



Cortana Intelligence Suite

Cognitive Services

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Agenda

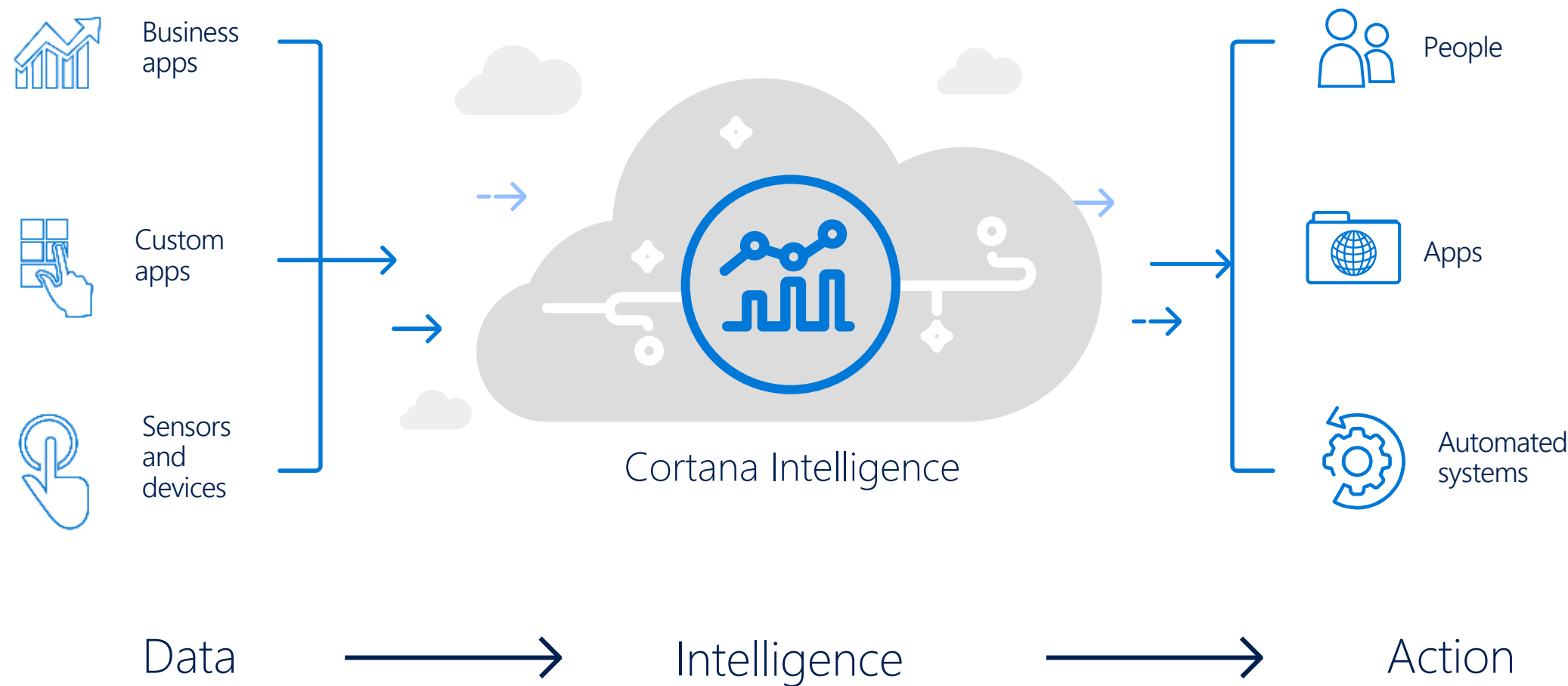
Part 1: Introduction to Azure AI

Part 2: Pre-built AI

