Agile Alliance®

Introductions

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Leading AI Change: A Guide for the Agile Leader in Artificial Intelligence Transformations

Agenda

- Artificial Intelligence (AI) and Machine Learning (ML) – What you should know about this technology
- AI transformations
- Agile leader’s role in AI transformations

Instant Quiz: AI or not AI?

1. Movie recommendations from Netflix
2. Personalized welcome page when you log into Amazon.com
3. Paper flyer from your favorite store
4. Expense Report approval
5. Self-driving cars
6. Alert from a medical device
7. Fraud warning from your bank
8. Predicting the SuperBowl winner

AI and ML Defined

ARTIFICIAL INTELLIGENCE (AI):

Any systems (hardware or software) that display **INTELLIGENT BEHAVIOR** by analyzing their environment and taking actions in order to achieve a specific goal

MACHINE LEARNING (ML):

A type of AI that allows software applications to become more accurate in **PREDICTING OUTCOMES** without being explicitly programmed

Why AI and ML?

INCREASED SPENDING

By 2024, global spending on artificial intelligence will reach $110 billion

—IDC

IDC, “Worldwide Spending on Artificial Intelligence”

FROM PILOTING TO OPERATIONALIZING

By the end of 2024, 75% of enterprises will shift from piloting to operationalizing AI

—Gartner

Gartner, “Gartner Identifies Top 10”

AI TRANSFORMATION

57% said that AI would transform their organization in the next three years

—Deloitte

Deloitte, “Thriving in the Era of Pervasive AI”

