

2019 IBM 科技論壇

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人工智慧的加速建置

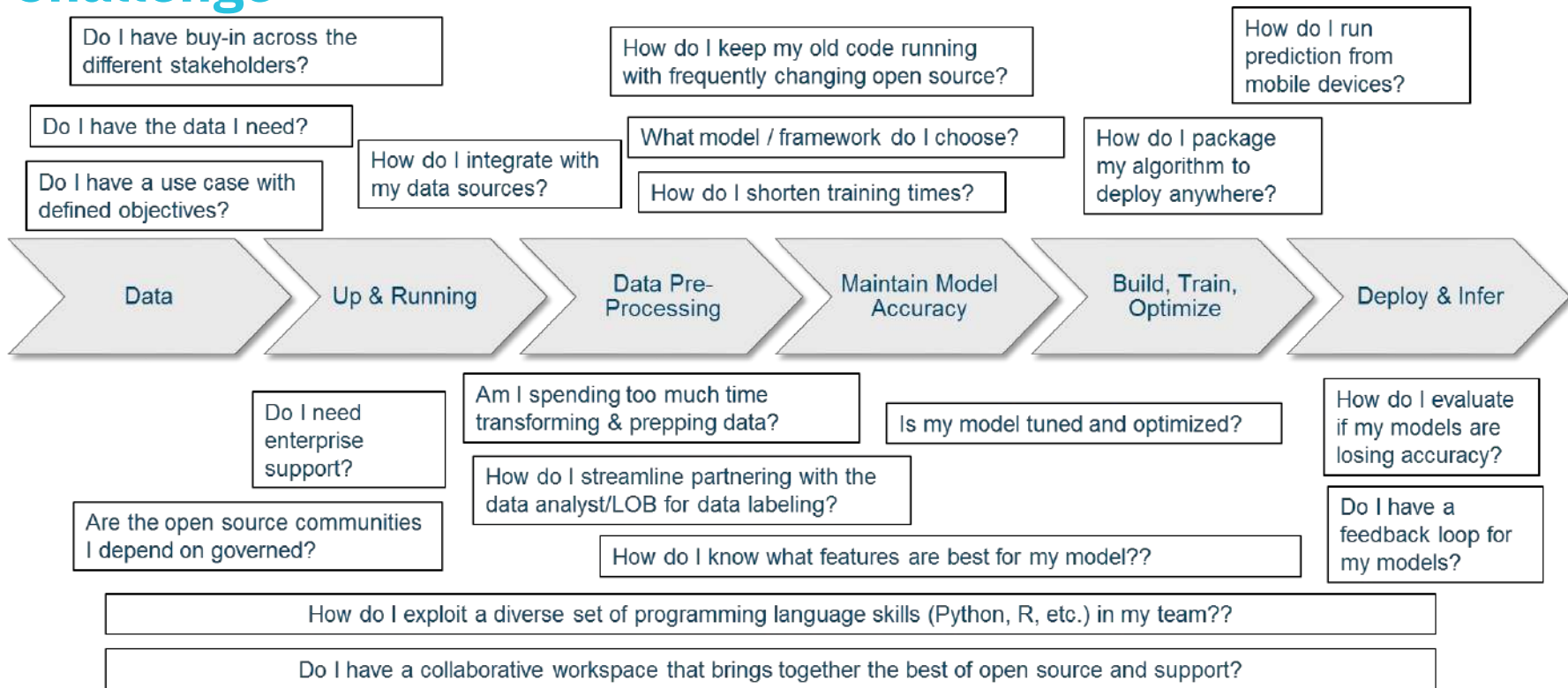
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Jerry Wang

