

**GOVTECH**  
SINGAPORE

# Towards A Data Analytics Ready Organisation

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“

If you want to go *fast*  
*go alone;*

If you want to go *far*  
*go together.*

”

*African Proverb*

“

If you want to do  
Data Science and AI *fast*,  
do with *Data Scientists*;

But if you want to do it  
*in a sustainable manner*,  
do with the *entire org.*

”

*Our Philosophy*



# Right Ingredients For **Success**

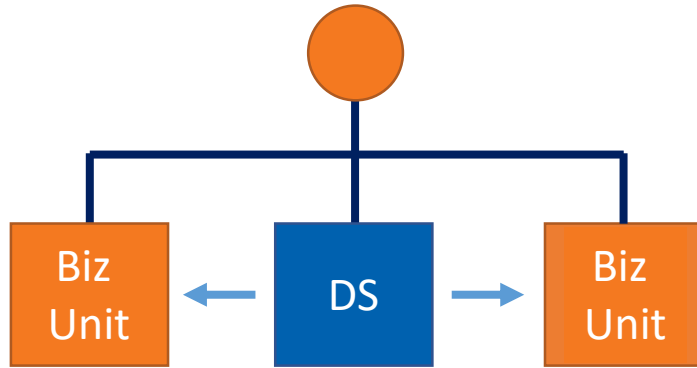
**Organisational  
Structure**

**Infrastructure &  
Tools**

**Whole-of-  
organisation  
Training Plan**

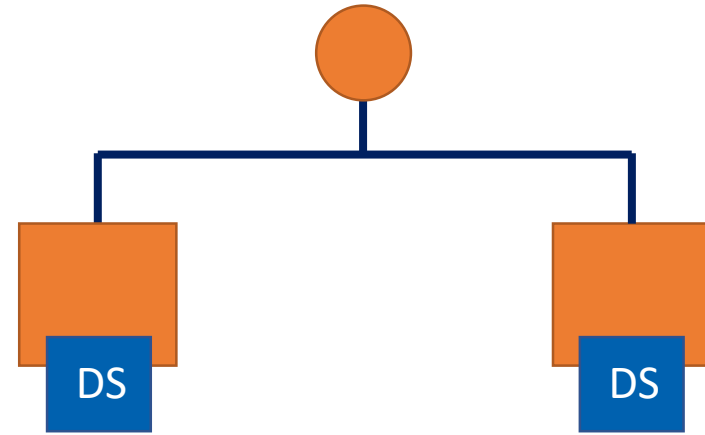
# Some Possible Options For Organisation Structure

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**Large central Data Science to support all projects**

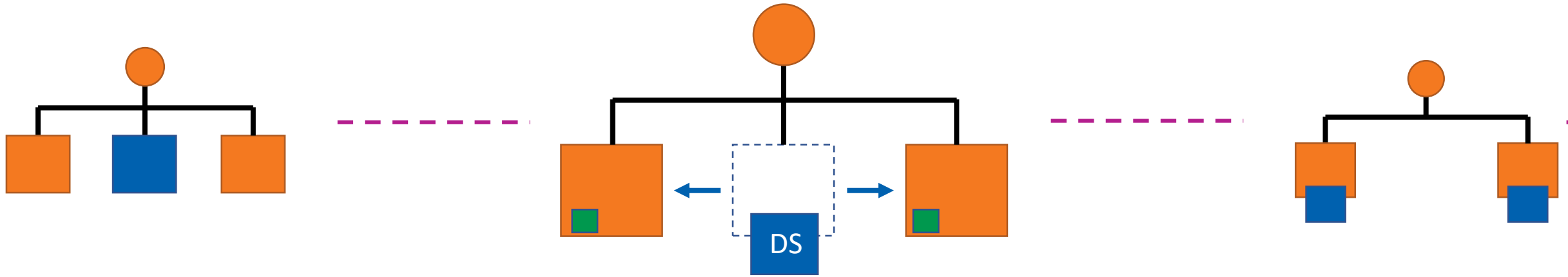
Data culture may not be pervasive; lower sense of ownership from the divisions



**Decentralised Data Scientist teams in each division**

Challenge with headcounts; Can you provide the DS with challenging (& enough) work?

