Building Reliable AI Products in Banking

Miranda Jones
SVP, Data & AI Strategy Leader

EMPRISE BANK®

Overview

- Overarching Principles & Team Frameworks
- ML Development Lifecycle & Key Elements

Emprise Bank AI Guiding Principles

1

Must Align to Mission and Values
Empower People to Thrive
Customer-focused, Integrity, Teamwork, Enterprising & Driven

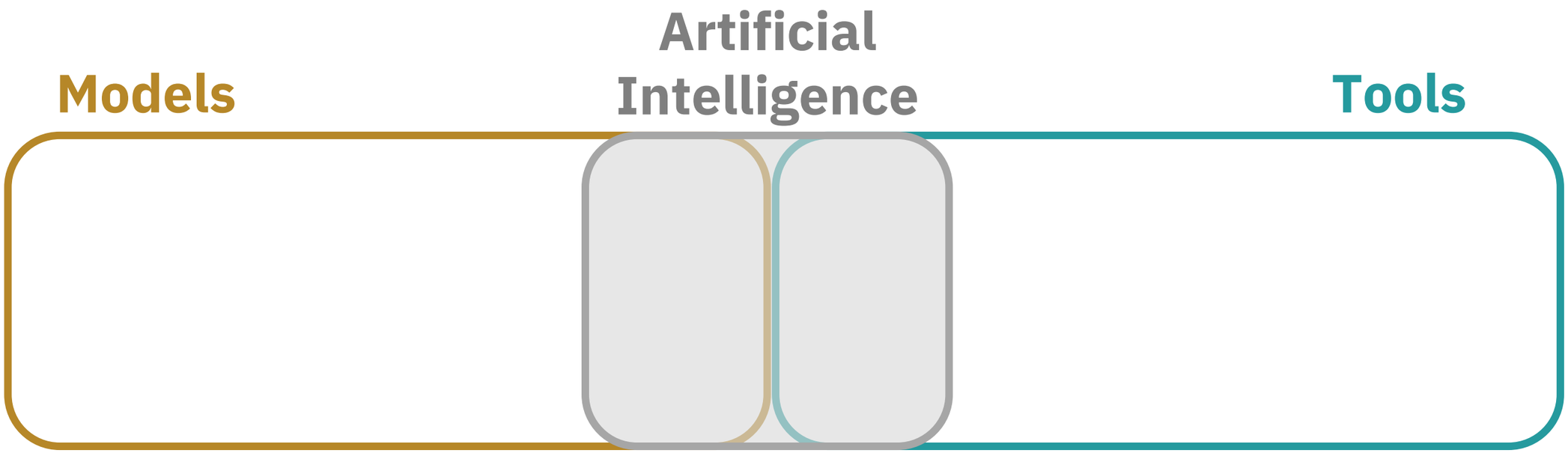
2

Enhances, not Replaces, Meaningful Human Interactions
Will support **strengthening relationships** with customers and between employees
Will make business processes **more transparent and trustworthy**, not less

3

Strengthen our Most Valuable Asset, Our Employees
Will be **aligned with employee readiness**
Will be designed in **partnership** with employee **subject matter expertise**

Model & AI Regulatory Terminology



Models and tools are distinct, but AI could be either one.

EMPRISE BANK®

Managing Model & AI Risk

Model Risk Management

- Enforces and oversees program
- Sets required general training
- Sets model validation standards and guidelines