IBM SLS Cognitive Consultant/IT Architect

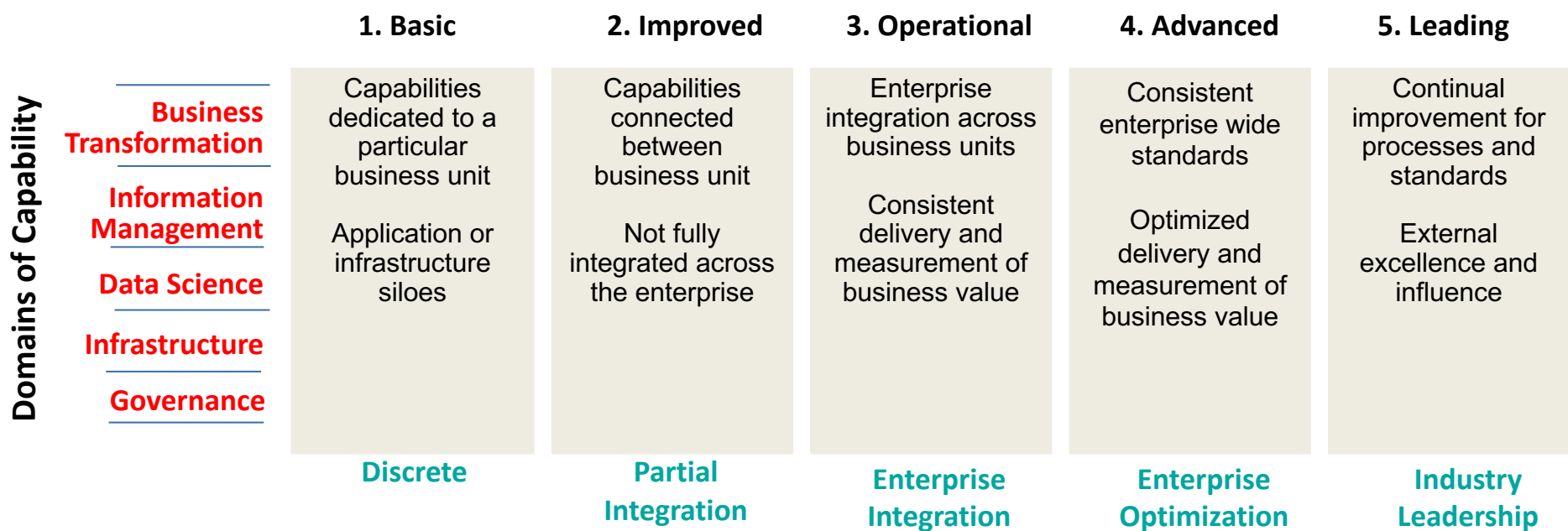
Observations on Cognitive Computing

- ***Cognitive Computing is business ready for well-defined tasks:***
 - Businesses need very effective and accurate outcomes to be successful
 - Example: Auditing insurance reimbursement claims
- ***It is all about Data:***
 - Low quality data = poor results
 - Sampling and history of data provide better outcomes
 - Creating and curating needed data is challenging
 - Employ skilled data scientists
- ***The Human Factor:***
 - Cognitive technologies involve humans to train them along with machine learning
 - Can take months to train
- ***It is a journey:***
 - Requires incremental approach
 - Important to find proper use cases