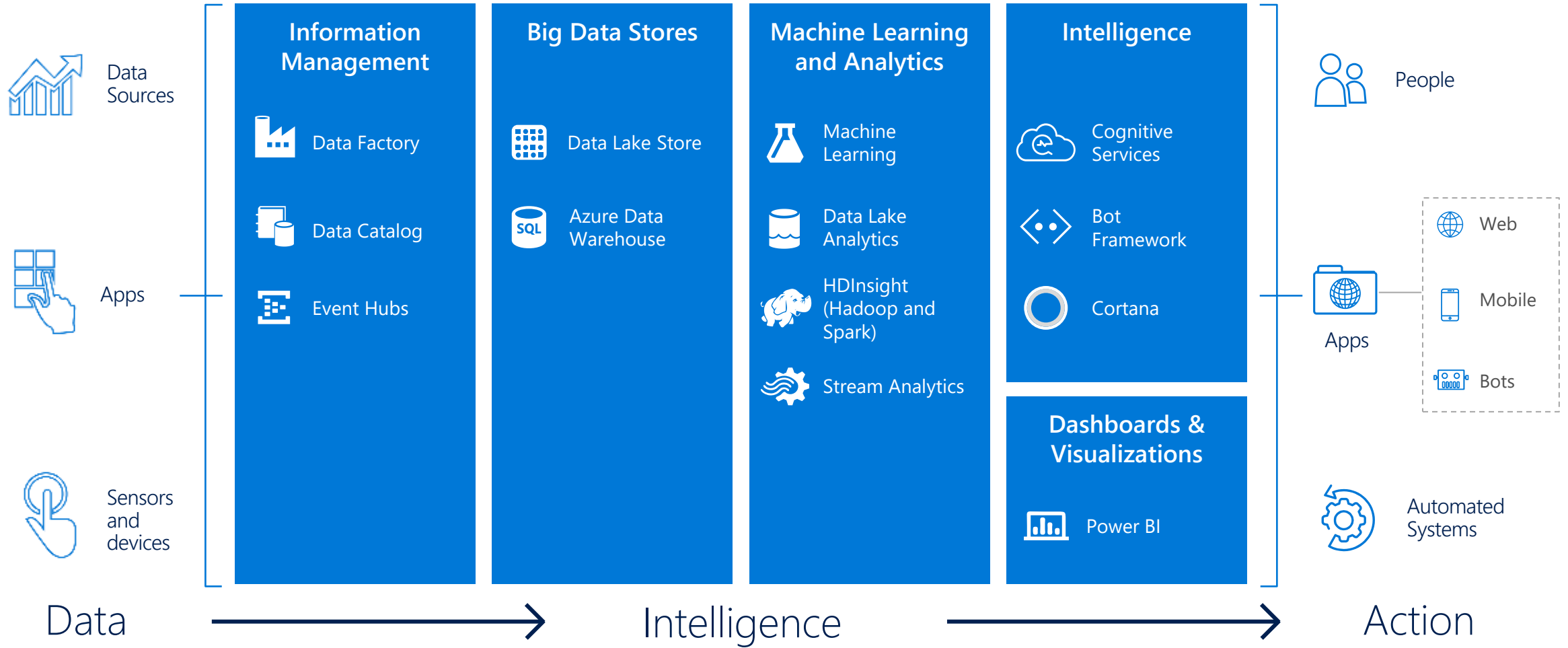
- Recap
- Cognitive Services overview
- Detailed overview
- What to use when: cognitive services vs custom AI/ML
- Live Demos: Knowledge Mining and Custom Vision