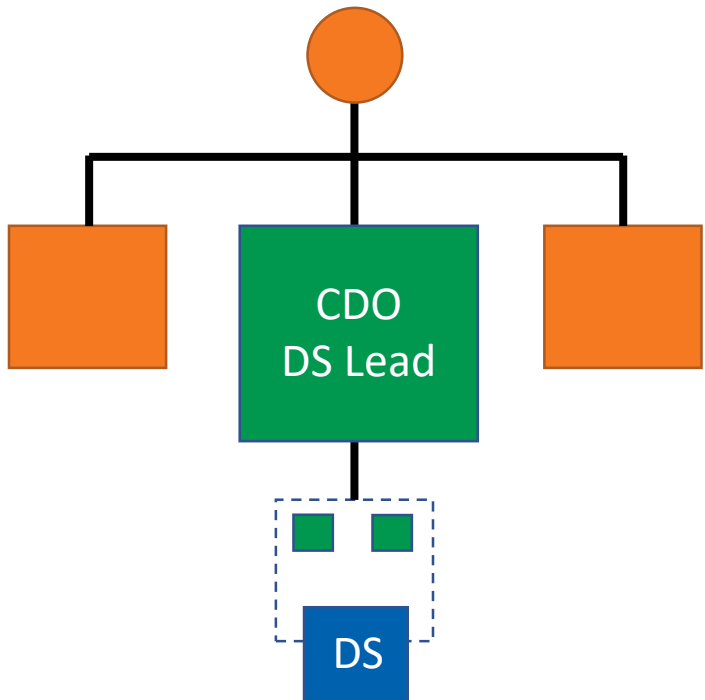
## Sweet Spot Somewhere In Between



- Form a working group made up of business users with advanced analytics skills -> **Data Champions (■)**
- These **Data champions form bedrock for project execution**, as they know the domain, and generally own the problems.
- **Support the Data Champions** with Data Scientists, who execute projects alongside them, and play a mentoring role.

## Put In Place A Leadership Tier

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- Chief Data Officer's (CDO) new mandate is also **to push for data exploitation** on top of data governance.
- Co-lead the efforts with a Data Science lead
- Prioritise project execution



## Recognise and develop the Data Champions

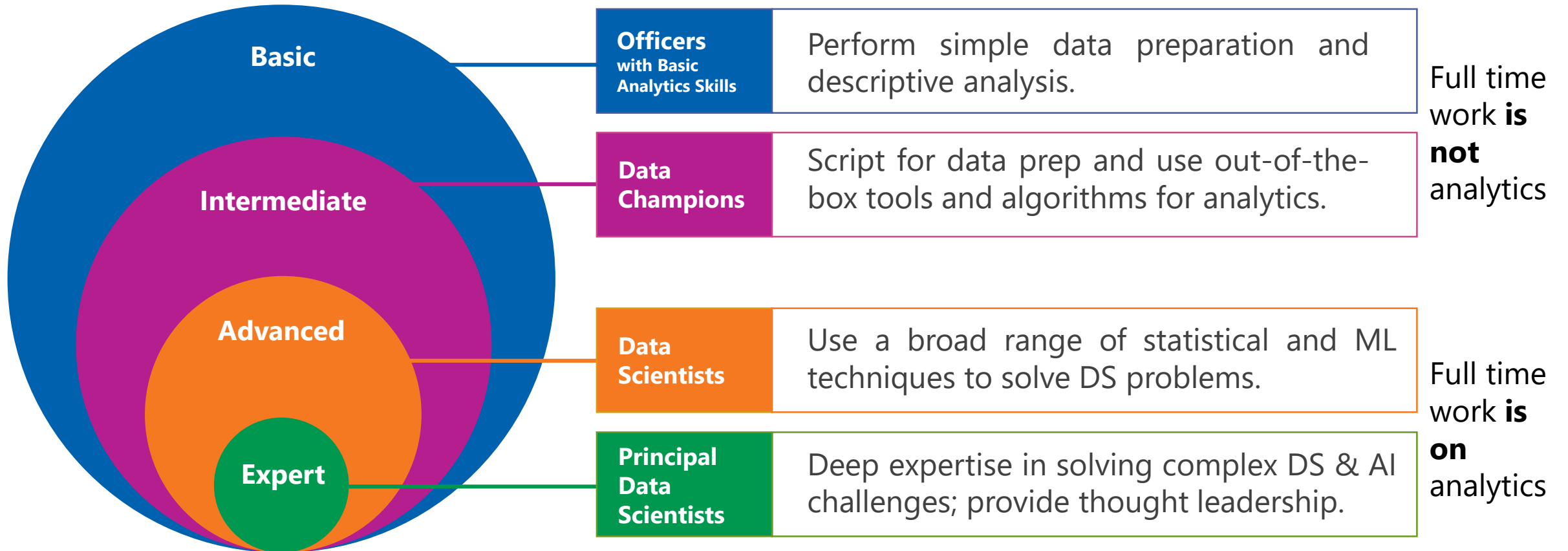
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- A very critical component in **sustaining projects beyond completion**
- **Act as influencers** of Data Science & AI to the rest of their division
- **Recognise their efforts** and **protect their interests**
- **Develop them further** through mentoring and training



