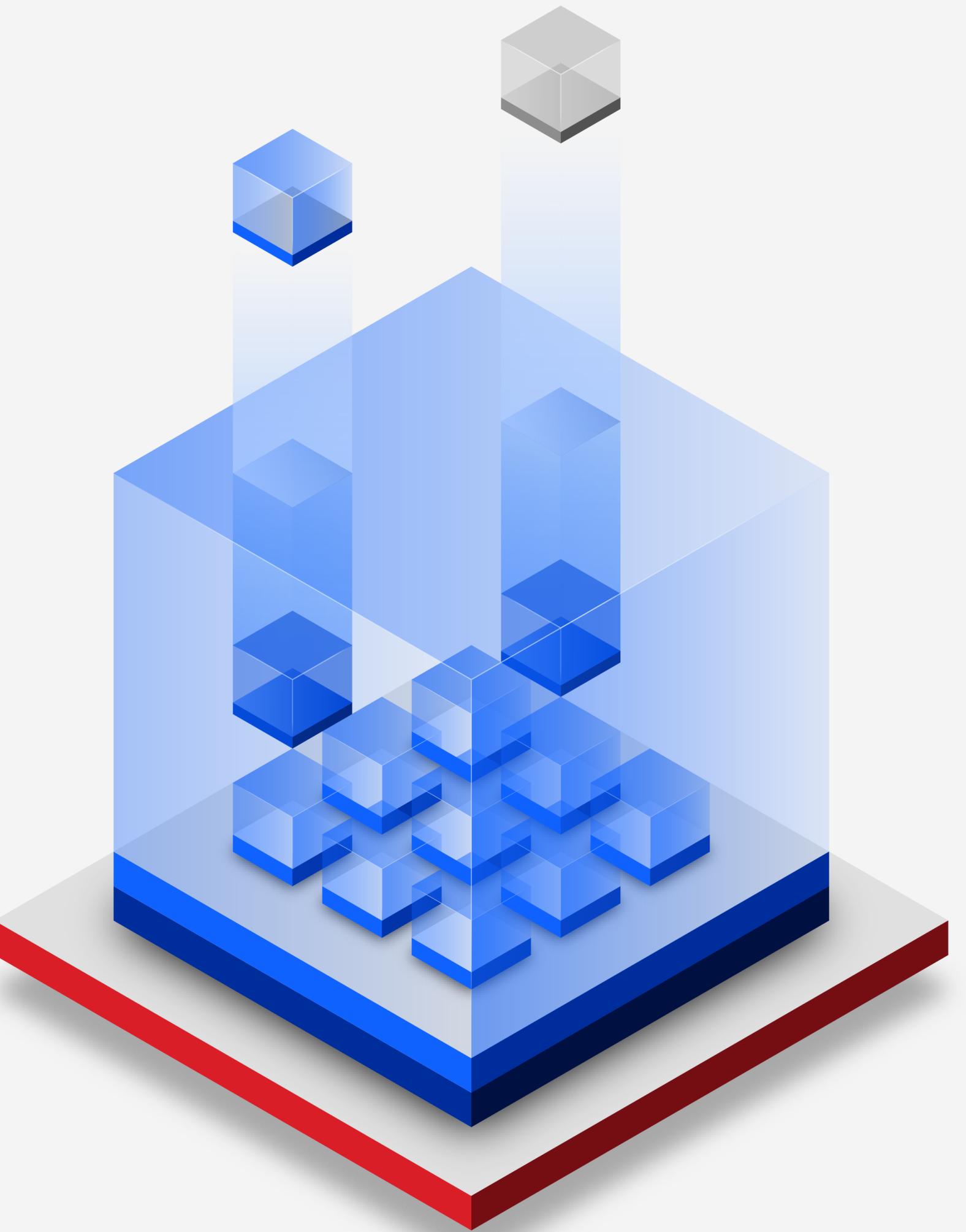


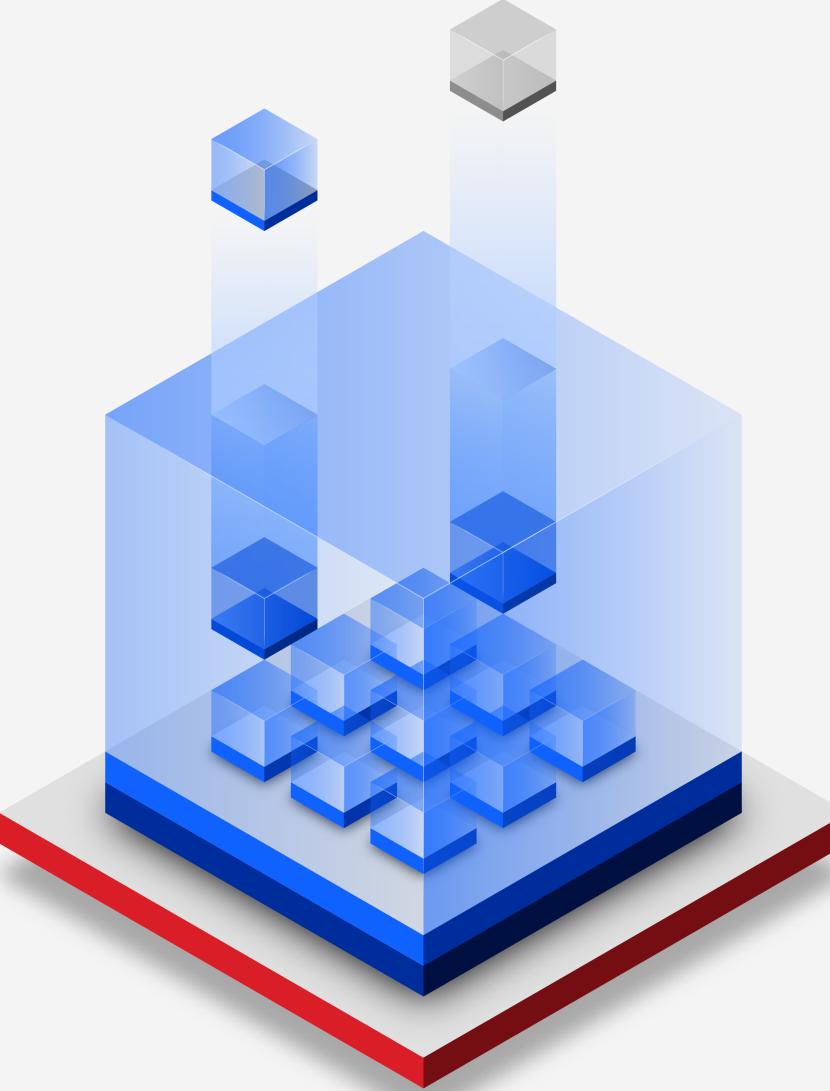
# MLOps with trustworthy AI

## IBM Cloud Pak for Data



# Agenda

- Opportunity identification
- Customer briefings
- Progressing and closing opportunities
- Pricing and packaging
- Objection handling
- Competitive landscape



# Common headwinds for data science practices

- Fragmented data
- Short supply of data science skills
- Variety of tools / practices / frameworks
- IT standards for training / deployment
- Operationalizing ML models is difficult
- Unclear if ML models are accurate
- Difficult to audit model predictions

Organizations that do not beat  
these challenges will build and  
operationalize fewer models.



# Common buyer profiles for data science-related opportunities

## Main Buyer: Analytics Leader



### Data Science Practice Leader

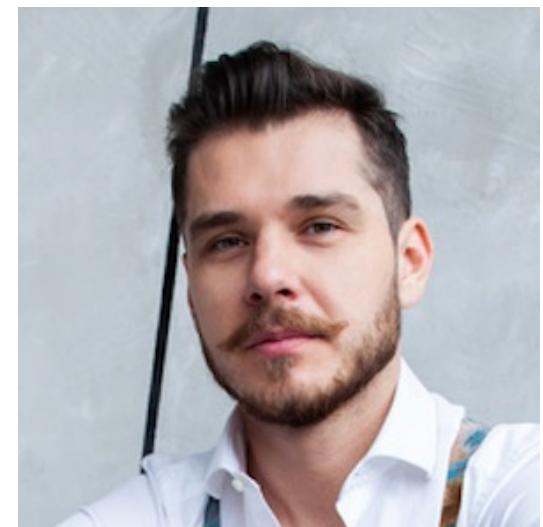
Also known as:

- Chief Data Officer
- Director of Analytics
- Chief Technology Officer

Priorities

- MLOps life cycle
- Capabilities of data science tools

## Main Buyer: Line of Business



### Business professional

Also known as:

- Operations manager
- Marketing campaign manager
- Financial analyst

Priorities

- Self-service access to data and tools
- Collaborate in data science process

## Main Buyer: IT Leader



### Director of Enterprise Architecture

Also known as:

- VP, Enterprise Technology
- Director of IT Strategy
- IT Strategist and Planner

Priorities

- Integration with existing infrastructure
- Deployment models (containers/aS)

# Qualification questions

Pre-empt objections, identify roadblocks to progressing the deal and closure

**What is your cloud strategy?  
Do you have strategic relationships with MS Azure, AWS, or Google (or will you in the near future)?**

This could cause IT execs to stall the Cloud Pak for Data and Watson Studio sales opportunity. Proactively let them know that **Cloud Pak for Data runs on any cloud they choose.**

**Who approves models to be deployed into production?  
Is it IT, Chief Data Officer, Analytics Leader, Chief Marketing Officer, Chief Operations Officer?**

