



PEN-S-0013

INOVASI ASAS PEMBANGUNAN

Problem Statement

Inovasi 3

One-stop Smart platform for government funding application, processing, monitoring, tracking and reporting - using AI and Big Data Analytics to enhance the insights and impact



Name: Toni

Background: Normal working class

Grants applied: > 10

Grants obtained: 0



Name: Richson

Background: Lots of family inheritance

Grants applied: 5

Grants obtained: 4



Only 2%

of SMEs received any grants¹

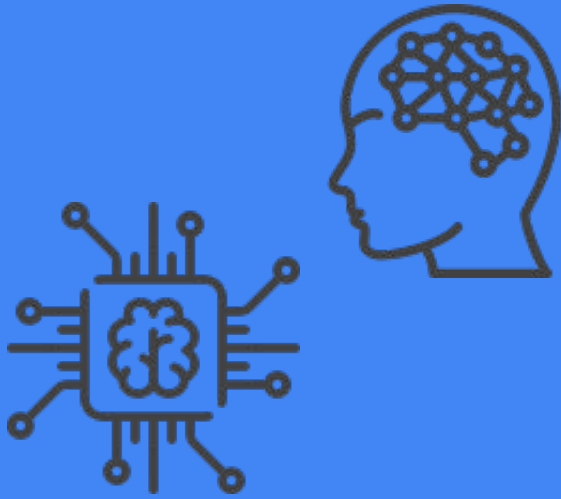
Serial grant-repreneurs are able to obtain multiple grants while legitimate SMEs suffer



What if there's a way we can use technology to improve how grants are applied and given?

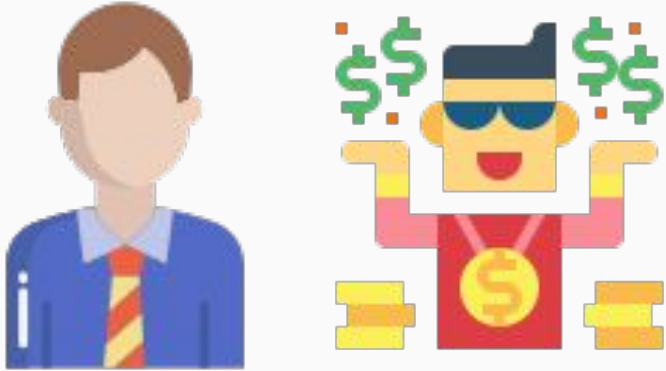


An integrated platform with a **centralised database** of grant applicants that will **identify high risk "grant-repreneur"** by utilising the power of **AI/ML** while providing an easy way for deserving grant applicants to apply through a chatbot.



Leveraging AI and Big Data Analytics

Two Groups of Users



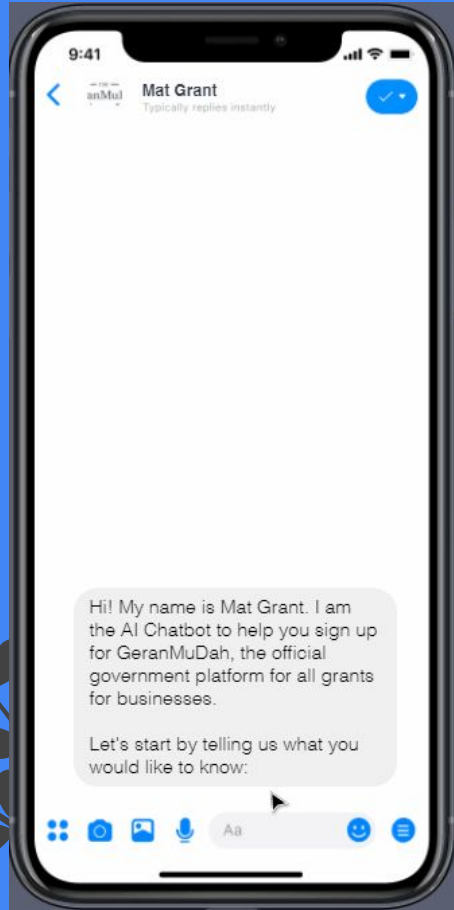
Grant Applicants



Grant Providers

Grant Applicants





A seamless application process through an AI Chatbot

1. Suggest the right grants
2. Guide applicants through the application process
3. Sync these information to a centralised database

