Prerequisites for Internet of Things (IoT)

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Hardware Specifications:

- Windows (minimum 10), Mac OS, Ubuntu
- Ram - 4GB (minimum)
- Hard disk - 256GB (minimum)
- Processor - Intel i3 (minimum), Mac M1

Software Specifications:

- Anaconda Navigator - https://www.anaconda.com/products/distribution
- Spyder / VS Code / Pycharm

Create an Account in Thinkercad

- https://www.tinkercad.com

IBM:

IBM Account Creation - https://vimeo.com/742609168/1824d26a5b (Follow this video for IBM Skill Build Account Creation)

- IBM Skill Build - https://www.ibm.com/academic/home
- Webmail - https://sg2plmcpnl492529.prod.sin2.secureserver.net:2096/
- IBM Cloud - https://cloud.ibm.com/login

IBM

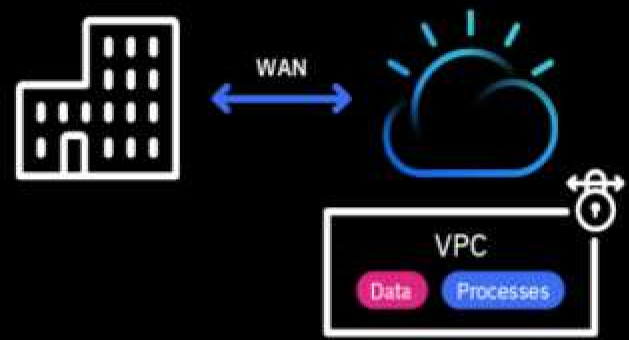# Deploy the right type of cloud to accelerate innovation

Private
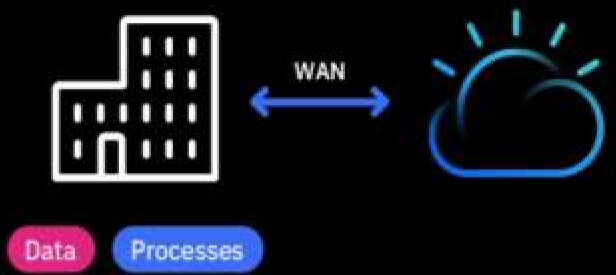
When to use

Organization has requirement to utilize on-premises infrastructure (security policy, investment equity, limited WAN bandwidth, etc)