# The Organisation Is Not Homogeneous

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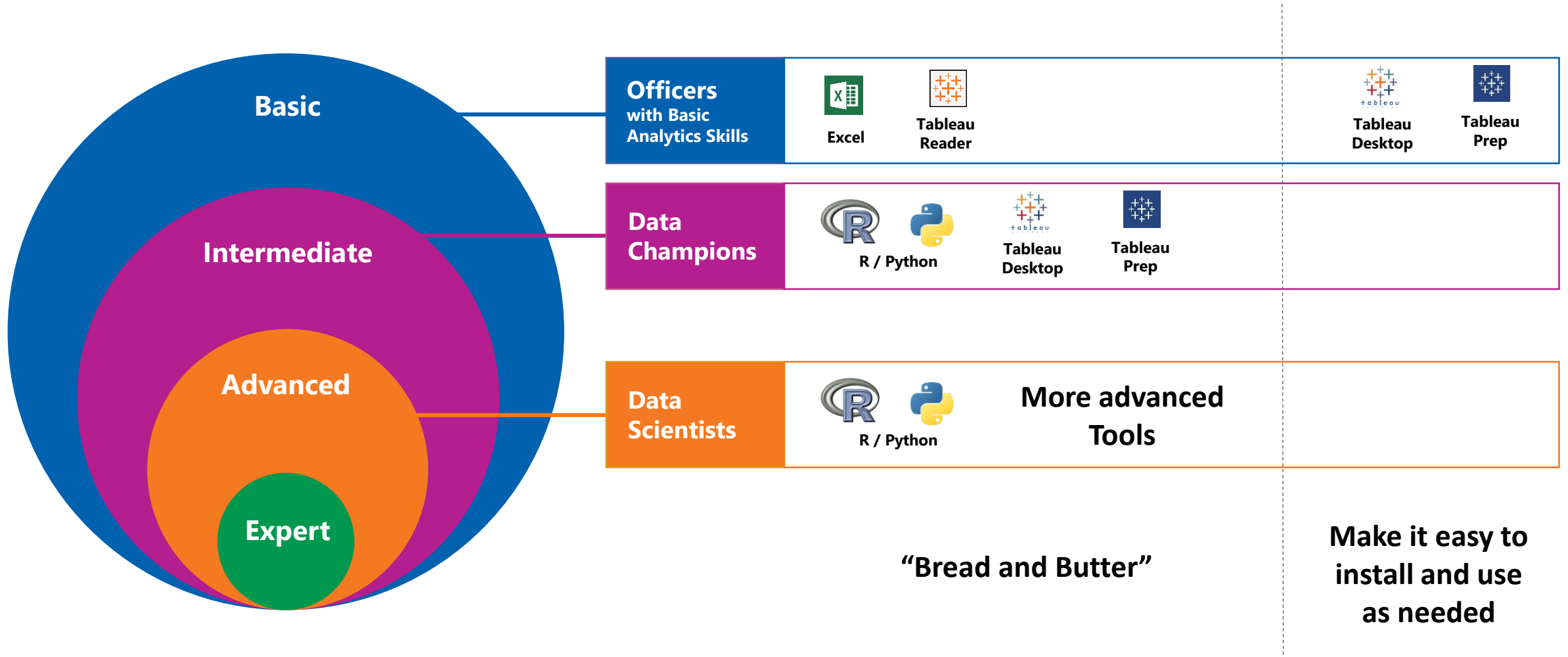
# Right Ingredients For **Success**