Grant Providers

penjana

Pelan Jana Semula Ekonomi Negara



End-to-end integration with CRM to keep track of all grant applications easily

Contacts ▾ Conversations ▾ Grants ▾ Service ▾ Reports ▾									
Search 🔍 📅 ⚙️ 🔔 👤 Geranku ▾									
Deals ▾ ⌵ ⌶ Sales Pipeline ▾ All deals ▾									
Actions ▾ Import Create deal									
Search name or descri 🔍 Deal owner ▾ Create date ▾ Last activity date ▾ Amount ▾ More filters Board actions ▾ Save view									
APPOINTMENT SCHEDULED 14 QUALIFIED TO PITCH 4 PASSED FIRST ROUND 5 PASSED SECOND ROUND 5 CONTRACT SENT 8 SUCCESSFUL 8 UNSUCCESSFUL									
CIP IGNITE Grant Amount: \$150,000.00 Close date: November 7, 2020 MS		MDEC Smart Automation Grant (SAG) Amount: \$180,000.00 Close date: December 18, 2020		CIP IGNITE Grant Amount: \$300,000.00 Close date: January 28, 2021 MD		MOSTI R&D Fund Amount: \$600,000.00 Close date: December 31, 2020		CIP IGNITE (II) Amount: \$300,000.00 Close date: December 11, 2020	
MDEC Smart Automation Grant (SAG) Amount: \$150,000.00 Close date: September 5, 2020		MTDC CRDF Amount: \$500,000.00		CIP ACCELERATE Grant Amount: \$150,000.00 Close date: November 30, 2020		PlaTCOM HIP2 Amount: \$200,000.00		PlaTCOM HIP2 Amount: \$200,000.00	
PlaTCOM HIP2 Amount: \$150,000.00		MTDC CRDF Amount: \$475,000.00		PlaTCOM HIP2 Amount: \$500,000.00		MTDC CRDF Amount: \$500,000.00		MTDC CRDF Amount: \$100,000.00	
CIP ACCELERATE Grant Amount: \$475,000.00		PlaTCOM HIP2 Amount: \$200,000.00		MTDC CRDF Amount: \$100,000.00		PlaTCOM HIP2 Amount: \$100,000.00		Teraju Superb Grant Amount: \$475,000.00	
CIP IGNITE (II) Amount: \$475,000.00				Teraju Superb Grant Amount: \$500,000.00		MTDC CRDF Amount: \$150,000.00		PlaTCOM HIP6 Amount: \$100,000.00	
PlaTCOM HIP2 Amount: \$475,000.00						Teraju Superb Grant Amount: \$475,000.00		PlaTCOM HIP2 Amount: \$200,000.00	
MTDC CRDF Amount: \$200,000.00						PlaTCOM HIP2 Amount: \$100,000.00		MTDC CRDF Amount: \$150,000.00	
Teraju Superb Grant						Teraju Superb Grant Amount: \$200,000.00		MTDC CRDF Amount: \$100,000.00	
Total: \$4,650,000		Total: \$1,355,000		Total: \$1,550,000		Total: \$1,550,000		Total: \$1,950,000	
								Total: \$2,225,000	
								Total: \$1,000,000	



























A centralised database of entrepreneurs with our proprietary KYG screening functionality

Contacts ▾
19 Contacts

Actions ▾ Import Create contact

★ All contacts ▾ ★ My contacts ★ Unassigned contacts + Add view All views

Search name, phone, € 🔍 Contact owner ▾ Create date ▾ Last activity date ▾ Lead status ▾ More filters Table actions ▾ Save view