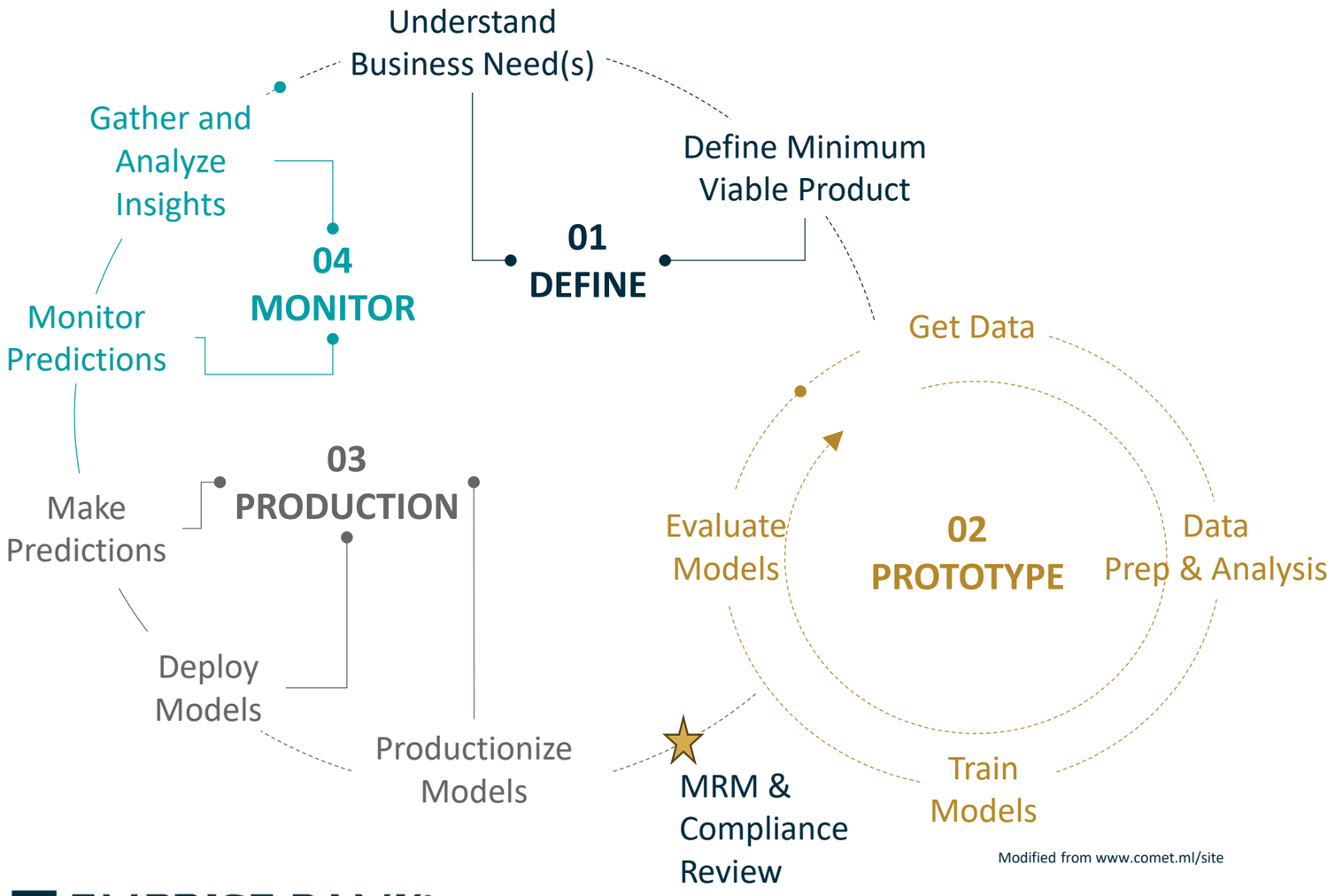
Data & AI Capabilities

- Trains traditional ML models
- Integrates LLM use cases
- Perform model validations
- Oversee internal models & AI

AI Task Force

- Training the organization
- Champion AI engagement activities
- Broadening AI development support
- Maturing AI oversight
- Identifying meaningful use cases