This is often a key stakeholder that can be hidden from you. Identify them and **make sure they understand our approach to explainable AI.**

**What other data science tools does your company use?**

This may seem obvious, but typical companies have 3-5 vendor solutions including “free open source”, which is always a competitor. Identify the competitors, their sponsors within the company and **if necessary, build an “AND” strategy to co-exist initially** (replace them once we get established).

# Qualification questions

Find their pain points and evaluate what resonates

## Questions

- What is the ratio of coding data scientists vs. citizen data scientists?
- What other groups do you work with to create and deploy models?
- What types of cloud environments is your team using as data sources?
- Are you ready for a compliance audit of your AI and ML models?

## What to listen for

- I feel we don't have enough people with the right skills.
- We experiment a lot but cannot show results through deploying the models.
- Our deployed models were useful at first, but we're now concerned about accuracy.
- We must deliver by [specific date] to demonstrate [metrics] with this initiative.
- I'm not sure when our model was last validated
- I'm not sure our model is being used for its original purpose.

# Preparing for a client briefings

- 1 Understand which buying personas will be in the room, and ensure materials align to their priorities
- 2 Based on the qualification questions, tailor the presentation to line up with the client's challenges
- 3 Find applicable use case stories from the Data Science and AI Elite Team's Industry Accelerators on Seismic
- 4 Using the Data Science in Cloud Pak for Data Client Presentation as a starting point, weave in applicable use case content, and move any non-applicable content (based on personas not attending, and unapplicable challenges) to the end of the deck as Backup
- 5 Prepare a short live demo, that showcases the capabilities that match the interests and priorities of people in the room



# The importance of MLOps

MLOps is an excellent vehicle for telling the IBM data science story – especially when presenting to data scientists and analytics practice leaders.

