reason for request**

You are unable to proceed with the renewal (reason as indicated in WP online) because:

- ○ Company has insufficient local workforce.
- ○ Company has insufficient sub-quota.
- ○ You or the company has an adverse record.
- ○ Worker has an adverse record.
- ○ Worker has reached the maximum employment period allowed.
- ○ Worker has reached the maximum age allowed for a work permit

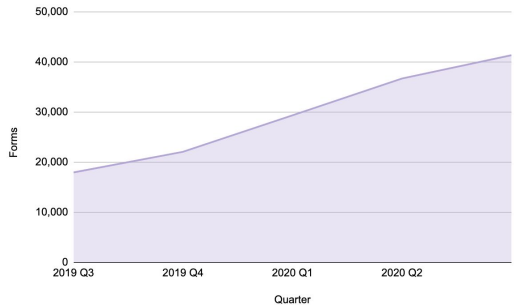
FormSG / *Metrics over past 12 months*

40k public officers
have created forms



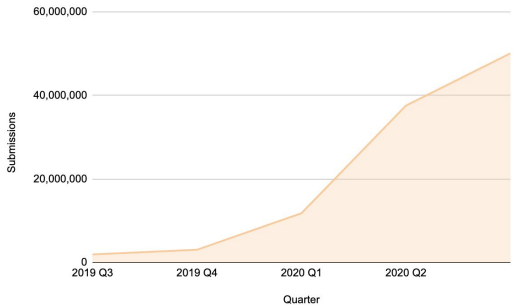
47775 PUBLIC OFFICERS ON OUR PLATFORM

41k forms
created



52006 DIGITAL FORMS DEPLOYED

50 million
form submissions

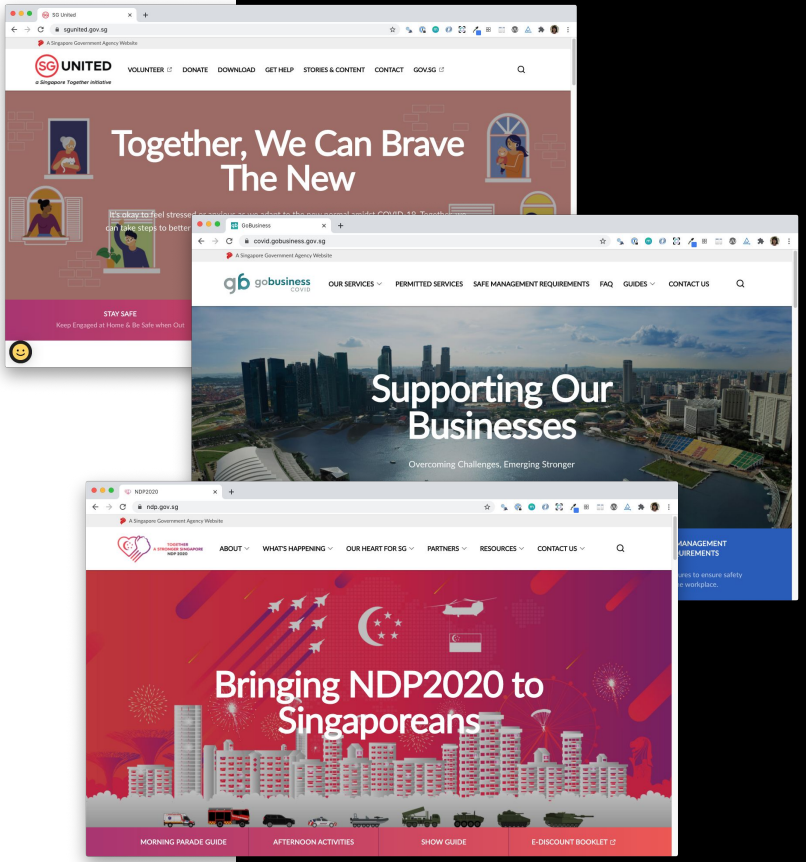


65008923 FORMS HAVE BEEN SUBMITTED

© 2020 Open Government Products

Isomer

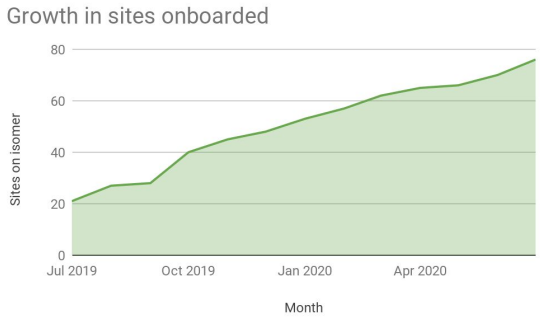
Standard website template and hosting system to build government websites that are fast, cheap and secure.