Where AI/ML is Used Today

Recommendations & Personalization

Supply Chain Optimization

Speech Recognition

Image Recognition

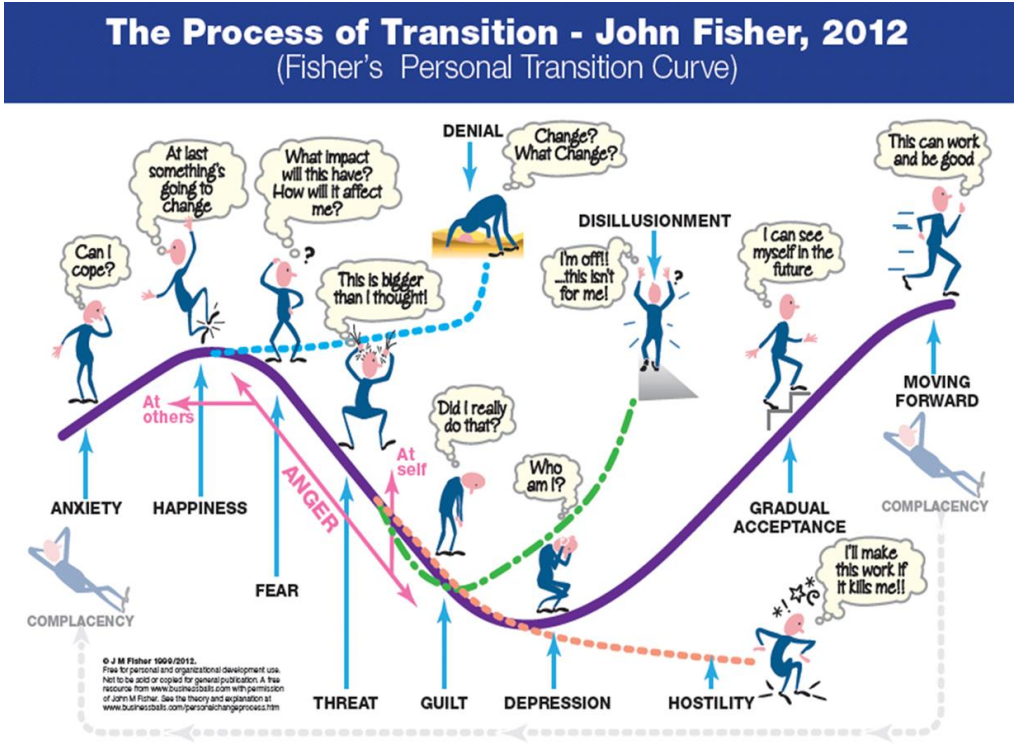
Predictive Maintenance

Computer Vision

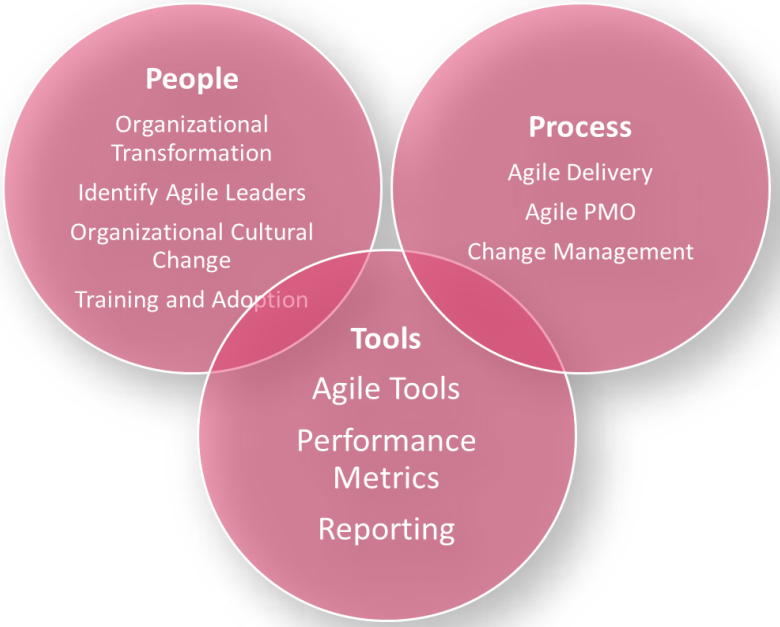
... and many more

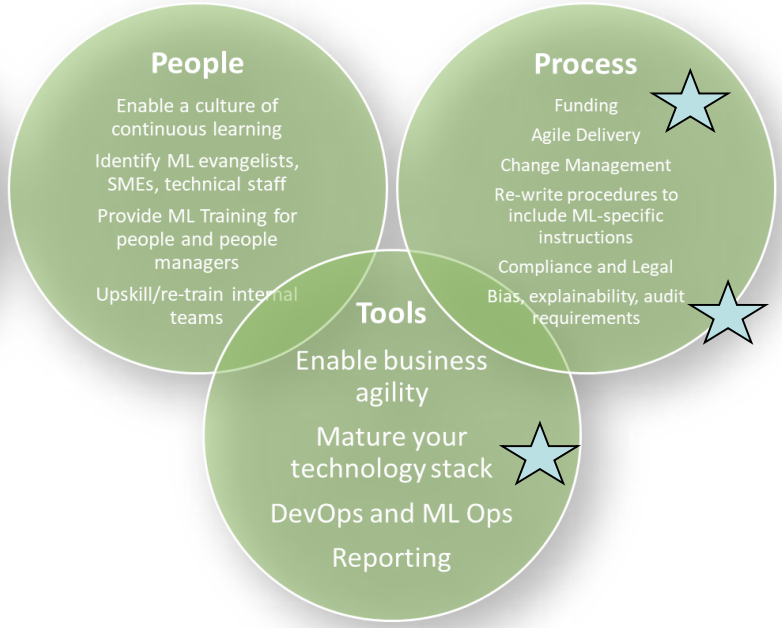
AI Transformations

Agile Transformations vs AI Transformations



Agile Transformations vs AI Transformations





AI Transformations

EXHIBIT 4 | A Transformation Approach to Flip the Odds of Success

Winning in the medium term

- Assess the current position of digital and AI in the organization
- Define the target state of value pools and business model in three to five years
- Create a roadmap to develop "unicorns," use cases with great potential

Funding the journey

- Define the funding needs, free up resources, focus on quick wins
- Embrace agile ways of working for speed and cost-efficiency
- Be willing to divest

Building capabilities

- Unify the entire organization around digital and AI with disciplined change management
- Train and hire digital talent
- Adjust the operating model to enable AI@scale

Sources: BCG interviews and analysis.