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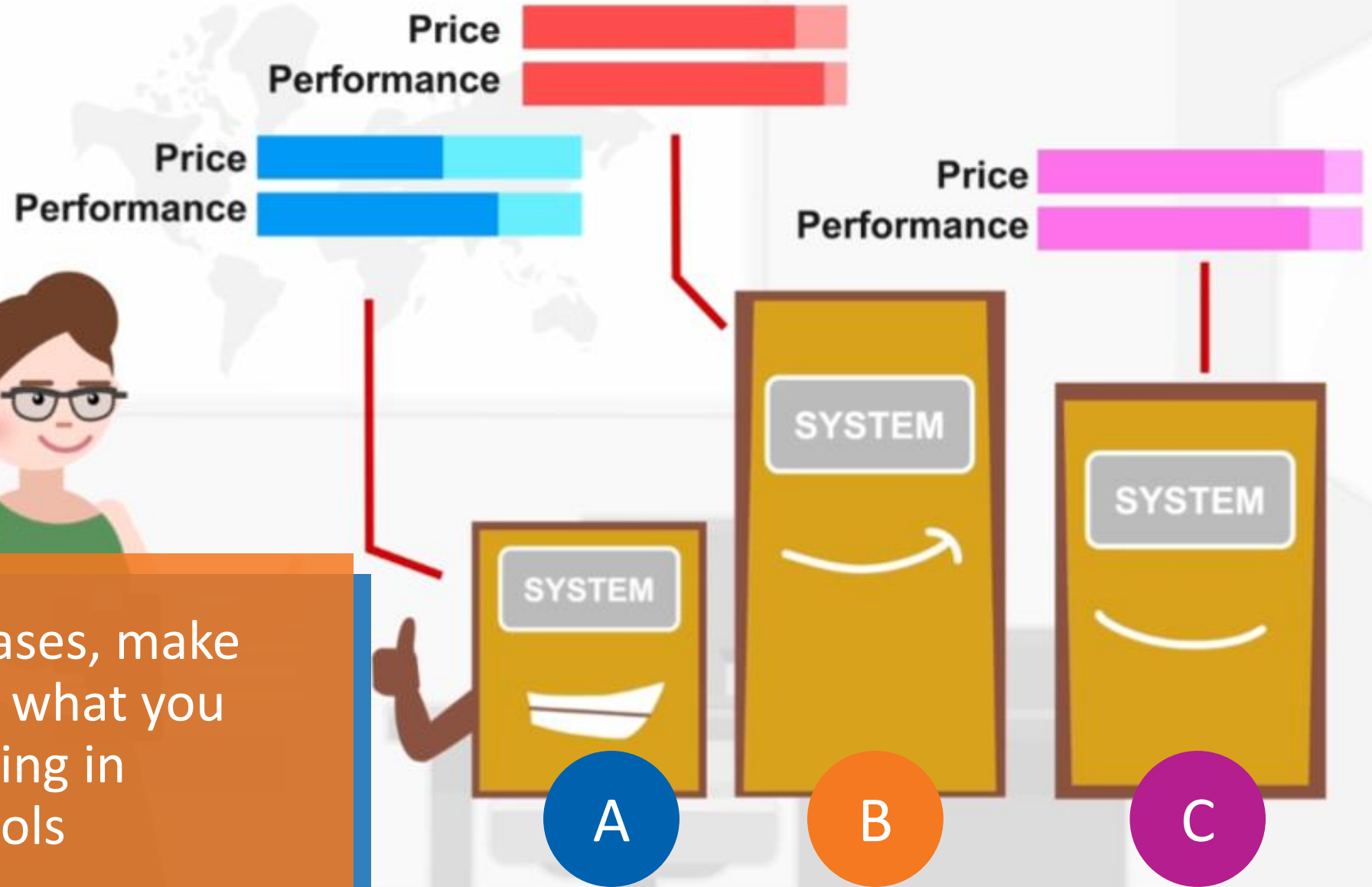
**Infrastructure &  
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# Let the Staff Have Access To Tools They Need Seamlessly



Try out some use cases, make sure they are really what you need, before investing in expensive infra / tools