© 2020 Open Government Products

Isomer / *Key metrics*

76 sites
launched on isomer

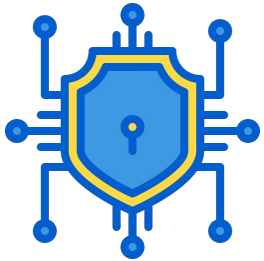


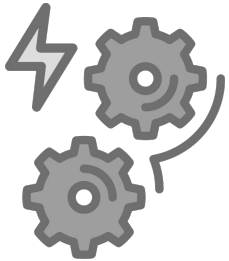
15 million
site visits



© 2020 Open Government Products







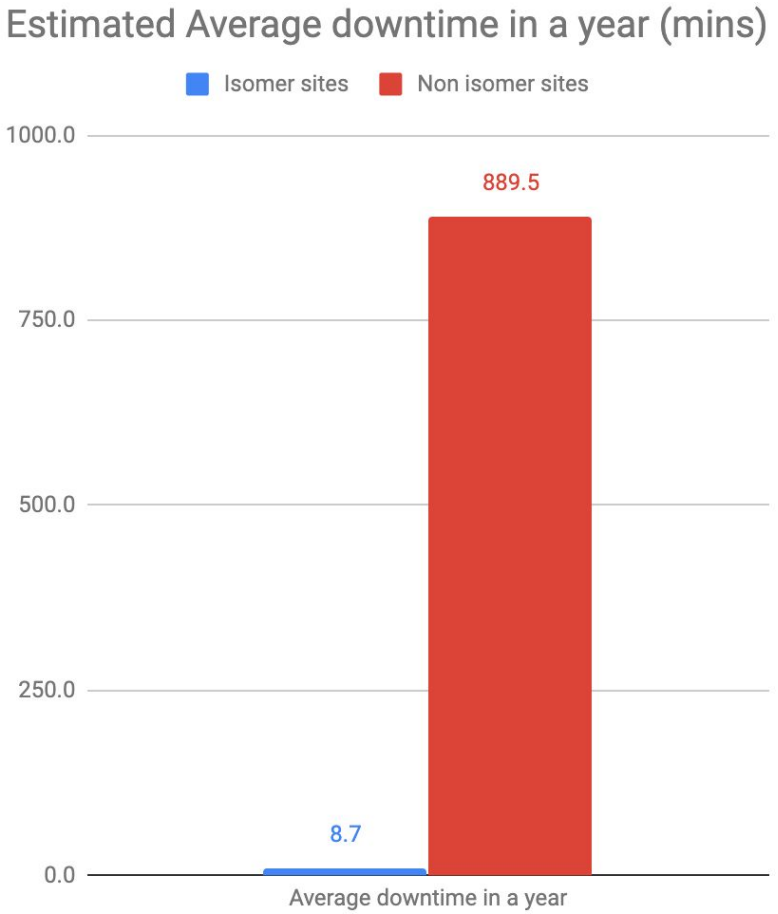
Usable & impactful digital products

Improved reliability & security

Built cheaper & faster