Part 3: Custom AI

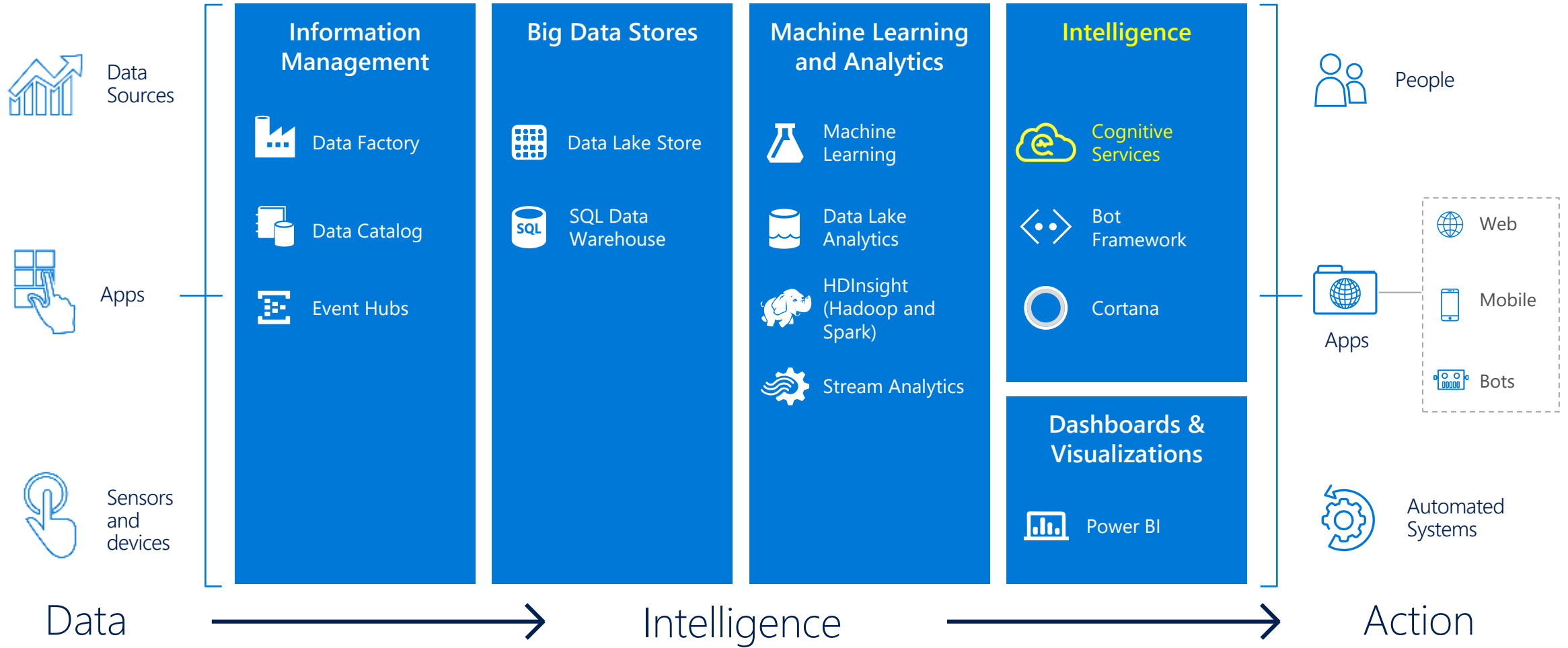
Stay ahead of the curve with Cortana Intelligence Suite



Easily turn data into intelligent action



Easily turn data into intelligent action





Bringing it all together

The Seeing AI App

Computer Vision, Image, Speech Recognition, NLP,
and ML from Microsoft Cognitive Services

[Read Blog Here](#)

[Watch Video Here](#)

Microsoft Cognitive Services

Give your apps a human side



Vision

From faces to feelings, allow your apps to understand images and video



Speech

Hear and speak to your users by filtering noise, identifying speakers, and understanding intent



Language

Process text and learn how to recognize what users want



Knowledge

Tap into rich knowledge amassed from the web, academia, or your own data



Search

Access billions of web pages, images, videos, and news with the power of Bing APIs



Labs

An early look at emerging Cognitive Services technologies: discover, try & give feedback on new technologies before general availability

Microsoft Cognitive Services

Give your apps a human side



Vision

Computer Vision
Content Moderator
Emotion
Face
Video
Video Indexer
Custom Vision Service



Speech

Bing Speech
Custom Speech Service
Speaker Recognition



Language

Bing Spell Check
Language Understanding
Linguistic Analysis
Translator Text & Speech
Web Language Model
Text Analytics



Knowledge

Academic Knowledge
Entity Linking
Knowledge Exploration
Recommendations
QnA Maker
Custom Decision Service



Search

Bing Autosuggest
Bing Image Search
Bing News Search
Bing Video Search
Bing Web Search
Bing Custom Search



Labs

Project Prague (gesture)
Cuzco (events)
Johannesburg (routing)
Nanjing (Isochrones)
Abu Dhabi (distance matrix)
Wollongong (location)

Why Microsoft Cognitive Services?