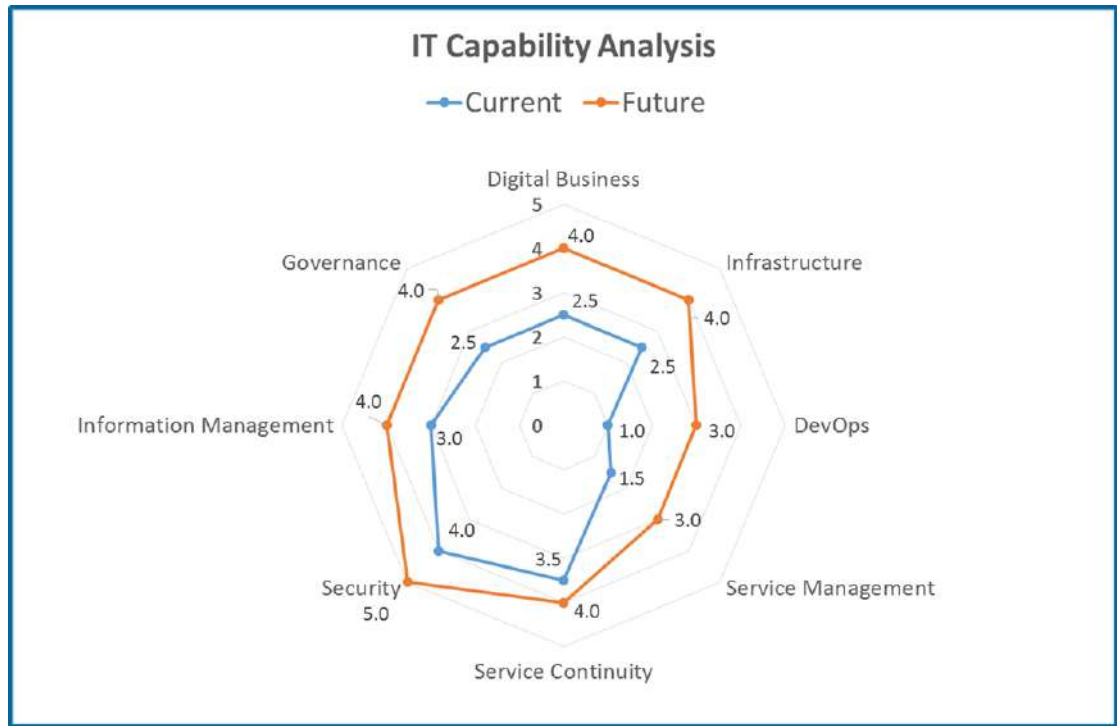
Challenge



Maturity Analysis Model



Maturity Analysis – Results Visualization sample

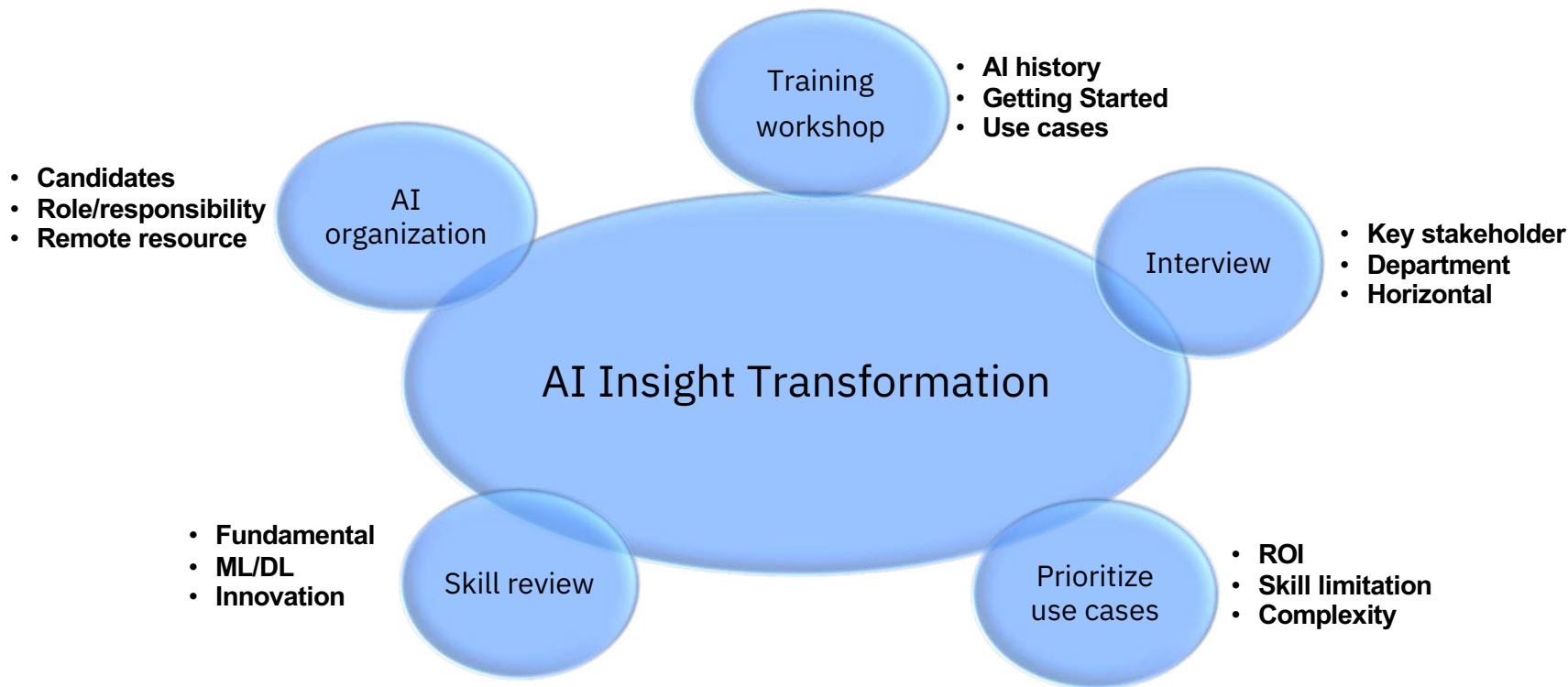


Scene based model strategy on AI

- Visual Recognition
- Scene Recognition
- Visual Style Recognition
- Object Detection
- Pixelwise Prediction
- Object Segmentation
- Medical Imaging
- Object Positioning
- Sequence of images
- Activity Recognition
- Image to text Description
- Video to text Description
- Recurrent Nets and Long Short Term Memories (LSTM)
- Long-term Recurrent Convolutional Network (LRCN)
- Natural language syntax
- Word prediction and embedding
- Language translation

self-develop or outsource?
站在巨人的肩膀上!