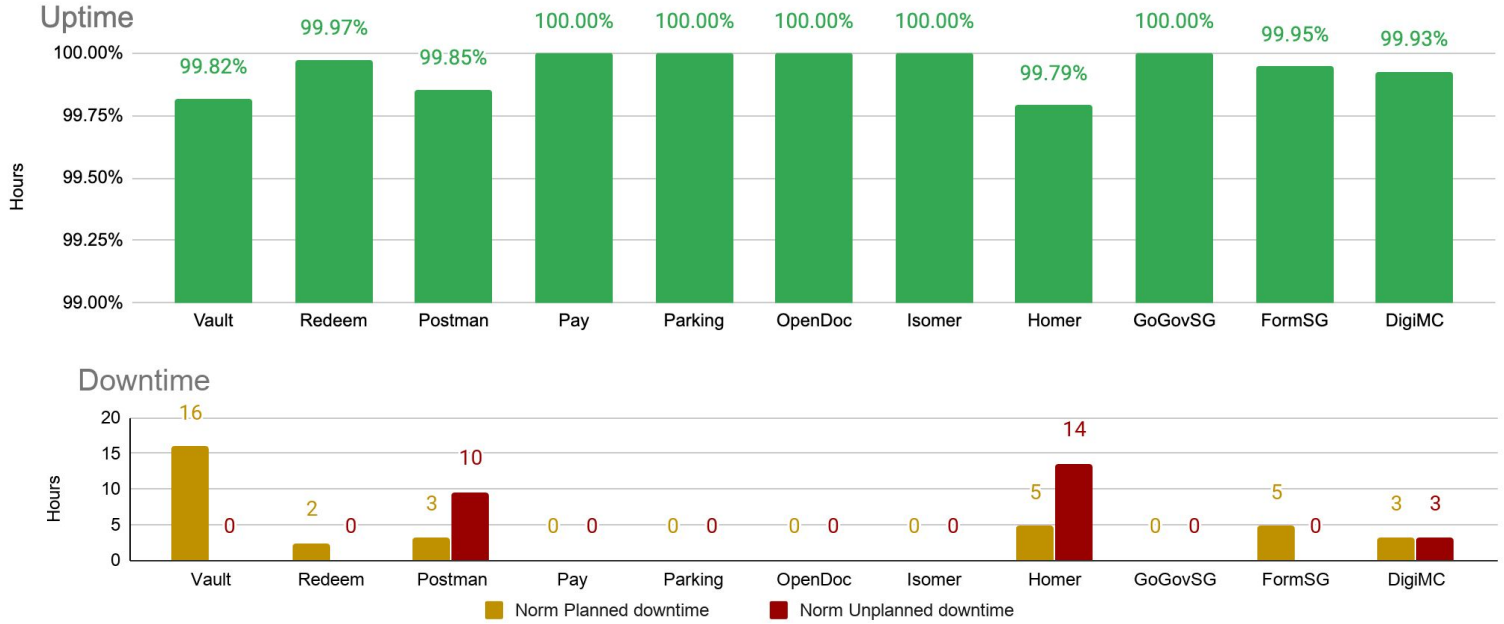
isomer

100x lower average downtime than non-isomer sites



© 2020 Open Government Products

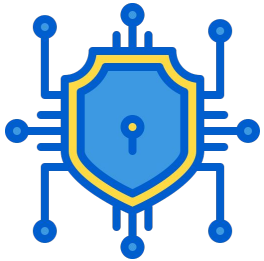
Uptime and downtime for OGP Products

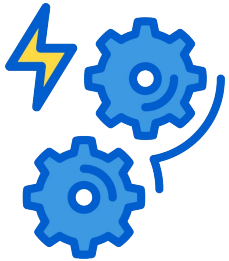


© 2020 Open Government Products

Since Jan 2020 (Hours normalized to a full year equivalent), includes planned and unplanned downtime