[AI Transformation in 2022: In-Depth guide for executives (aimultiple.com)]

Agile Leader's Role in AI Transformations

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- Promote lean budgeting
- Promote agile teams and team of teams
- Propose agile delivery to fail fast
- Propose specific reports to show value delivered

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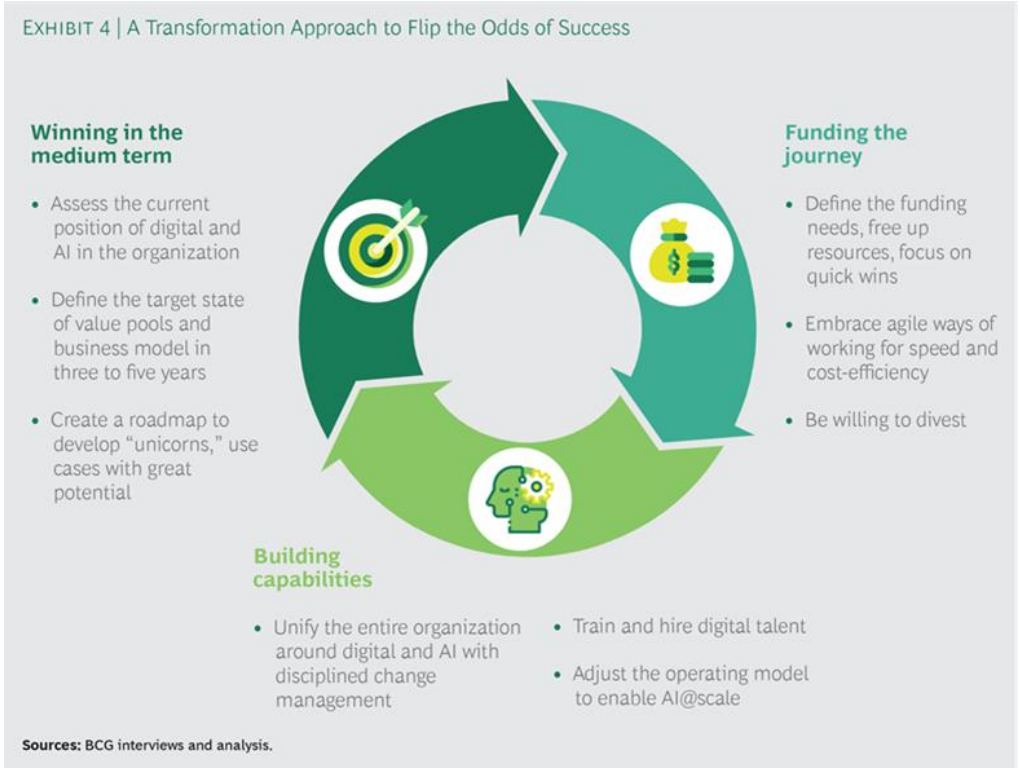
Sources: BCG interviews and analysis.

- Manage training schedules and content
- Promote technical excellence and agile development processes
- Check for compliance/bias/fairness features
- Propose changes as needed to the current processes to enable scalability

Agile Leader's Role in AI Transformations

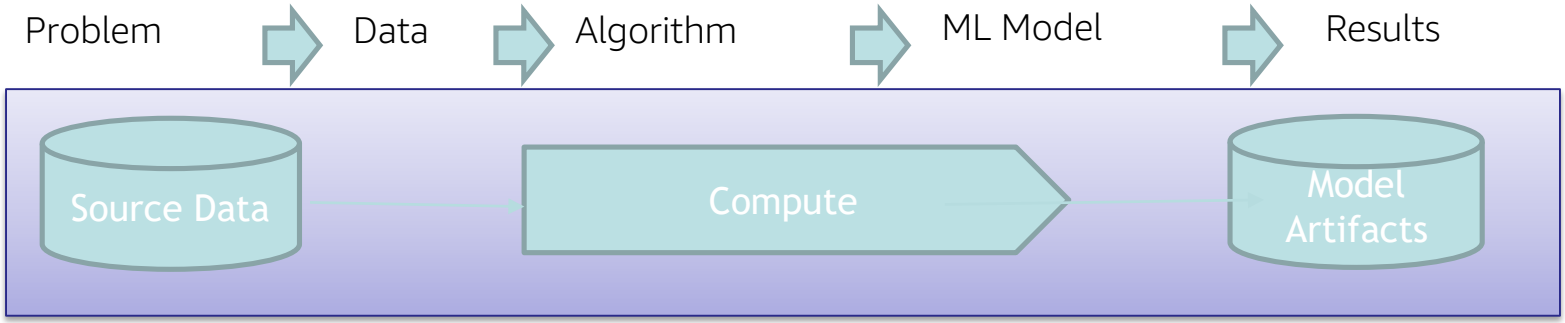
- Deliver correctly and on time
- Measure everything!
- Create metrics for important KPIs and trends
- Create roadmaps
- Report often
- Provide visibility into the work