# Right Ingredients For **Success**

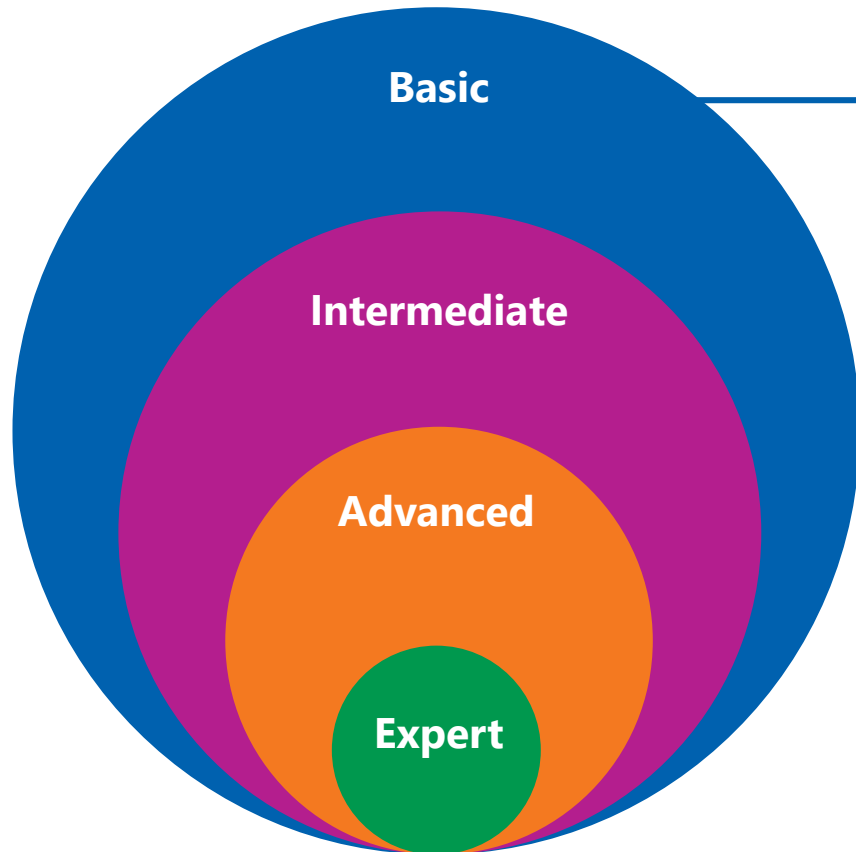
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# Right-size the training plan for different tiers of staff

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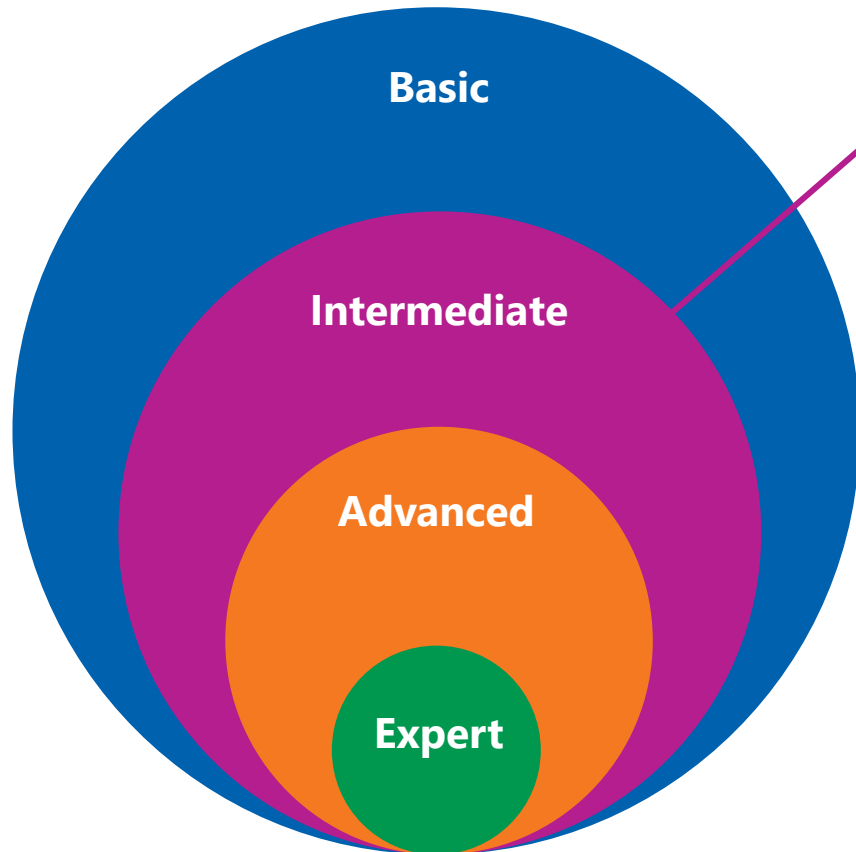
**Officers**  
with Basic  
Analytics Skills

Perform simple data preparation and descriptive analysis.

- Pick a familiar tool that they're used to, e.g. Excel
- Learn more complex functions and use analytics features with it
- Be able to clean, and prepare/transform data
- Use a modern BI tool to slice-and-dice their data, build simple dashboards

# Right-size the training plan for different tiers of staff

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## Data Champions

Script for data prep and use out-of-the-box tools and algorithms for analytics.