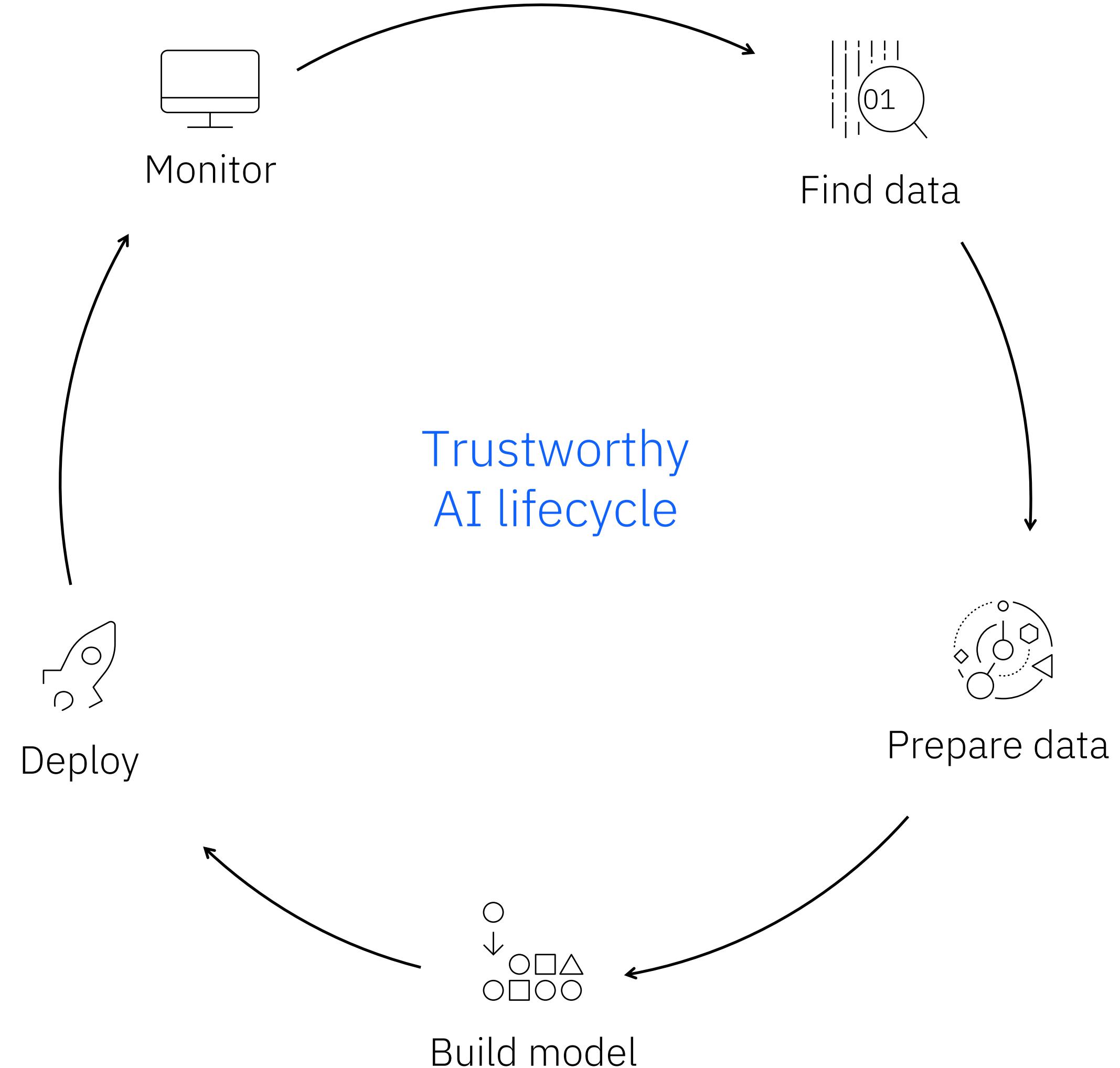
**Solution-focused**  
presentation vs. product-focused presentation

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**Common industry terminology** makes it easier for the customer to understand IBM capabilities compared to other vendors

---

**Covers all aspects of data science lifecycle:** focus on areas based on client needs



Emphasize the better together message of Cloud Pak for Data

[A successful MLOps practice needs an intelligent data fabric](#)

In addition to Watson Studio, Cloud Pak for Data includes other capabilities that greatly enhance IBM's data science story

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#### **Watson Knowledge Catalog**

provides governed self-service access to cataloged data (shop for data and import into your project; enables model lineage and association with governance artifacts)

#### **Watson Query**

simplifies your data landscape with a universal query engine that accesses your disparate data sources



# Expert Labs

## Trustworthy AI Offerings



### Trusted AI Build

2 Data Scientists

## 8 Weeks

- Explore, cleanse, prepare datasets for use case
- Demonstrate how to check for bias in Data
- Build & test trustworthy AI/ML model

Outcome: Working AI/ML model

- Co-create with customer data scientists.



### Trusted MLOps Deploy

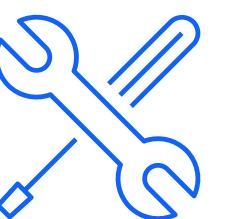
1 Data Scientist  
1 MLOps Practitioner

## 6 Weeks

- Implement Best Practices for model validation
- Setup deploy pipeline integrated with CI/CD

Outcome: Validation and Deployment pipeline

- Co-create with customer data scientists and model validators.



### Trusted MLOps Monitor

1 Data Scientist  
1 MLOps Practitioner

## 6 Weeks

- Implement monitors for Bias/Fairness, Drift, etc.
- Model Explainability On Demand

Outcome: Monitoring setup for ML Models

- Co-execute with customer deployment engineers.