<input type="checkbox"/>	NAME ▾	EMAIL	PHONE NUMBER	CONTACT OWNER	ASSOCIATED COMPANY	RISK LEVEL
<input type="checkbox"/>	 Jay Low	<small>KYG</small> big@whale.com	Treequote	 Unassigned	 Shenzhen M-Whale Co.	NOT STARTED
<input type="checkbox"/>	 Hee Hon	michael.scott@zathunicon.com.my	60185546323	 Unassigned	--	NOT STARTED
<input type="checkbox"/>	 James Tan	jk@million.com	+60162254451	 Unassigned	 Bags-A-Million.COM	NOT STARTED
<input type="checkbox"/>	 Jam Max	terry@hudson.biz	60123456789	 Unassigned	 hudson.biz	NOT STARTED
<input type="checkbox"/>	 Ling Li	macmitch@groovestreet.com	60195543221	 Unassigned	 Groove Street Grille	NOT STARTED
<input type="checkbox"/>	 Kenny Gee	kg@fundsuper.com	60123456789	 Unassigned	 fundsuper.com	MEDIUM
<input type="checkbox"/>	 Lauren Tzirides	ltziri@hubspot.com	1(888) 482-7768	 Unassigned	 HubSpot, Inc.	HIGH
<input type="checkbox"/>	 Lan See	ltziri@dalttechnology.com	60185546323	 Unassigned	 Datamatics Business Solutions ...	LOW
<input type="checkbox"/>	 Michael Scott	michael.scott@dundermifflin.com	1(800) 555-5555	 Unassigned	 National Broadcasting Company	LO

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19 Contacts

Actions ▾ Import Create contact

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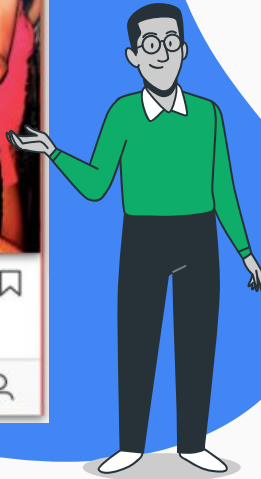
<input type="checkbox"/>	 Jay Low	big@whale.com	Treequote	 Unassigned	 Shenzhen M-Whale Co.	HIGH
<input type="checkbox"/>	 Hee Hon	michael.scott@zathunicon.com.my	60185546323	 Unassigned	--	NOT STARTED

KYG

Know Your “Grant-repreneurs”

Know Your “Grant-repreneurs” (KYG) uses **machine learning algorithms** to recognise **pattern** or **common attribute** of known “grant-repreneurs”.

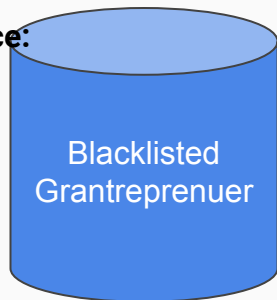
KYG spots any **similarity** of **blacklisted “grant-reprenuer”**



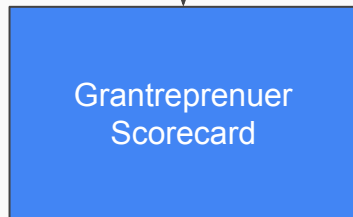
How it works?

Various data source:

- Cradle
- MDEC
- MaGIC
- MOSTI
- etc



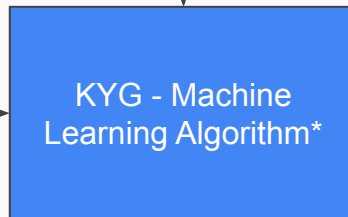
Feed data to train machine learning model



Application



An applicant profile feed to KYG



Social Media Scraping Web Scraping

- | | |
|----------------------|------------------|
| - Facebook | - Google |
| - Instagram | - News |
| - Twitter | - Legal fillings |
| - LinkedIn/Glassdoor | - SSM database |