Phase	Tasks
Phase 1	Training Content discussion and refine
	AI from yesterday to future and use cases
	AI enablement Map
	AI Tech. introduction and demo
Phase 2	Interview with stakeholders
	Interview with high management team
	Interview with users
Phase 3	Customer scenario prioritize discussion
	AI organization discussion
	Draft final report discussion
	Final presentation and report

導入階段

實驗期

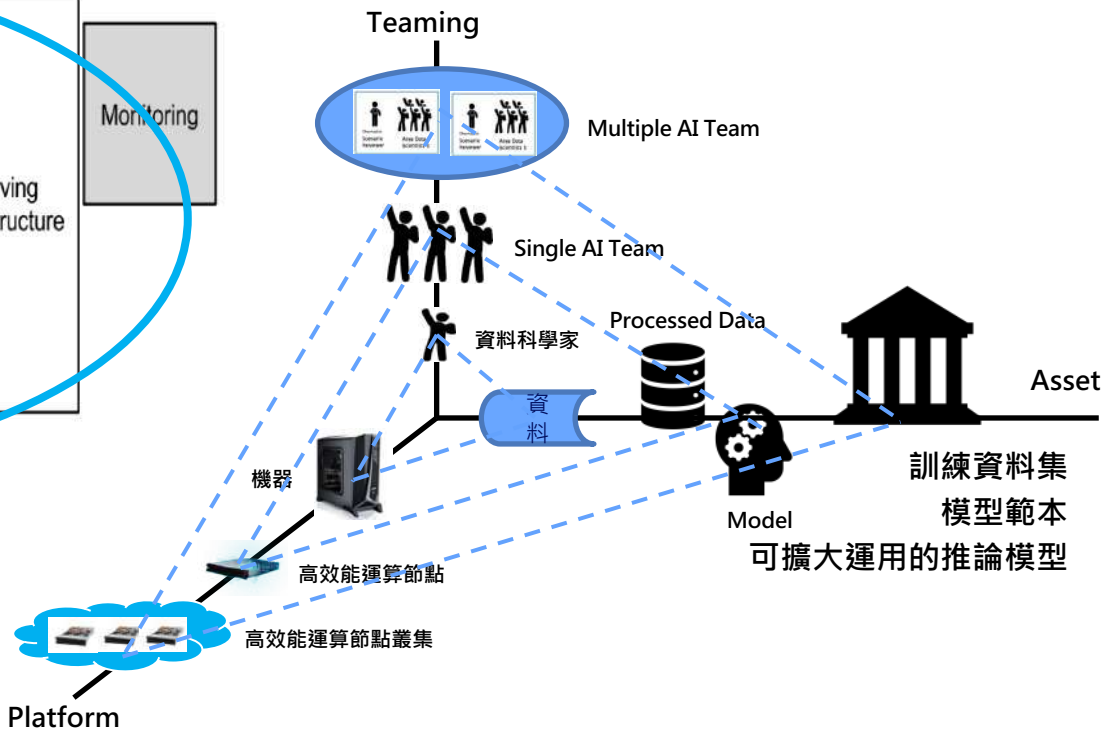
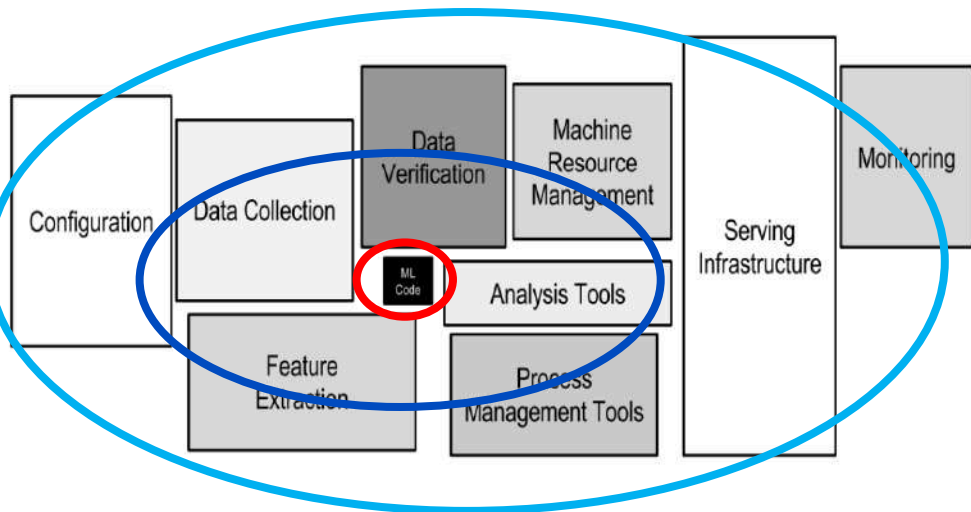
- Single node
- Single user/tenant
- Small scale data
- Algorithm prototyping, hyperparameter optimization