ML Development Lifecycle



Modified from www.comet.ml/site

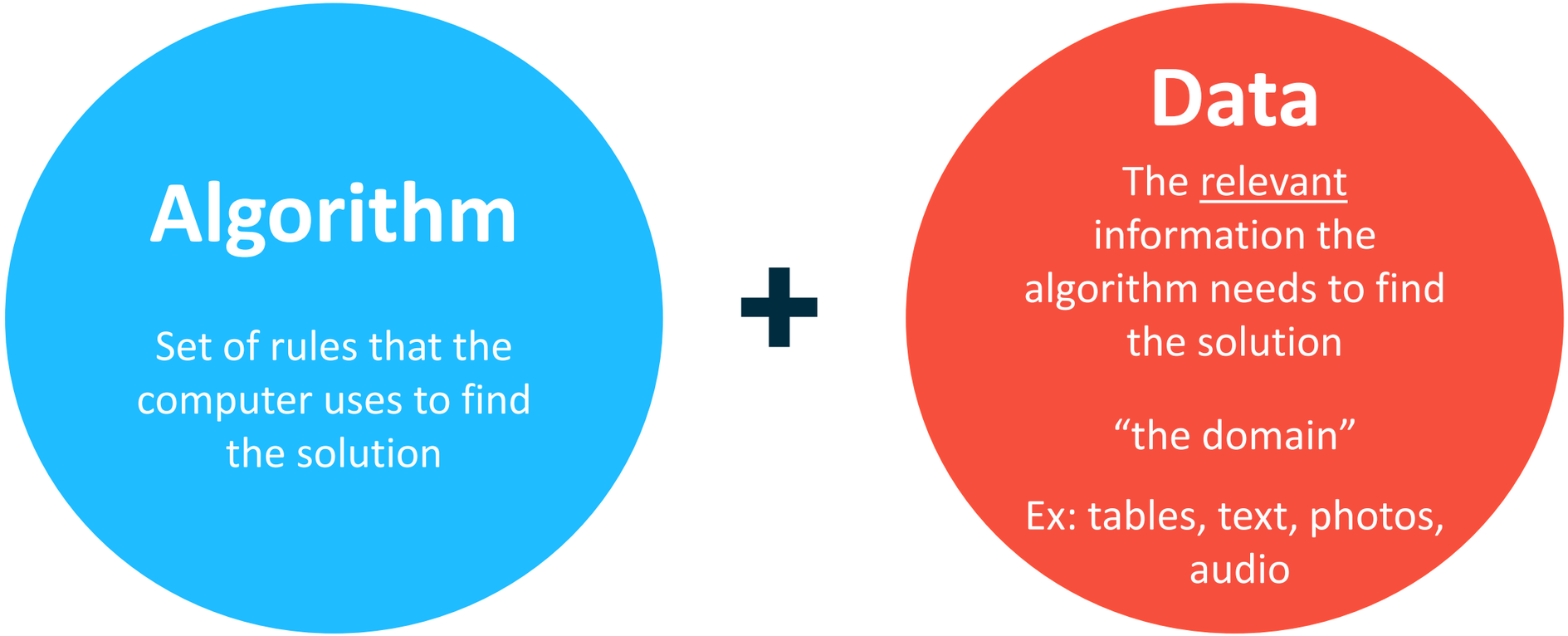
Key Beliefs

Subject Matter Experts:

- Understand the **purpose** and **meaning** of their work better than the Data & AI team.
- Have **real-world experiences** and **knowledge** that can help us identify the best data to use or test
- Need to have **trust** in this work for it to be **adopted**