High

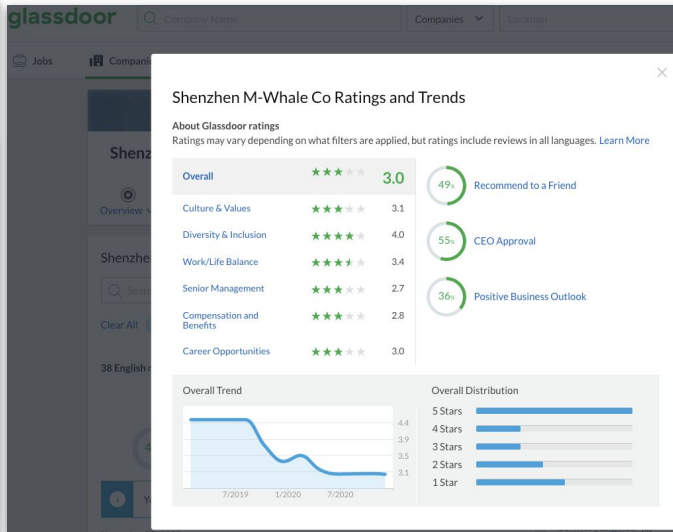


Medium

Low

*With applicant's consent

“Grant-reprenuer” Scorecard



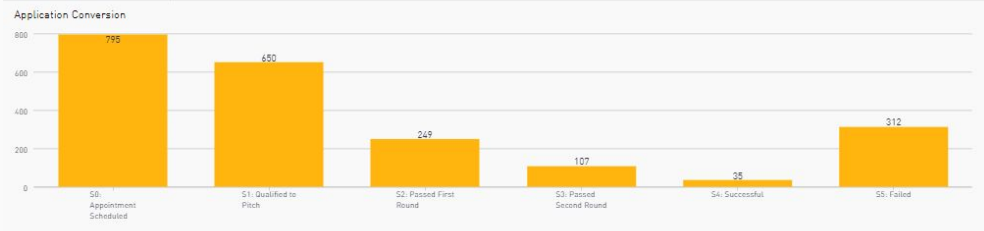
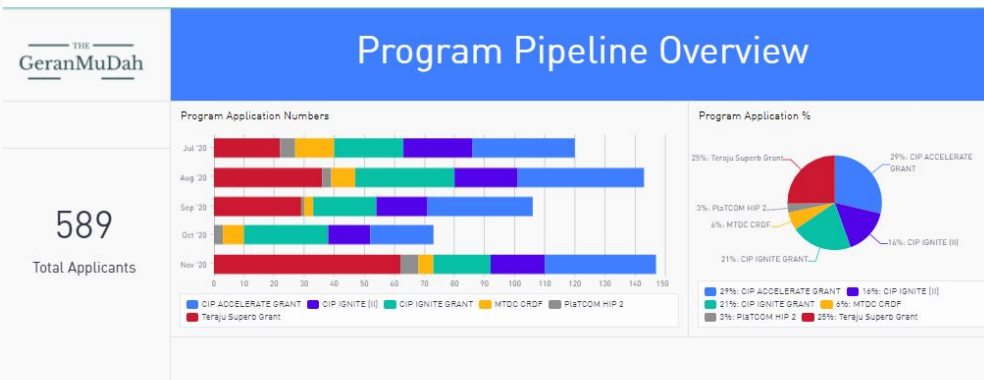
Red Flag	Probability	Weightage
Excessive Party	0.83	0.4
Expensive Vacation	0.92	0.4
Grantreprenuer Network	1.00	0.8
Existing Lawsuit	1.00	1
Negative News Report	1.00	1
Negative Social Media Sentiment	0.78	0.5
etc

Hypothesis 01 : Grantreprenuers like to project a “successful” lifestyle.