### AI Governance Quickstart

1 Data Scientist  
1 MLOps Practitioner  
1 CPD Engineer  
1 OpenPages Practitioner

## 9 Weeks

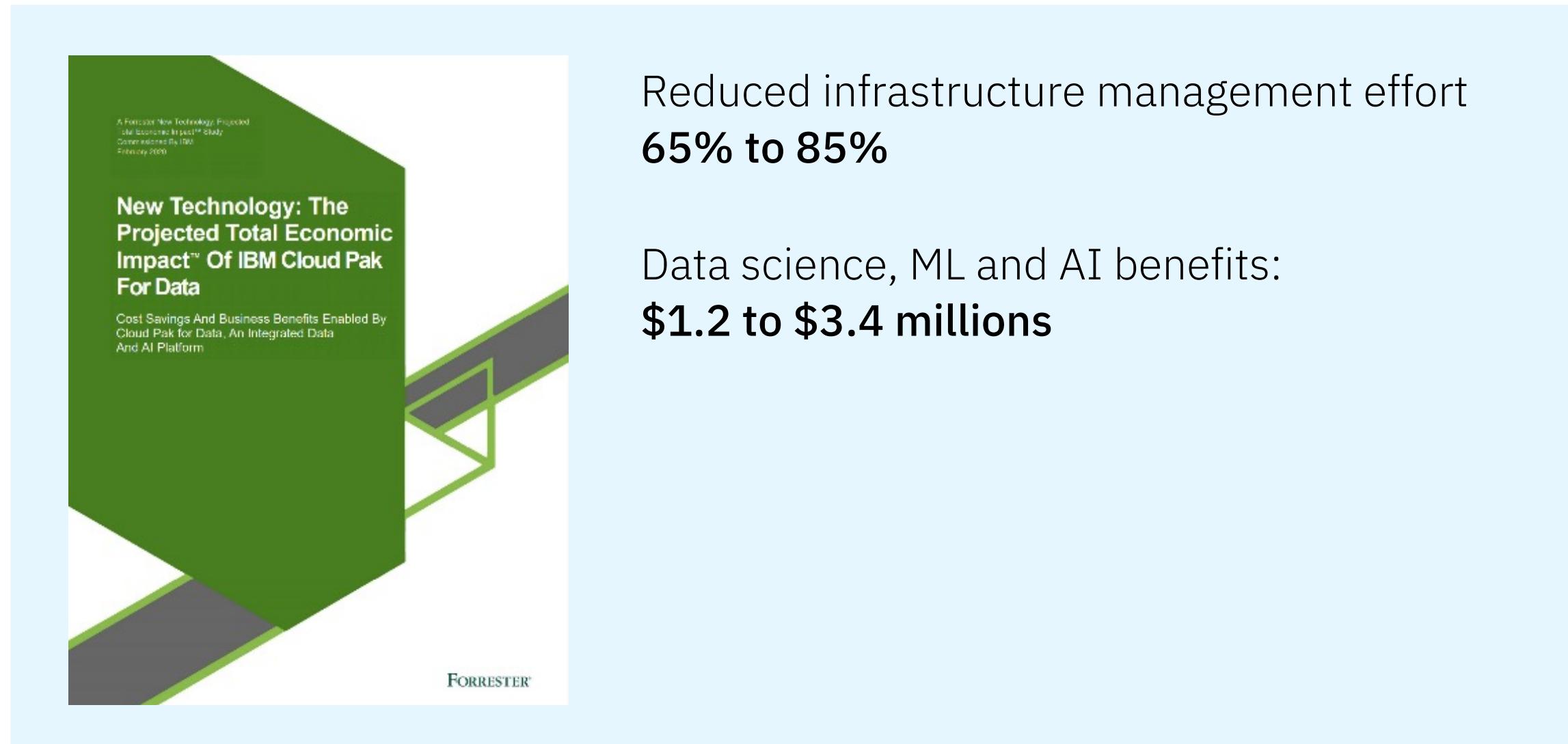
- Install and configure platform with the AI Governance Services
- Install Model governance workflow
- Onboard an existing model to the platform

Outcome: AI Governance platform for management of ML models

- Co-execute with customer deployment engineers.