EMPRISE BANK®

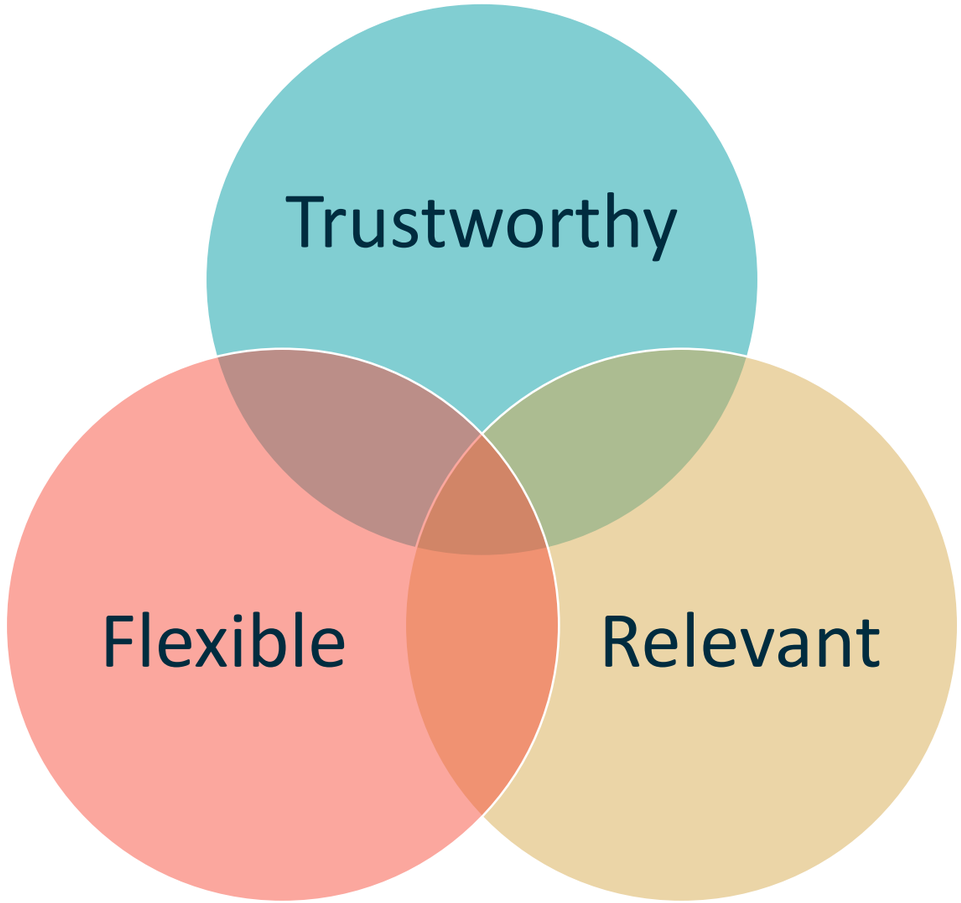
Every Trained ML Model is Biased



ML Models/AI are Products of an Algorithm and Data

EMPRISE BANK®

Data for AI Projects



Aligned with Business Values

Trustworthy:

- Has business meaning
- Source of truth
- Accuracy
- Ability to be verified with standard user data
- Reliability

Relevant:

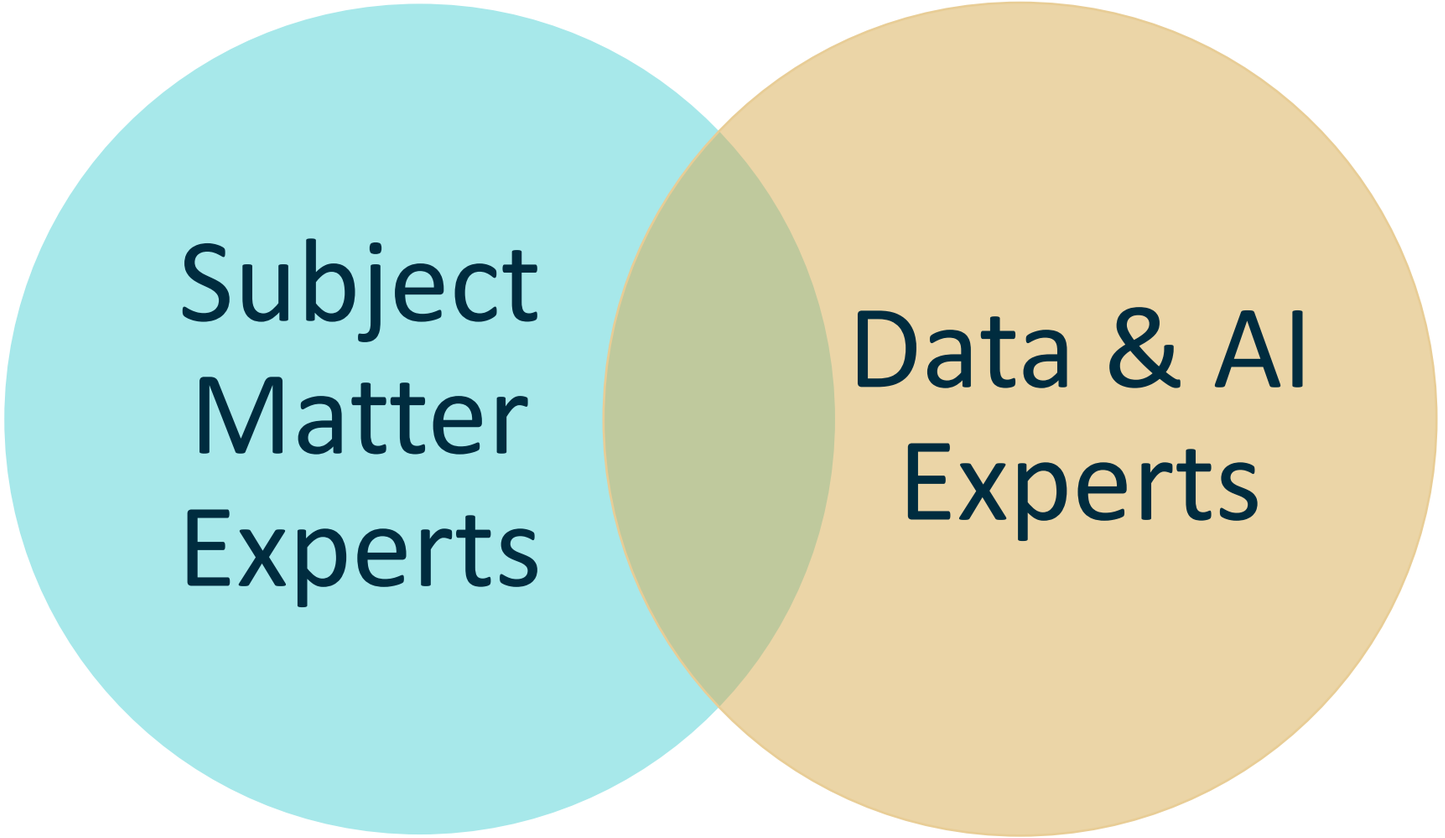
- Speed of data <> use case
- Interoperability to business process or customer interaction
- Scoped in the domain

Flexible:

- Ability to experiment
- Create and test many variables

EMPRISE BANK®

Diverse Collaboration



Successful AI/ML Projects Are Built on Teamwork

Building & Deploying with Transparency

Automated ML Pipelines

- Documented**, clearly stated purpose** and decision criteria
- **SMEs** deeply involved in brainstorming features and **reviewing analysis results**
- Communicate feature importance and feature not-importance during development
- **Accessible list of variables used in ongoing predictions/segmentation**

Human in the Loop Predictive ML

- Documented**, clearly stated purpose** and decision criteria
- **SMEs** deeply involved in brainstorming features and **reviewing analysis results**
- Communicate feature importance and feature not-importance during development
- **Predictions include feature importance translated for business users**

Generative AI

- Documented LLM used visible to user in data product
- Training, training, training “LLMs predict words, they do not learn facts”
- **Designing use cases around readiness**
- Supporting information and training baked into data product

EMPRISE BANK®

Final Thoughts

"Machine learning is a core, transformative way by which we're rethinking how we're doing everything."

Sundar Pichai
CEO, Google

"[We should be asking ourselves] questions like **is this better than the human process it replaces**? Is it going to destroy a bunch of people's lives? For whom does this algorithm fail?"

Cathy O'Neil
author of
Weapons of Math Destruction

"The technology is the easy part. The hard part is figuring out the social and institutional structures around the technology."

John Seely Brown
Former Chief Scientist of Xerox
and director of Palo Alto
Research Center

EMPRISE BANK®