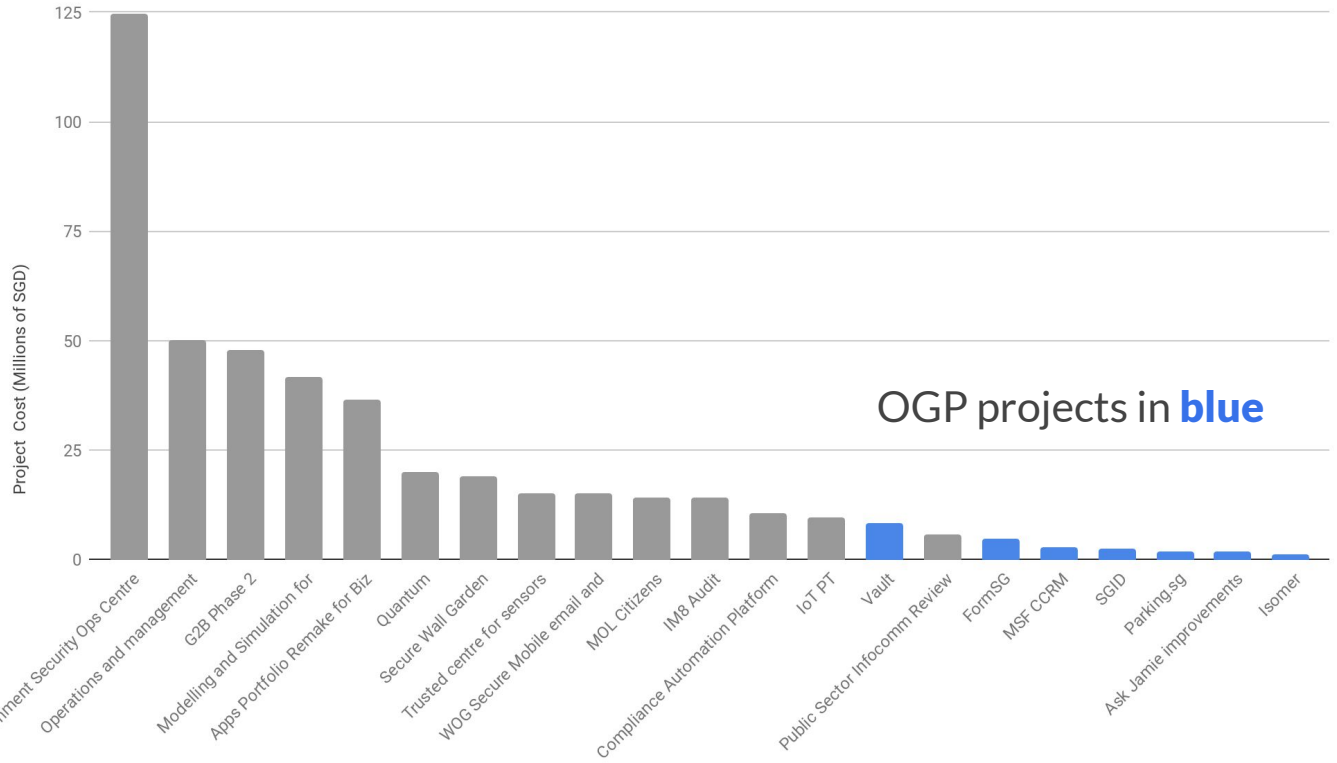


Usable & impactful digital products

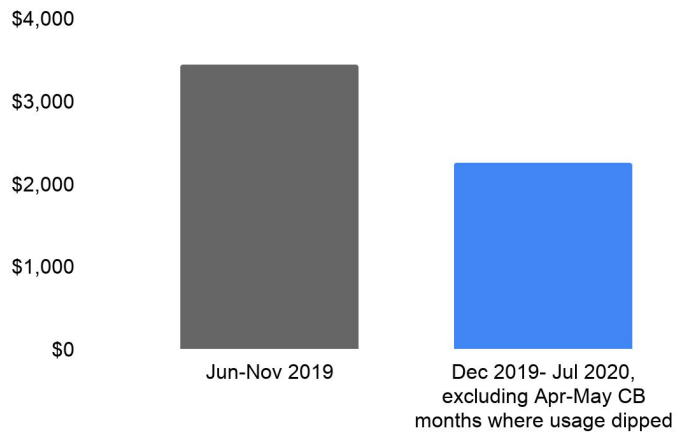
Improved reliability & security

Built cheaper & faster

Cost Comparison with CDB Pipeline Projects



© 2020 Open Government Products



~$2500
a month in infrastructure costs

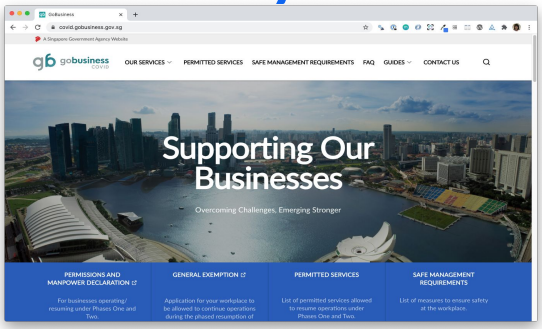
Service	Monthly in SGD	Yearly in SGD	Yearly cost per site in SGD
Netlify	420	5040	68
KeyCDN	140	1680	23
AWS	280	3360	45
Total	**840**	**10080**	**136**