Easy

Roll your own with REST APIs
Simple to add: just a few lines of code required



Flexible

Integrate into the language and platform of your choice
Breadth of offerings helps you find the right API for your app
Bring your own data for your custom experience



Tested

Built by experts in their field from Microsoft Research, Bing, and Azure Machine Learning
Quality documentation, sample code, and community support

GitHub



Vision



From faces to feelings, allow your
apps to understand images and video

Computer Vision | Content Moderator | Emotion | Face |
Video | Video Indexer | Custom Vision Service



Vision



Computer Vision API

Distill actionable information from images



Face API

Detect, identify, analyze, organize, and tag faces in photos



Emotion API

Personalize experiences with emotion recognition



Video API

Analyze, edit, and process videos within your app



Content Moderator

Machine-assisted moderation of text and images, augmented with human review tools



Custom Vision Service

Customizable web service that learns to recognize specific content in imagery



Video Indexer

Process and extract smart insights from videos



Form Recognizer

Extract text, key/value pairs and table data from form documents

Speech



Hear and speak to your users by filtering noise, identifying speakers, and understanding intent

Custom Recognition | Speaker Recognition | Speech



Speech



Bing Speech API

Convert speech to text and back again, and understand its intent



Speaker Recognition API

Give your app the ability to know who's talking



Custom Speech Service

Fine-tune speech recognition for anyone, anywhere

Language



Process text and learn how to recognize what
users want

Bing Spell Check | Language Understanding |
Linguistic Analysis | Text Analytics | Web Language Model |
Translator Text and Speech



Language



Bing Spell Check API

Detect and correct spelling mistakes within your app



Web Language Model API

Leverage the power of language models trained on web-scale data



Linguistic Analysis API

Easily parse complex text with language analysis



Language Understanding Intelligent Service

Teach your apps to understand commands from your users



Text Analytics API

Detect sentiment, key phrases, topics, and language from your text



Translator

Easily perform speech and text translation

Knowledge



Tap into rich knowledge amassed from
the web, academia, or your own data

Academic Knowledge | Entity Linking |
Knowledge Exploration | Recommendations |
QnA Maker | Custom Decision Service



Knowledge



Academic Knowledge API

Explore relationships among academic papers, journals, and authors



Knowledge Exploration Service

Add interactive search over structured data to your project



Entity Linking Service

Contextually extend knowledge of people, locations, and events



Recommendations API

Provide personalized product recommendations for your customers



Custom Decision Service

Create custom experiences with adaptive, contextual decision-making



QnA Maker

Distill information into conversational, easy-to-navigate answers

Knowledge



DEMO

Resources:

[Link to Demo](#)

[GitHub Code](#)

Search



Access billions of web pages, images, videos,
and news with the power of Bing APIs

Bing Web Search | Bing Image Search
Bing News Search | Bing Video Search
Bing Auto Suggest

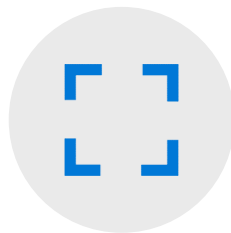


Search



Bing Web Search API

Connect powerful search to your apps



Bing Image Search API

Bring advanced image and metadata search to your app



Bing Video Search API

Trending videos, detailed metadata, and rich results



Bing News Search API

Link your users to robust and timely news searches



Bing Autosuggest API

Give your app intelligent autosuggest options for searches



Bing Custom Search

Create a highly-customized web search experience

Microsoft Service Lab





Microsoft Cognitive Services Labs

An early look at emerging Cognitive Services technologies:
discover, try, and give feedback on new technologies before general availability