Overview Dashboard

- Showcase the application pipeline and details
- Provide summary statistics on a program level, filterable by program

GeranMuDah Pipeline Dashboard



Post Grant Monitoring



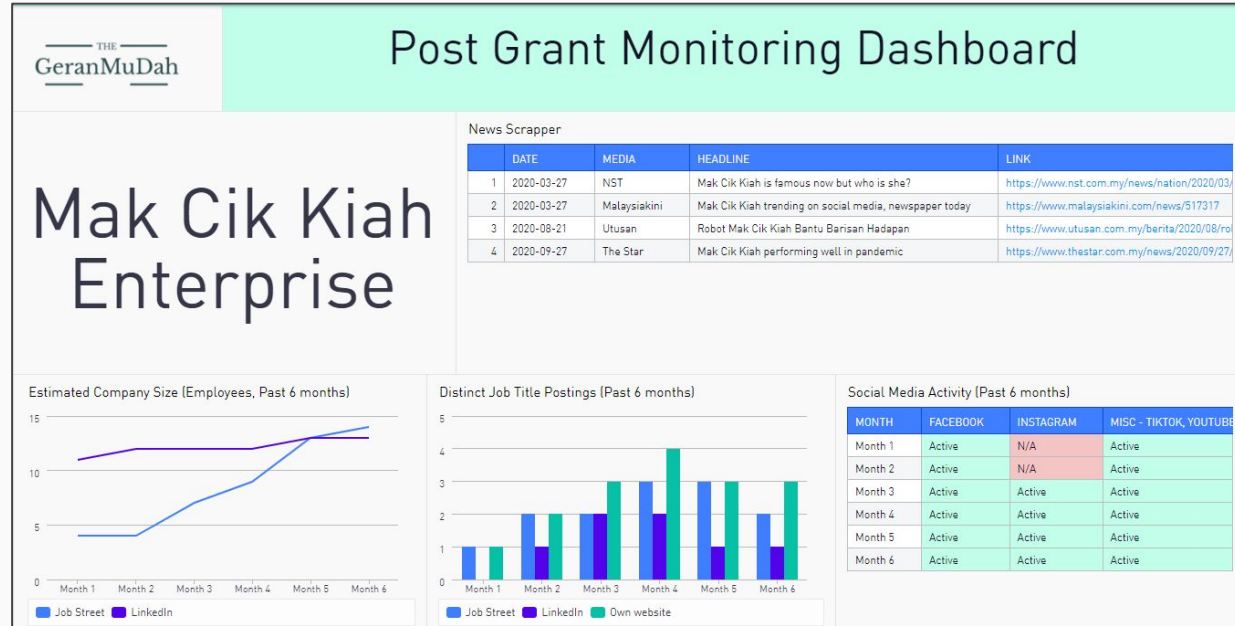
Post Grant Monitoring Dashboard



Smart Scraping Algorithm