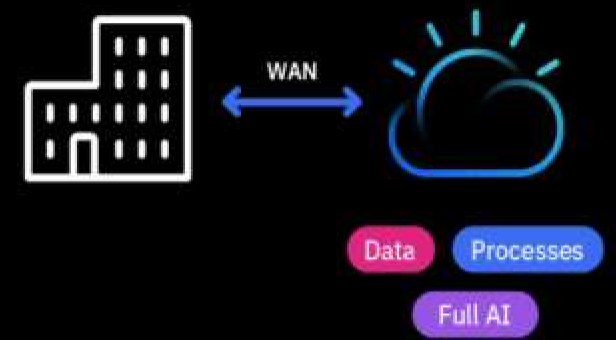30-40 IBM Cloud services

Dedicated

When to use

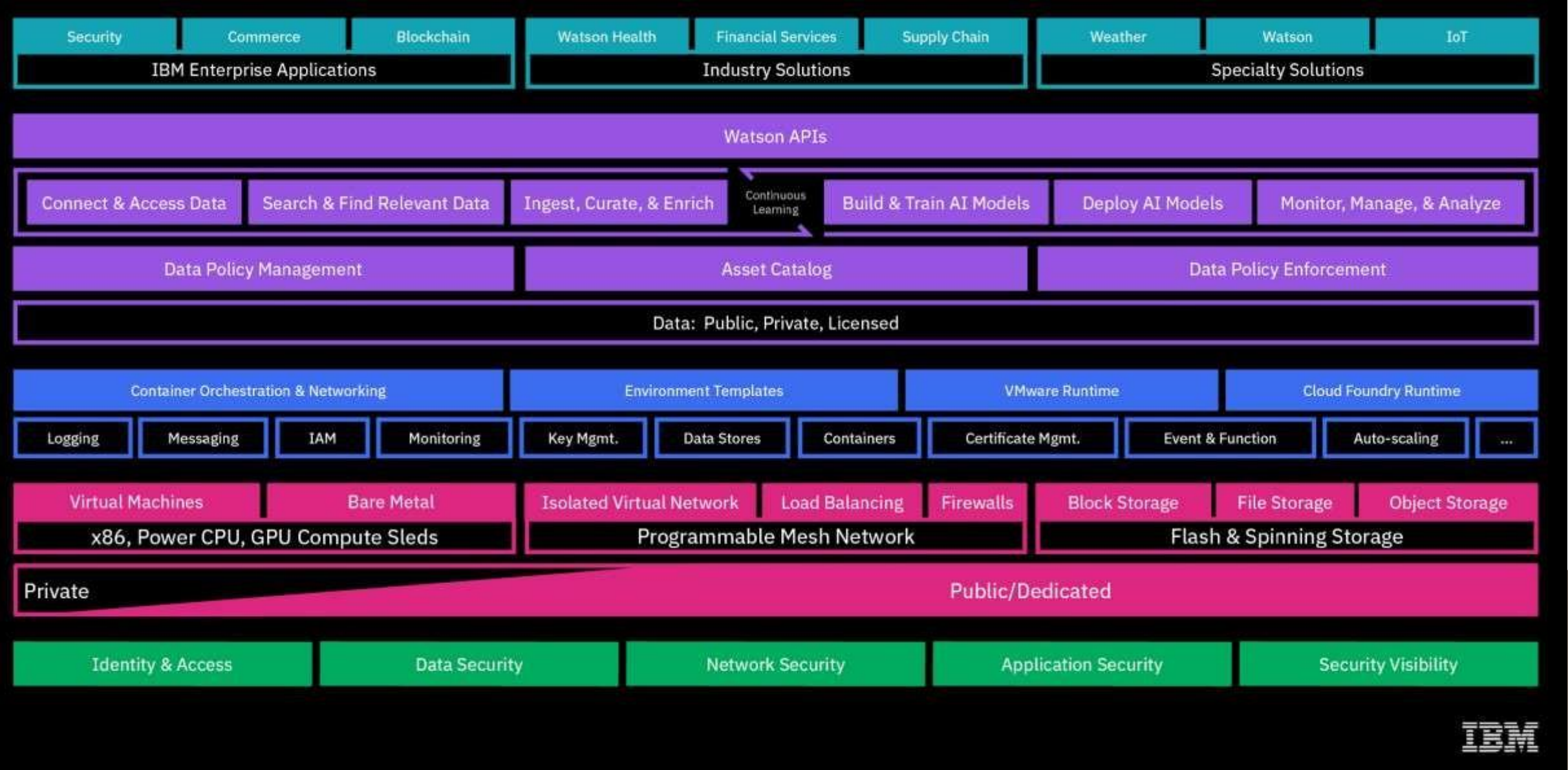Organization has isolation requirement for security and/or performance reasons