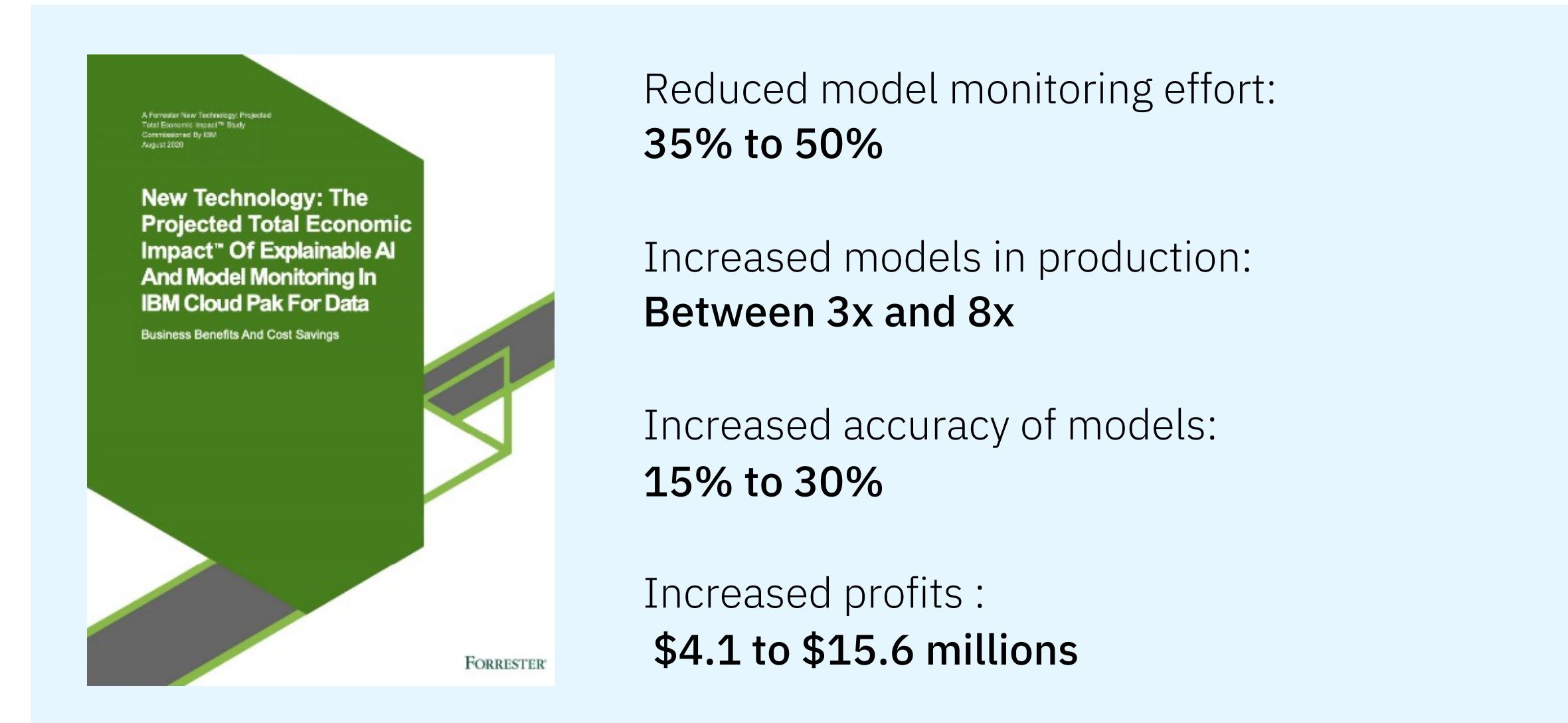
# Value of implementing data science on Cloud Pak for Data

## IBM Cloud Pak for Data



“We wanted AI and ML data capabilities that sit on-prem but still have the modern cloud benefits. And by having a standardized piece of infrastructure, with OpenShift being the orchestration platform, Cloud Pak for Data checked all the boxes.”

## Explainable AI and model monitoring On IBM Cloud Pak for Data



“Our models are now more accurate, which means we can better forecast our required cash reserve requirements. A 1% improvement in accuracy frees up millions of dollars for us to lend or invest.”

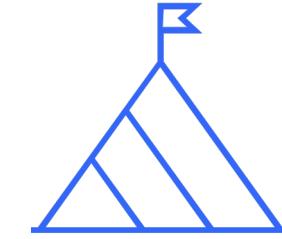
Experts are available to help progress your deals

Tap into IBM expertise to build the AI skills required to successfully implement enterprise AI →



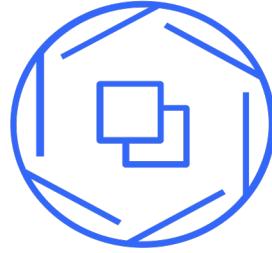
## Client Engineering

Prove the value of IBM products through a hands-on engagement



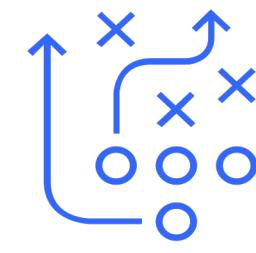
### Proof of value

Work with our experts during 2–6-week engagements



### Proven methodologies

Operationalize and scale your solutions with our proven agile approach



### Diverse, robust expertise

Highly specialized, deep-technical experts on core technology across various industries