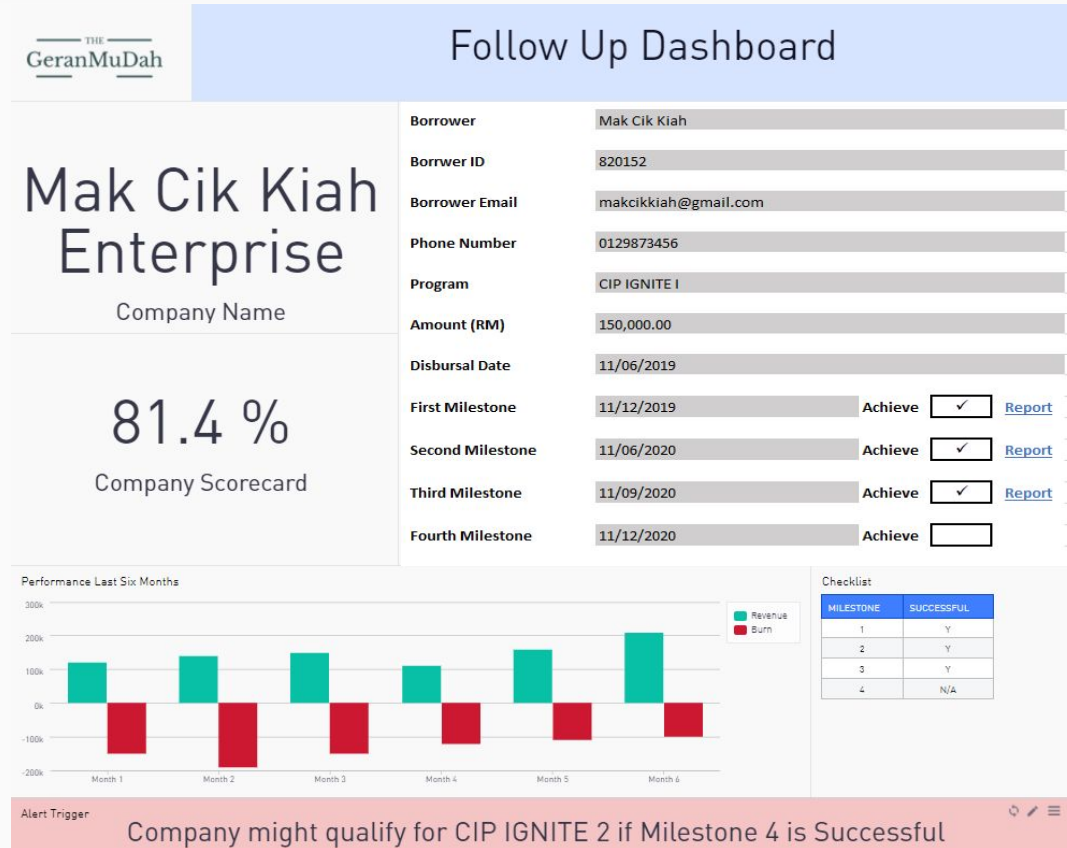


Monitor and Measure Performance



Follow up Dashboard

- Automated follow up processes
- Auto pulling of CTOS / SSM data upon availability to update company info
- **Alert Trigger** if a company is eligible to apply for other “next-stage” grants