上線期

- Expanding use cases
- Multi-node
- Cluster
- Medium scale data
- Security

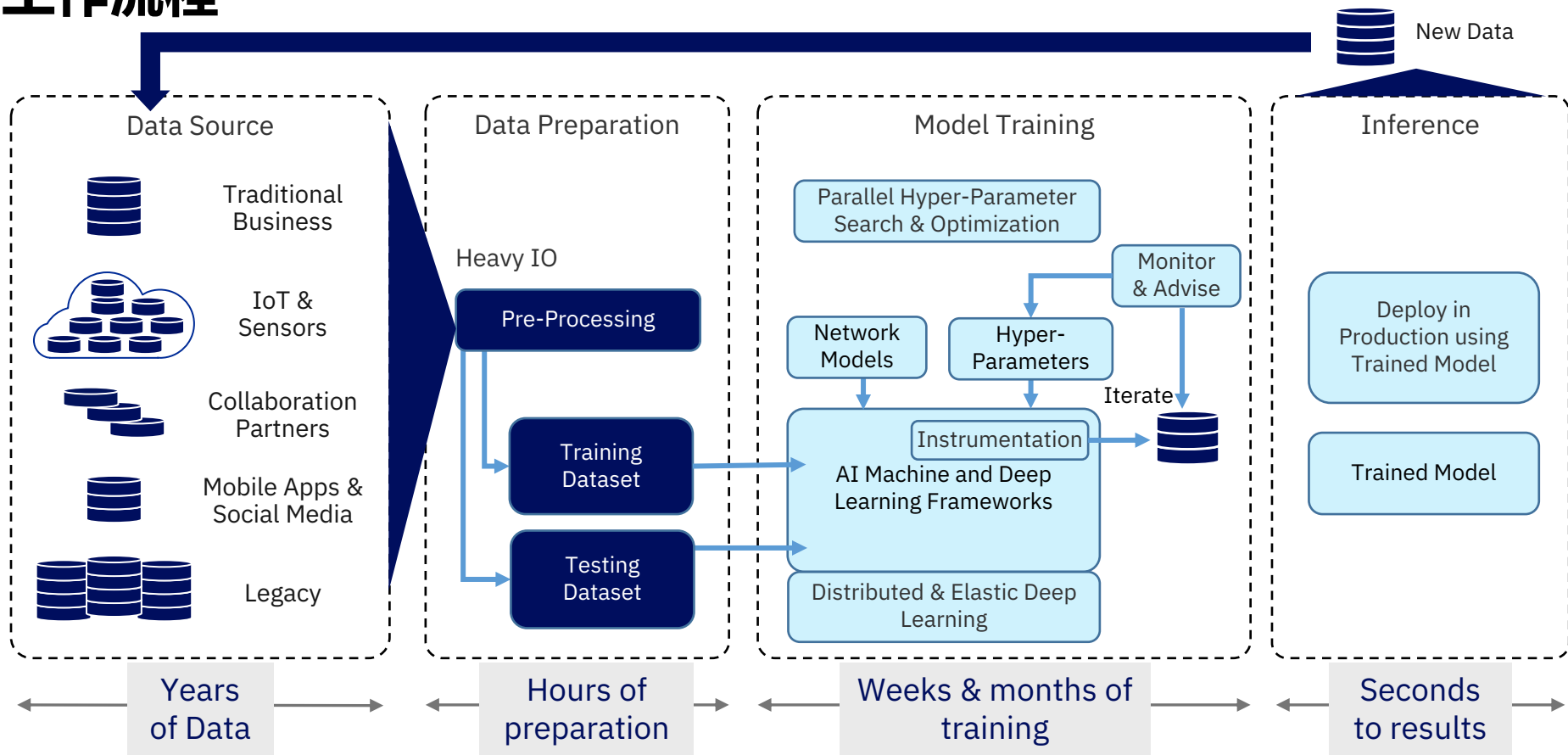
擴展期

- Data Science Shared Service
- Multitenant
- Upstream data pipeline
- Model iteration
- Scalable Inference

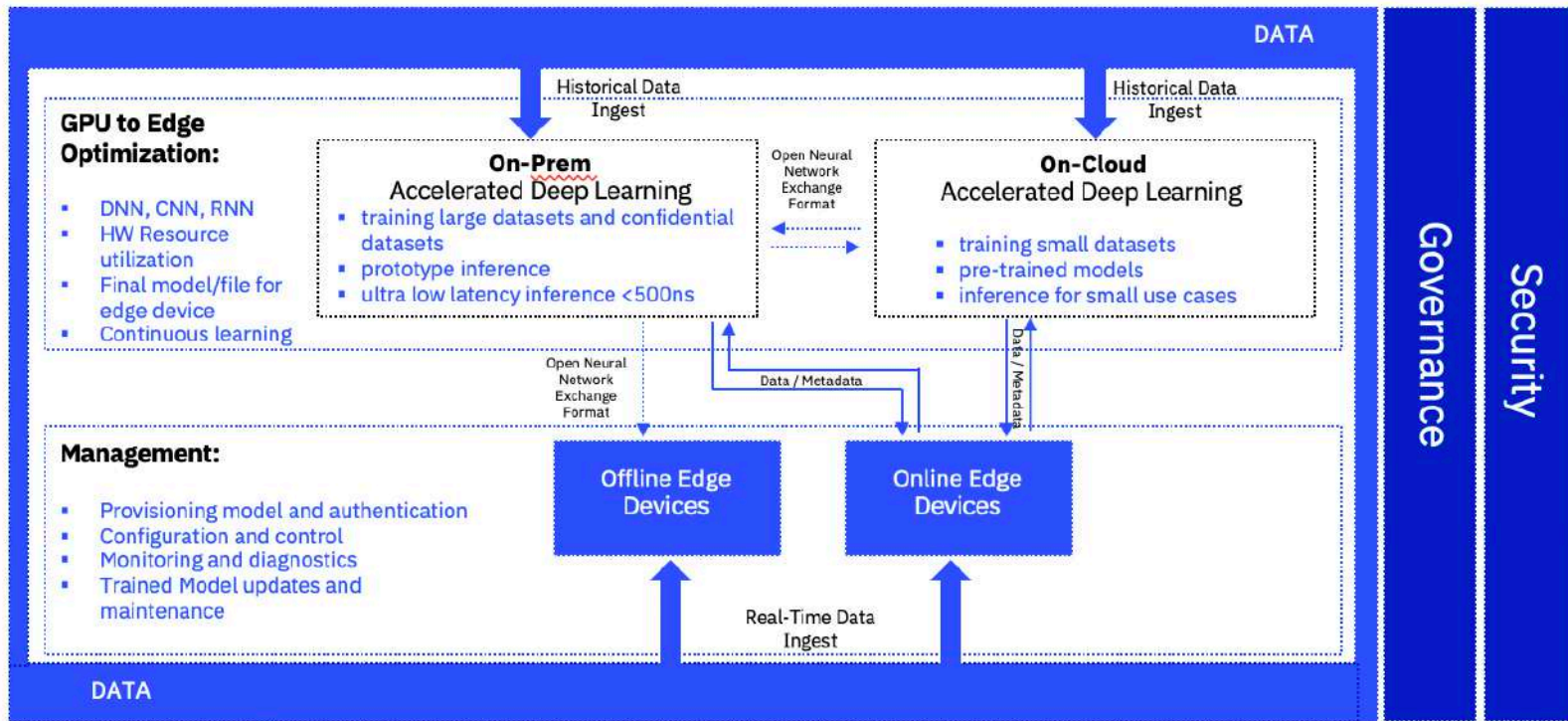


D. Sculley, Gary Holt, Daniel Golovin, Eugene Dzyndov, Todd Phillips, Dietmar Eber, Vinay Chaudhary, Michael Young, Jean-Francois Cresno, Dan Dennison. Hidden technical debt in Machine learning systems. Proceedings of the 28th International Conference on Neural Information Processing Systems, p.2503-2511, December 07-12, 2015, Montreal, Canada