# Deal progression and closing tool: Watson Studio Proposal Template

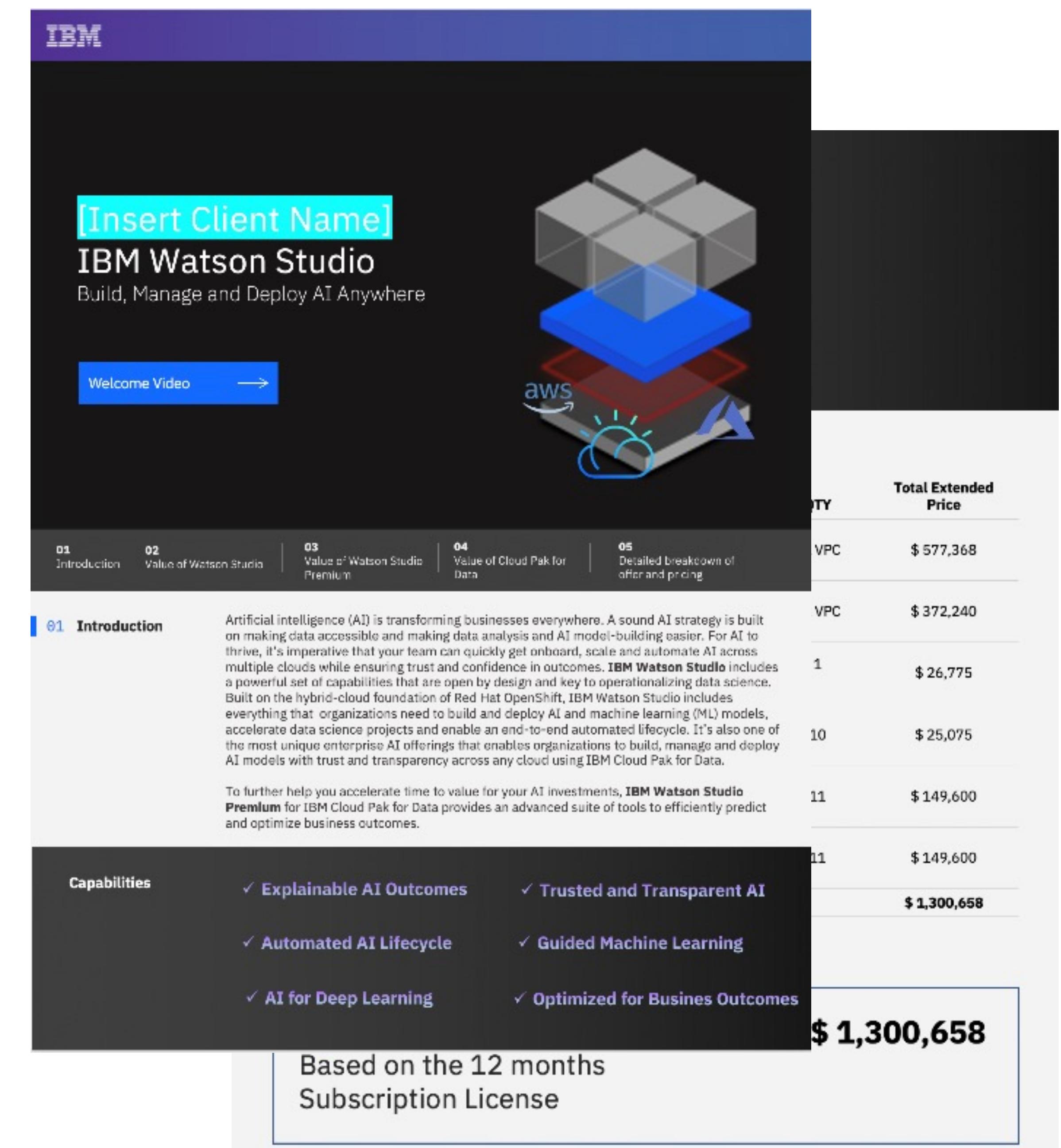
**Progress** a Watson Studio deal to **Close** with the  
**Watson Studio Proposal Template**

Fully **customizable** and easy to edit  
based on client's needs

Client-facing asset enriched with value  
propositions, benefits with key product highlights

Powerful in **accelerating** the **decision-making**  
process for your client

[Watson Studio Proposal Template →](#)



The screenshot shows a professional-looking proposal template for IBM Watson Studio. At the top, there's a purple header with the IBM logo. Below it, a teal bar contains the placeholder text "[Insert Client Name]". The main title "IBM Watson Studio" is displayed in bold black text, with the subtitle "Build, Manage and Deploy AI Anywhere" underneath. A "Welcome Video" button with a play icon is visible. To the right, there's a graphic of four stacked cubes in grey, blue, red, and white, with a small "aws" logo and a cloud icon next to it. The main content area has a dark background with light-colored text. It features a navigation menu at the top with five items: 01 Introduction, 02 Value of Watson Studio, 03 Value of Watson Studio Premium, 04 Value of Cloud Pak for Data, and 05 Detailed breakdown of offer and pricing. The "01 Introduction" section is currently active, showing a detailed paragraph about AI's impact and how Watson Studio fits into it. Below this, another paragraph discusses the advanced tools provided by Watson Studio Premium. A "Capabilities" section lists several features with checkmarks. At the bottom right, a large bold price of "\$ 1,300,658" is displayed, with a note below it stating "Based on the 12 months Subscription License". On the far right, there's a vertical column with a table showing "Total Extended Price" for different quantities (1, 10, 11, 11) and their corresponding prices (\$ 26,775, \$ 25,075, \$ 149,600, \$ 149,600). The total price for 11 units is also shown as \$ 1,300,658.

QTY	Total Extended Price
VPC	\$ 577,368
VPC	\$ 372,240
1	\$ 26,775
10	\$ 25,075
11	\$ 149,600
11	\$ 149,600
	<b>\$ 1,300,658</b>

# Deal progression and closing tool: IBM Sales Configurator

IBM Sales Configurator →

**NOTE:** If you can't access the Sales Configurator, request access at the link above and an admin will grant it within 24 hours.

IBM Sales Configurator

MY CONFIGURATIONS

## MyConfiguration

FastStart2021

103 VPCs    104 vCPUs \*    455 GB

\* License estimate    Compute (minimum)    Memory (minimum)

\* Work with your technical specialists and client to consider best practices for deployment architecture; for example, it's common in production deployments to add a minimum 10% additional vCPUs to this sizing estimate to account for peak workload.

[View detailed request and limit settings for all services](#)

**Summary**

AutoAI (Without Spark)	x1
Common Core Services	x1
Control Plane	x1
Jupyter Notebook Server with Python ...	x1
SPSS Modeler (Without Text Analytics...)	x1
Watson Knowledge Catalog	x1
Watson Machine Learning	x1
Watson OpenScale	x1
Watson Studio	x1

Total    9 services

License estimate    103 VPCs  
Compute (minimum)    104 vCPUs  
Memory (minimum)    455 GB

**Export**

**Edit**

# High-level view of data science capabilities in Cloud Pak for Data

## Cloud Pak for Data as a Service

### Cloud Catalog Services

- Watson Studio (Includes:  
Notebooks, RStudio, SPSS  
Modeler Flows, Decision  
Optimization, Data Refinery)
- Watson Machine Learning  
(Includes: AutoAI)
- Watson OpenScale
- Watson Knowledge Catalog