Organization seeks the security and compliance benefits of public cloud

Public

When to use

Organization embraces encrypted multi-tenant data and shared processing models

100+ IBM Cloud services

IBM provides tools to help clients manage multi-cloud environments

By 2020, more than 90% of enterprises will use multiple cloud services and platforms
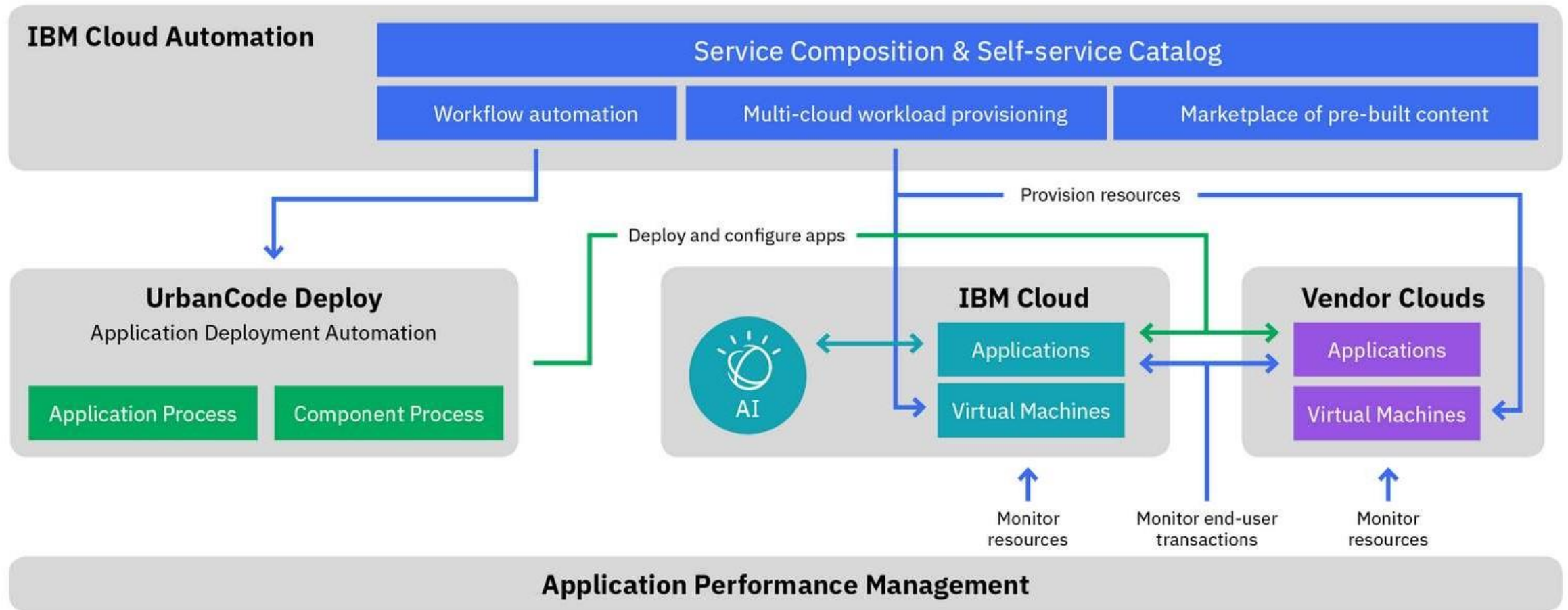
Only the IBM Cloud delivers the technologies that

Data Tools to prepare data for cognitive	Ingestion	▷ Storage	▷ Analytics	▷ Deployment	▷ Governance

AI Cognitive building blocks for developers	API Conversation	API Discovery	API Compare & Comply	API DLaaS	API Tone Analyzer	API Personal Insight
	API Visual Recognition	API Speech	API Document Conversion	API Nat Language Understanding	API Nat Language Classifier	API Knowledge Query

Cloud infrastructure A highly scalable, security enabled infrastructure	Cloud Integration		Cognitive Micro-services			DevOps Tooling	
	Networking	Security	Core Enterprise Infrastructure	Cognitive Systems	Virtual Servers	Object Storage	File Storage

Applications, solutions & services Targeted solutions for enterprise businesses	Watson Oncology	Watson Cyber Security	Weather	IBM Services & Ind. Solutions	Watson Virtual Agent	Watson Explore & Discover	IBM Risk & Compliance [5]	Asset Mgmt. (Maximo)

MATCHING THE RIGHT CLOUD TO THE RIGHT WORKLOAD

Enterprise transformation required for cloud adoption

Private Cloud

Mature workloads

Workloads needing low latency to back ends

Existing database workloads

Maintain & Evolve

Applications with complex processes and transactions

Applications with sensitive data

Regulation-intensive applications

Highly customized applications

Information-intensive applications

Not yet virtualized applications

Batch processing

* IBM Institute for Business Value study, "Tailoring Hybrid Cloud" August 2016
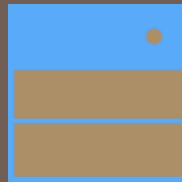
WIDEST SELECTION OF COMPUTE OPTIONS FOR ANY WORKLOAD, ACROSS GLOBAL INFRASTRUCTURE

PERFORMANCE & CONTROL   PORTABILITY   DEVELOPMENT SPEED

Virtual Server

Leverage existing languages and tools

Containers

Maximum portability

Platform as a Service

Extensive runtime options

Serverless

Maximum speed with serverless apps

IBM CLOUD PRIVATE BRINGS CLOUD NATIVE TO THE ENTERPRISE

- **Open Kubernetes-based container platform**
- **Cloud Foundry for app dev and deployment**
- **DevOps toolchain integration**

Hybrid Integration

- **Integration capabilities to unlock and connect**
- **Secure access to public cloud services (AI, Blockchain)**
- **Consistent experience across private/public**

Investment Leverage

- **Containerized versions of IBM Middleware**
- **Prescriptive guidance to optimize workloads**
- **Work with existing apps, data, skills, infrastructure**

Management & Compliance

- **Core operational services including logging, monitoring, security**
- **Flexibility to integrate with existing tools and processes**