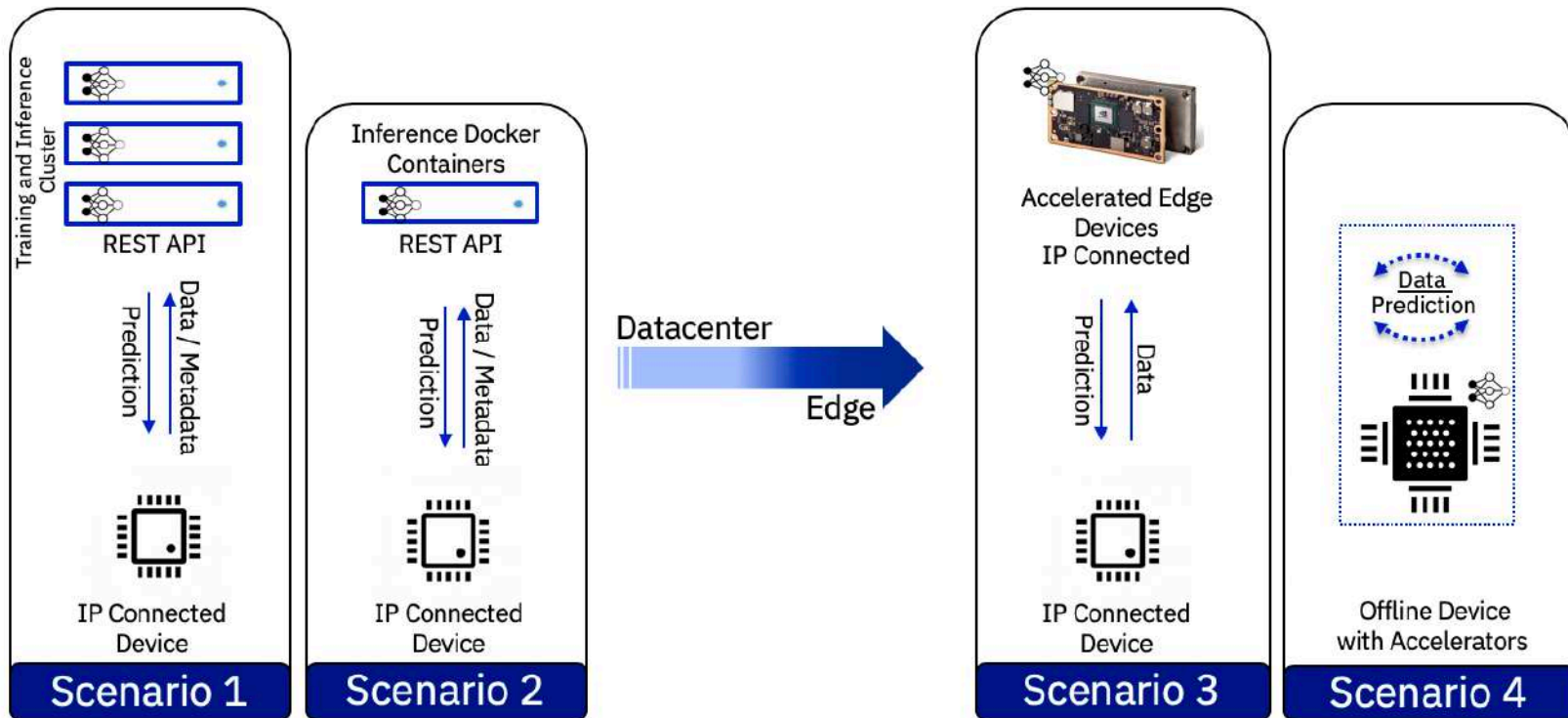
工作流程




Inference Support Capability



Inference Scenarios



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Thanks

The IBM logo is positioned in the top right corner of the slide. It consists of the letters 'IBM' in a white, bold, sans-serif font, with a small registered trademark symbol (®) to the right. The logo is set against a solid blue background that forms a vertical bar on the right side of the slide.