~$840
a month in infrastructure costs
for 74 websites

© 2020 Open Government Products

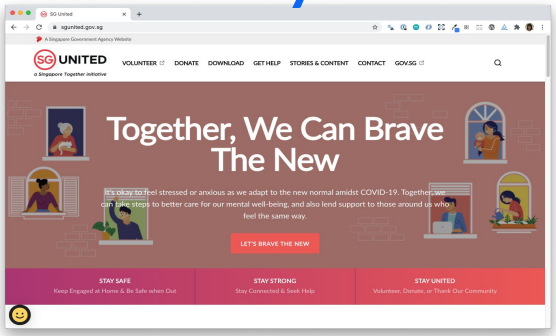
Isomer / *Launch informational sites fast*

7 days



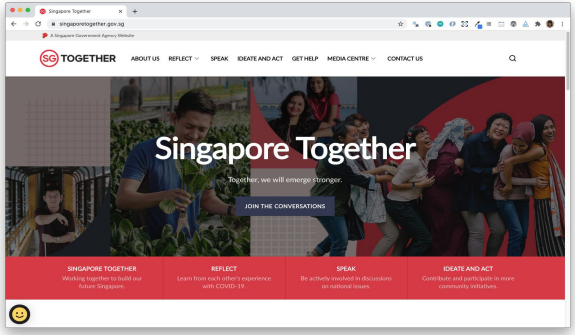
covid.gobusiness.gov.sg

3 days



www.sgunited.gov.sg

1.5 days



www.singaporetogether.gov.sg

© 2020 Open Government Products

Time to 1st roll out to public



© 2020 Open Government Products

Part 3: What’s Next?

Organisation Design is NEVER done: OGP ‘Settlers’

Organisation design is not an intermittent nor once-off exercise, but an ongoing deliberate process - to ensure that we are always tuning the organisation to be fit for purpose, as well as for what we need to do next.

Some things we thought about as we scaled from 50 to 180 people from 2021-2023:

Shoring up an expanded organisation with more product teams	Keep shipping good products for public good	Propagating our approach
The context: Team has doubled in size, with >10 product teams in a team of 50. How can we ensure that we can keep running well and sustainably?	**The context**: Product usage has scaled dramatically, and there is a suite of existing core products	**The context**: Tech and organisation practices have proven effective. How do we now thoughtfully share and scale these practices to uplift the public sector?
What this meant for org design: Defining role and growing the middle management layer; better managing central control of some aspects of team functioning (e.g. communication, learning processes, resource allocation)	**What this meant for org design**: Being deliberate about how grounds-up innovation/product discovery fits (or not) the existing base; Creating specialised responsibilities and boundaries for key functions e.g. cybersecurity	**What this meant for org design**: Redefining boundary permeability - e.g. new way of work with agency verticals (business and/or policy owners); inward permeation e.g. embedding people within OGP for learning & collaboration

Organisation Design is NEVER done: OGP ‘Town Planner’

Organisation design continues to be an ongoing deliberate process - to ensure that we are always tuning the organisation to be fit for purpose, as well as for what we need to do next.

Some things OGP had to adjust in stabilisation + transformation phase from 2024 onwards:

Motivation to stick with transformation of large organisations	Helping private sector transplants better understand the public sector	Tighter linkage of organisational outcomes to individual performance
The context: Without clarity of internal motivations of employees, and alignment to public service goals, employees can get frustrated by a slow rate of change	**The context**: Significant attrition from ex-FAANG employees due to a mismatch of expectations of speed of change / implementation	**The context**: High pressure, fast paced 6-monthly performance cycles focused on individual impact and outcomes, which didn’t always correlate to product / org outcomes.
What this meant for org design: Placing more emphasis on value signals at the point of hiring: why do candidates want to work in the public service? What vision do they have?	**What this meant for org design**: Beyond onboarding, deep engagement on what is the structure of government, what is important for civil servants, how to communicate in government.	**What this meant for org design**: Performance cycles shifted to 12 monthly. Employees’ performance is a function both of their individual impact/competencies as well as their product performance -> Product performance review in parallel with individual performance review.