### Cloud Subscription Types

Data science services can be purchased through any of the following subscription types:

- IBM Cloud
- Watson
- Cloud Pak for Data as a Service

## Cloud Pak for Data

### Base Services

- Watson Studio (Includes:  
Notebooks, RStudio)
- Watson Machine Learning  
(Includes AutoAI)
- Watson Machine Learning  
Accelerator
- Watson OpenScale
- SPSS Modeler Flows
- Hadoop Execution Engine
- Data Refinery
- Decision Optimization
- Watson Knowledge Catalog

### Cloud Pak for Data Cartridges

Additional capability is available from the following:

- Anaconda Repository

# Detailed feature matrix of data science capabilities in Cloud Pak for Data

	Cloud Pak for Data as a Service	Cloud Pak for Data
<b>Open-Source tools:</b> – Jupyter Notebooks – Jupyter Labs – RStudio	X — X	X X X
<b>Push Analytics to Data</b> – Hadoop Execution Engine – SPSS SQL Pushback	— X	X X
<b>Data Science IBM tools</b> – SPSS Modeler Flow Canvas – Data Refinery – Decision Optimization – AutoAI – Cognos Dashboards	X X X X X	X X X X X
<b>Deployment</b> – Deploy as Online/Batch – Model Versioning – Performance Monitoring – Continuous Learning – Deployment of Open Source Assets – Deployment of IBM Frameworks (SPSS, DO)	X X X X X X	X X X X X —
<b>Model Monitoring &amp; Validation</b> – Production Monitoring (Quality, Fairness, and Explainability) – Drift Detection – Model Validation	(Requires Watson OpenScale service) X X X	X X X
<b>Enterprise-grade package manager</b> – IBM Anaconda Repository for Cloud Pak for Data	—	X (Requires Anaconda repository, a paid extension on top of Cloud Pak for Data)
<b>Computing infrastructure</b> – GPUs	X	X

X = Included

— = Not included

# Services, part numbers, and pricing for Cloud Pak for Data software bundle

- To trade up existing Data Science Stand alone clients to Cloud Pak for Data, use Modernization parts.
- Engage with technical sales representative to size Cloud Pak for Data. For estimates, use the T-shirt sizings available in [the IBM Sales Configurator](#) →

Service (and capabilities)	Metric	Part number	Price
Cloud Pak for Data Enterprise Edition (includes Watson Studio, Watson Machine Learning, Watson Machine Learning Accelerator, Data Refinery, OpenScale, SPSS Modeler Flows, Decision Optimization, Hadoop Execution Engine)	VPC	CTL: D264MLL Perpetual: D1YGZLL Perpetual Non- Prod: D27RMLL	\$594 \$17,800 \$8,910
IBM Anaconda Repository for Cloud Pak for Data	Authorized users	CTL: D28AXLL Perpetual: D28AULL	\$172 \$5,150

# Services, part numbers, and pricing for Cloud Pak for Data as a Service

Sell under the IBM Cloud, Cloud Pak for Data as a Service, or Watson Subscription parts (no standalone part numbers)

- D01CFZX: IBM Cloud Pak for Data as a Service for IBM Cloud  
1 US Dollar per month
- D01CGZX: IBM Cloud Pak for Data as a Service for IBM Cloud  
1 US Dollar Overage
- D1U1GLL: IBM Cloud Platform  
1 US Dollar per Month
- D1U1HLL: IBM Cloud Platform  
1 US Dollar Overage
- D019JZX: IBM Watson Subscription for IBM Cloud  
1 US Dollar per Month
- D019NZX: IBM Watson Subscription for IBM Cloud  
1 US Dollar Overage

Service (and capabilities)	Metric	Part number	Price
Watson Studio	Free 1 user 50 Capacity Unit Hours (CUH)	\$99 USD/month Base: 1 user, 50 CUH Usage: \$99 USD / user \$0.5 USD / CUH	Tiered pricing, see the <a href="#">IBM Cloud Catalog →</a>
Watson Machine Learning	Free 20 CUH Max 1 GPU	Pay-as-you-go: \$0.5 USD / CUH	Base: 2500 CUH Usage: \$1,000 USD / instance \$0.4 USD / CUH
Watson OpenScale	Free for up to 5 models (limited monitors and explanations)	\$250 / model / month	N/A

# Client Objections: Easy

Client Objection	IBM Short Answer	More Details
Business Value Political Win	Watson Studio will require my Business Analysts to learn new skills. Or I'll have to hire new people in Marketing (or Operations or Finance)	<b>Watson Studio is built for coders and non-coders</b> so that they can use the skills they already have.
Financial Win	We have a small budget this year.	IBM has <b>options for every budget</b> . And when we build your business case together, you'll see how much we can save (make) your company in the very near term.
Technical Win	We are moving from on-prem to Microsoft Azure. So that's our standard and we aren't interested in IBM's Public Cloud.	Watson Studio is part of Cloud Pak for Data running on RHOS. So, you can stand up this platform on-prem or <b>any cloud you choose</b> .