Conclusion

**Match Grants through
Chatbot**



**KYG Machine Learning to
flag "Grant-repreneurs"**



**Post Grant Monitoring
Dashboard**





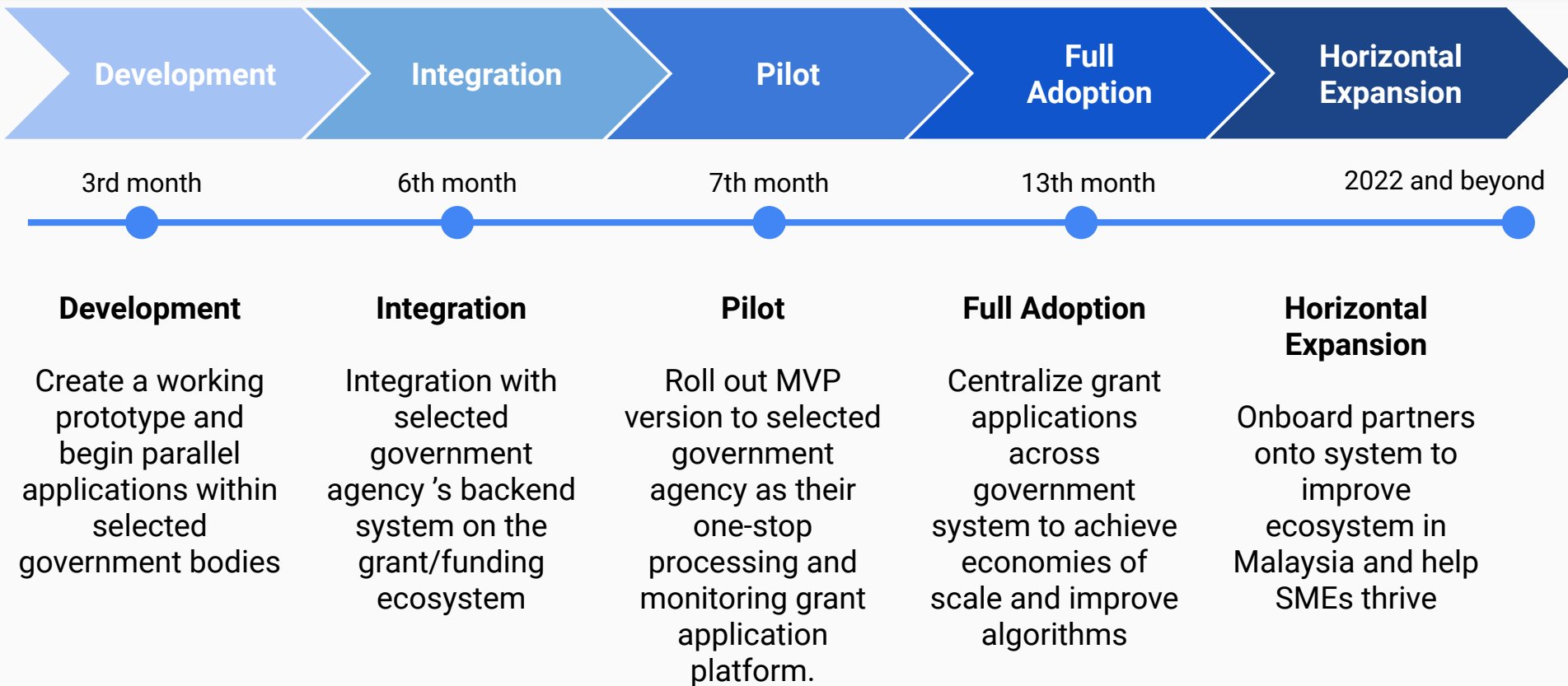
Thank You



Questions and Answer

Appendix

Roadmap





**A chance to pitch
for MYHackathon
final**



**List of successful
grant applicants**



**Blacklisted grant
applicants for
better screening**



**Support from
government to
make this project a
success**



Our Ask

THANK YOU



Leveraging AI and Big Data Analytics

“KYG” Checks

Using AI and Big Data Analytics, we devised a proprietary “KYG” check on the grant applicants to weed out potential grantpreneurs.

Smart Grant Recommendation

AI and Big Data Analytics will also help in recommending grants to applicants, as well as highlighting potential “next step” grants that companies might qualify.

Post Grant Monitoring

AI and Big Data Analytics will continuously monitor successful applicants' post-grant journey through the system's smart scraping algorithm



Team



Toh Sirn Loong

Technology
Consultant



Lim Yangli

Data
Scientist



Lee Soon Yan

UI/UX
Designer

Q&A

Q: What if the applicant do not have any social media, or if it is private?

A: While social media is one of the examples that we shown, our KYG model also scraps other publicly available information like linkedin, google, news, legal fillings and also SSM documents.

Scrapping a grantpreneur's social media is also just one of the hypothesis experiments that we will run. We also have other hypothesis and strategies that we can to continue to improve our machine learning model.

Q: Can you explain how the KYG works?

A: Refer to slide 16. We start with building a scorecard model using the existing blacklisted grantrepeuneur list. From there we can start identifying patterns and attributes, assign weightage to them. When a new applicant applies, we can then compare this applicant against the existing model to assess whether they are a potential high risk grantpreneur.

Q: What if you wrongly label someone as a grantpreneur even though that person is actually not?

A: We are actually not labelling that person. We are just flagging them as a potential high risk person. The officer will also need to do another last mile checking for high risk entrepreneurs. This can also then help the officers to reduce their workload when they do the last mile checking, as they only need to look at the applicants who are flagged as high risk instead of everyone.

The best part is that our model will also keep improving with every new data that we have.

Q&A

Q. What is your business model?

A. Same like ctos. Charge per KYG. Haven't determine exact pricing.

Our prospective client will be government agencies for grant, and vc firm + angel investor to manage their portfolio.

Q: What is the roll out timeline for this project? What has been built?

A. Dashboard for now. The KYG we need data from cradle / government agencies. Then show the roadmap on slide 25 for timeline.