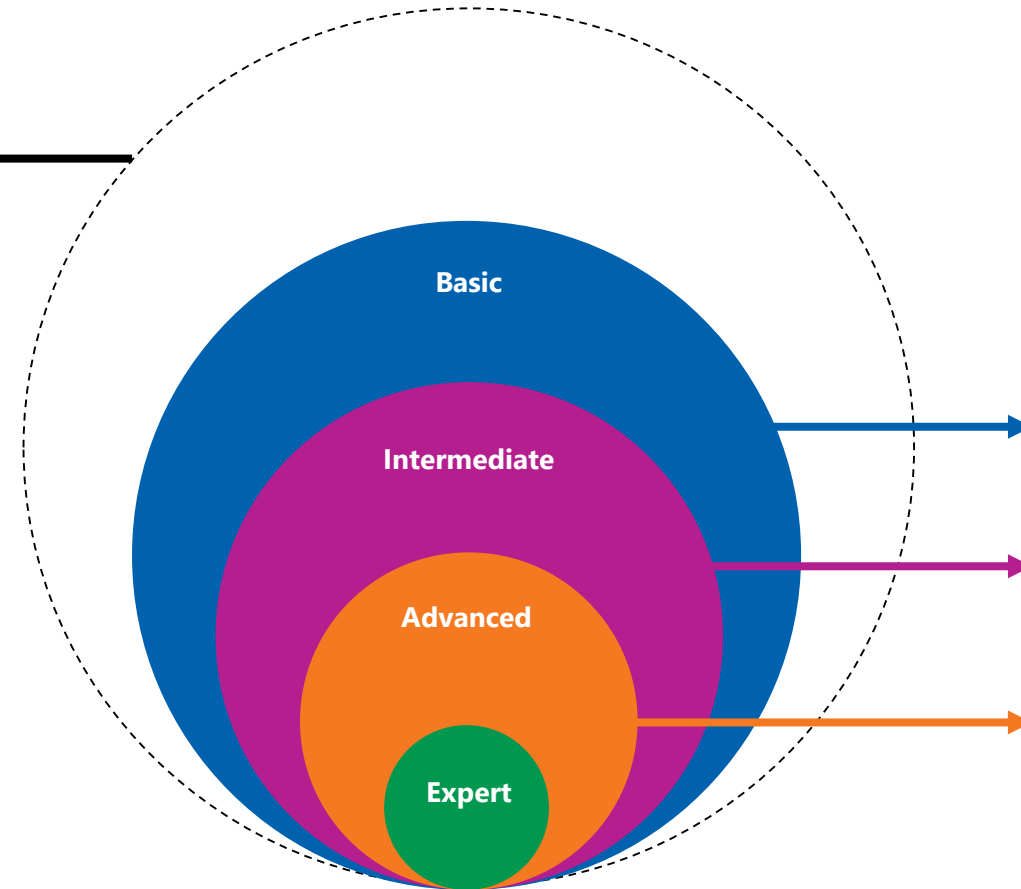
- Learn scripting so they can perform more 'automation' and complex tasks
- Be able to use some simple Machine Learning techniques
- Use a modern BI tool to slice-and-dice their data, do good data storytelling with it, and build more operational dashboards.

# Besides applied analytics skills, we must also level up the Data Literacy

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## Data Literacy

Knowledge-based contents broaden awareness, with the **goal to better exploit opportunities with data, and facilitate collaboration across agency.**



## Analytics Skills

Skills-based contents to deepen technical ability, deepen specific knowledge, with the **goal towards applying analytics directly to work.**





## Data Literacy ePrimer

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- Accessible by all public officers
- Primer on Data Science & AI concepts
- eLearning-based, self-paced
- ~4 hours of contents
- Enable officers to understand how to use data effectively.
  
- Look out for it!

# What Initial Success Looks Like

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More interactive dashboards and charts for self-service data discovery.  
Critical dashboards used regularly might be put on server for easy access.



Better understanding of strategic datasets across organisation to be harnessed for impactful projects.



One or two relatively impactful projects completed that brings greater value to actual work, with several more projects that are in the pipeline.

# What Initial Success Looks Like

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Divisions can confidently initiate projects that are then executed through the Data Champions. (with support from Data Scientists)



Staff within the Data Champions' division better appreciate of the use of data, enforces good habits in handling data, and responding positively to the Data Champions.



We would have developed a better sensing of a strategy for carrying out a data transformation journey that works for the organisation

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