# Client Objections: Intermediate

	<b>Client Objection</b>	<b>IBM Short Answer</b>	<b>More Details</b>
Business Value Political Win	I can see where this could be beneficial, but we have higher priorities in Marketing (or Operations or Finance) in 2022.	Many clients have reported <b>cost savings exceeding \$10M</b> in the first year they have implemented prediction and optimization models. If IBM could save you \$10M, would that make the priority list?	<a href="#">Data Science in Cloud Pak for Data Client Presentation →</a>
Financial Win	Watson Studio is too expensive for our budget this year.	Forrester interviewed existing clients and the <b>data science savings</b> they are receiving is <b>\$3M</b> in the first 3 years.	<a href="#">Forrester Cloud Pak for Data Total Economic Impact report →</a>
Technical Win	I get better capabilities using the free version of Anaconda than in Watson Studio.	IBM has a <b>strategic partnership with Anaconda</b> . In 2020 Anaconda changed their Terms of Service and requires companies to purchase licenses. IBM can help get you compliant with these new TOS.	<a href="#">Anaconda Sales Play →</a>

# Client Objections: Advanced

Client Objection	IBM Short Answer	More Details	
Business Value Political Win	As the head of Marketing (or Operations or Finance or CDO), I'm not confident that the models being built can be trusted to deliver the business results I need.	Deploying models into production and infusing in applications is where you get your value. Moving them into production with confidence is where companies struggle. We provide <b>Governed AI that is explainable.</b>	<a href="#">AI Governance Smartpaper →</a> <a href="#">Forrester Explainable AI Total Economic Impact report →</a> <a href="#">How we got a massive win for AI Governance →</a>
Financial Win	The overall cost of this platform (software, hardware, services) exceeds the benefits we expect to get from this investment.	IBM has proven many times that the ROI and <b>payback for Watson Studio is compelling.</b> We'll build one together for your company.	<a href="#">Cloud Pak for Data Business Value Assessment tool →</a>
Technical Win	We don't have the resources or skills to stand up Cloud Pak from Data (Watson Studio) and lack the process to effectively build and deploy models at scale.	Many clients need help ramping up their teams. IBM Expert Labs can lead your team through the install of Cloud Pak for Data.	<a href="#">Data and AI Expert Labs →</a>

# Data science and machine learning market challenges

## Enterprise data is fragmented

- Moving data is costly, risky, and slow
- Duplication can lead to different outcomes



[Unlike Google, AWS, Azure](#)

## Move data science to the data

- Multi-cloud support
- Pushing model training to Cloud, Hadoop, Mainframe, GPU-supported infrastructure

## Data scientists are a scarce resource

- Diversity in skill levels, and preferences for different open-source frameworks
- Computationally intense workloads (Big data, Deep Learning) constrain productivity
- Citizen data scientists emerging



[Unlike SAS, Mathworks, and build your own](#)

## Enable expert and citizen data scientists

- Reduce barriers to distribution of work
- Visual productivity tools
- Intelligent management of AI infrastructure
- High performance HW/SW acceleration
- Automating Data Science

## Operationalizing AI is difficult

- Hard to trust how models perform in production
- Data scientists' difficulty with integration into engineering and support efforts
- Operationalizing introduces security, scalability, governance constraints

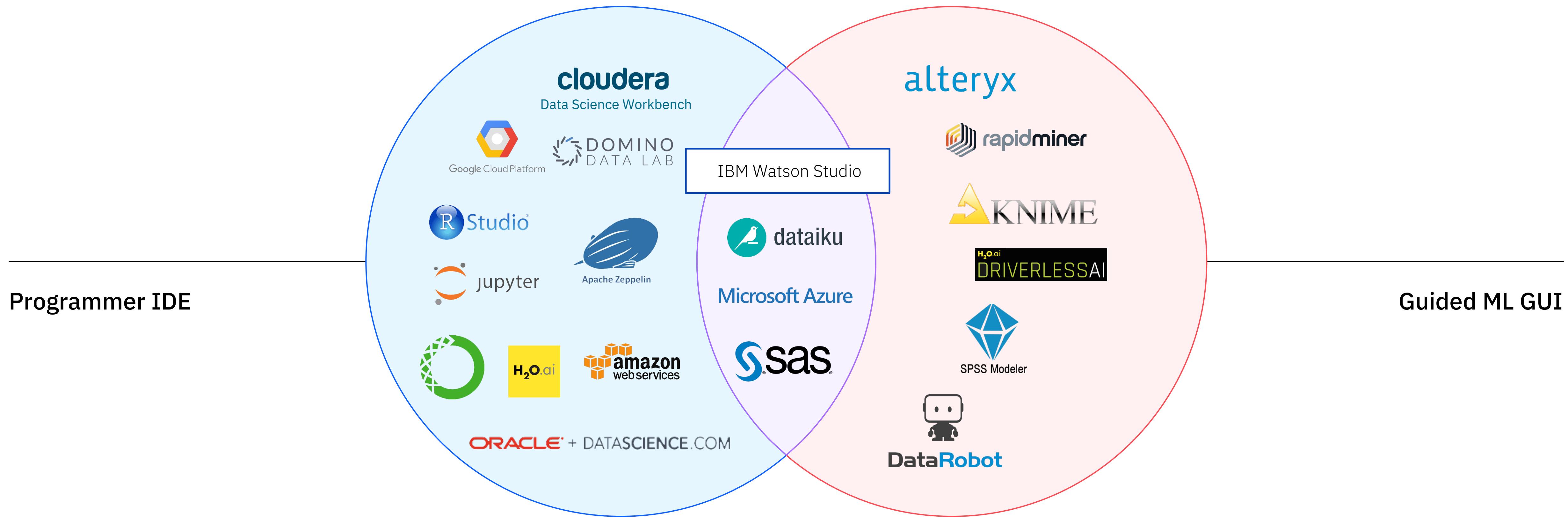


[Unlike H<sub>2</sub>O, DataRobot](#)

## Full AI lifecycle, including open source

- Ease & flexibility of deployment
- Security, compliance and governance
- Advanced model management capabilities
- Extend to Deep Learning and AI applications

# Data science platforms and tools competitive landscape



**Key Takeaway:** Today's data science organizations have a wide mix of skills sets. The intersection of these 2 spaces is emerging as the true battle ground for users.