Project Prague

Gesture based controls



Project Cuzco

Event associated with Wikipedia



Project Johannesburg

Route logistics



Project Nanjing

Isochrones calculations



Project Abu Dhabi

Distance matrices



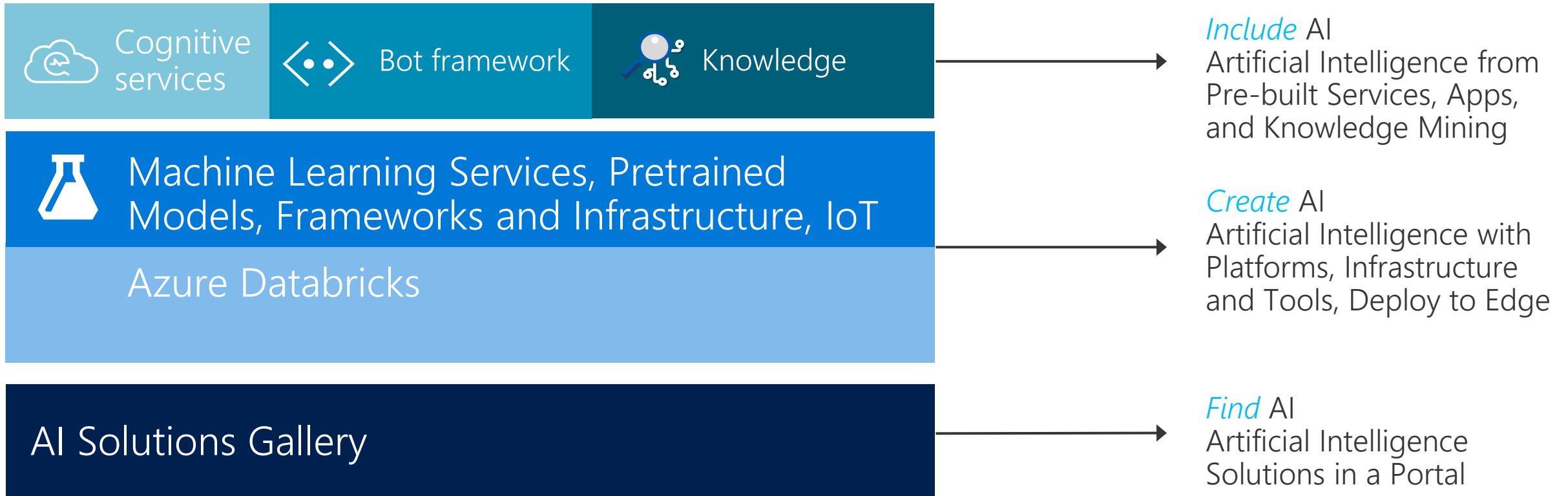
Project Wollongong

Score location attractiveness

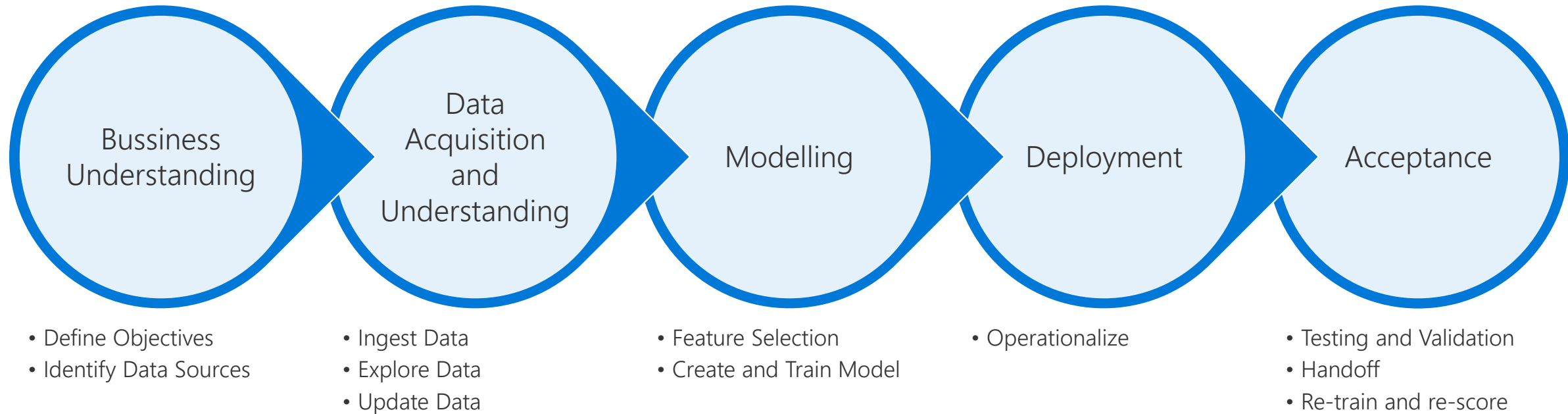
What to use When

Cognitive services vs custom AI

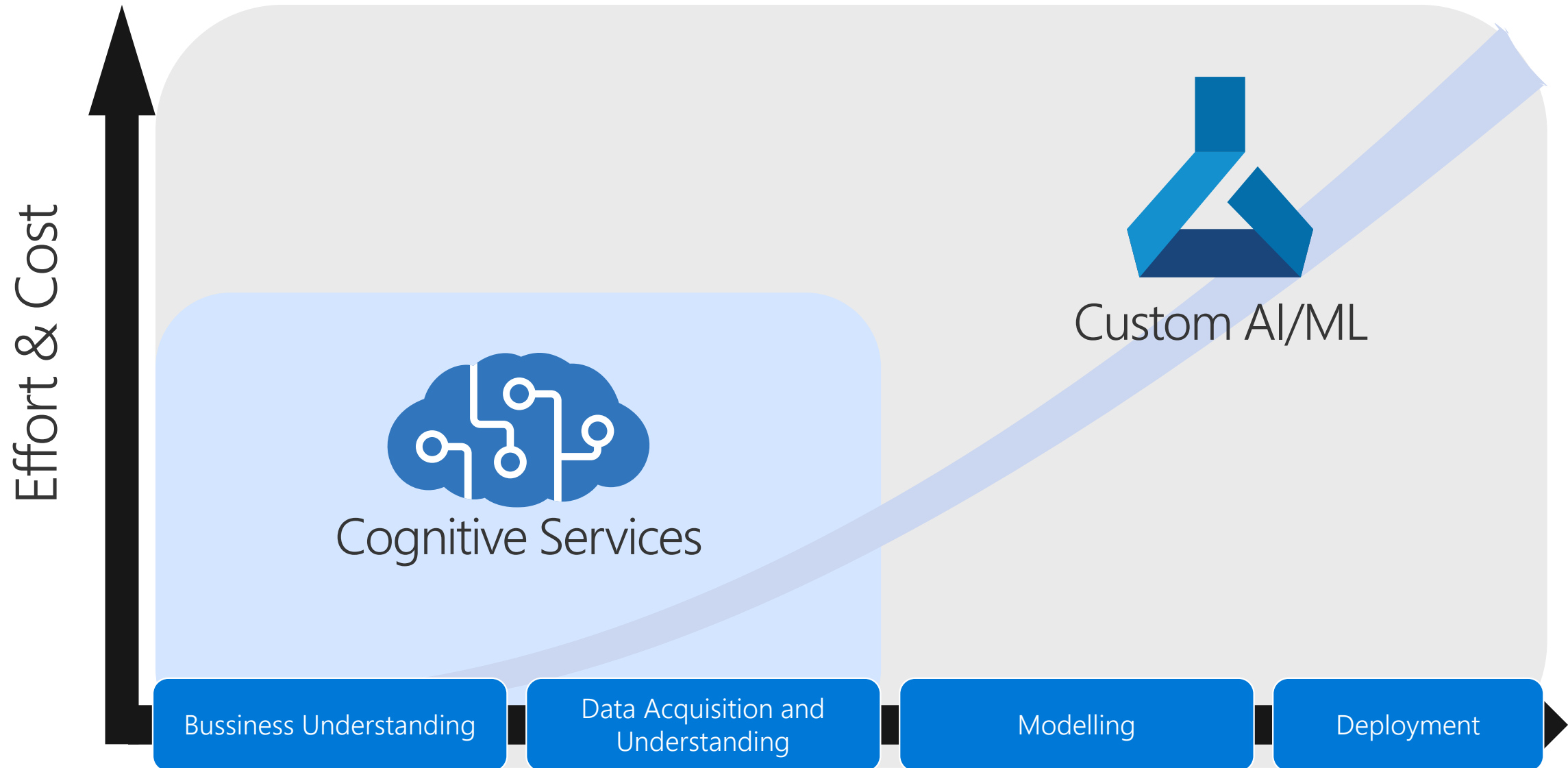
The Azure AI Landscape



The Data Science Process



The Data Science Process

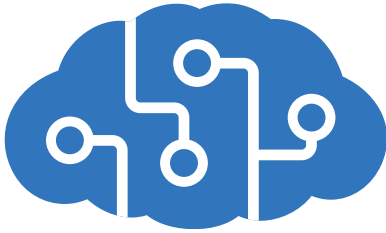


Model Assessment

Cognitive Services

vs

Custom AI/ML



Baseline to assess custom model



Azure ML

LIVE DEMO



Knowledge Mining

Extract knowledge from covid-19 research document

[Link to Dataset](#)



Vision

Classify cells infected by malaria virus

[Link to Dataset](#)

[Cognitive Services Documentation](#)