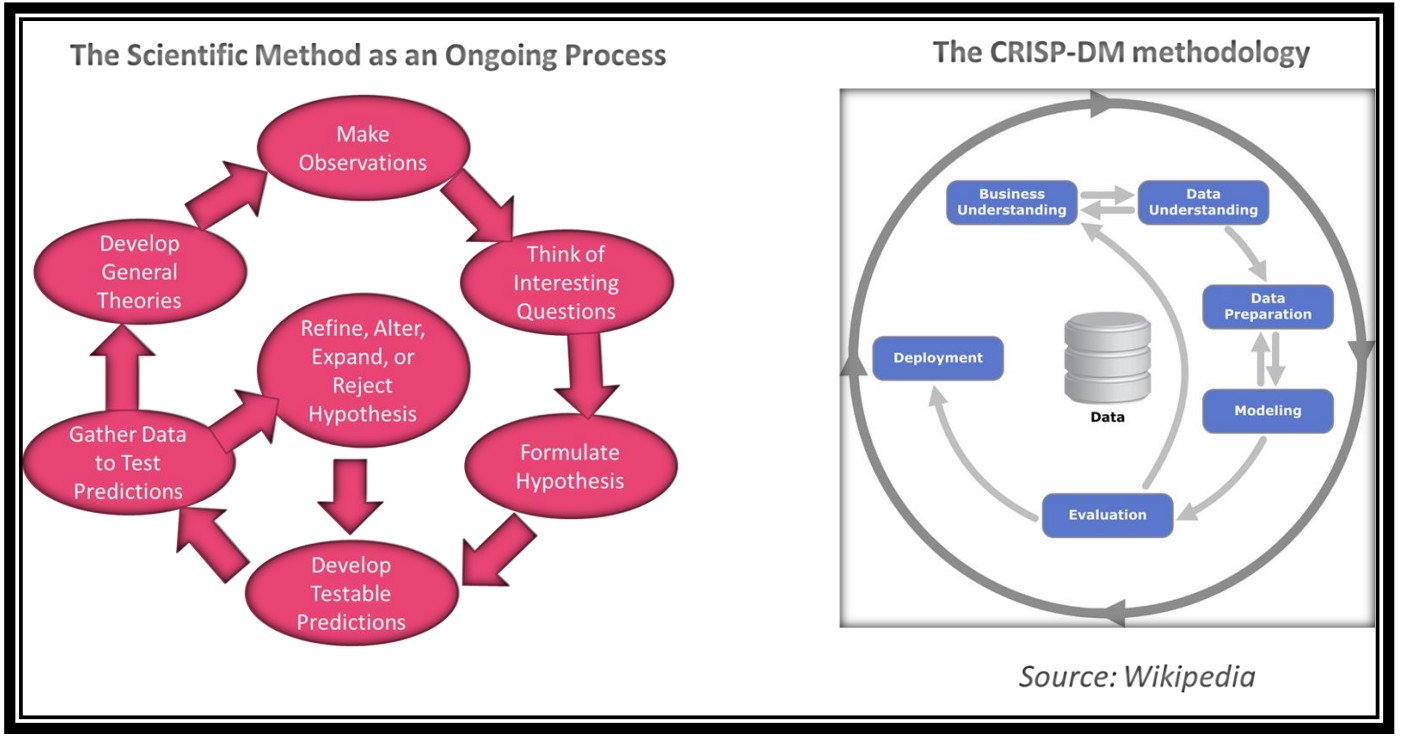
AI Product Delivery

The machine learning process is based on the following steps:

- Feed data into an algorithm.
- Use this data to train a model.
- Test and deploy the model.
- Consume the deployed model to do an automated predictive task.



AI/ML and the Scientific Method



Cross-Industry Standard Process for Data Mining

Managing the Unknown

Managing the Unknown

- **Train** all stakeholders on Agile and ML
- Define your **Roadmap** and **MVP**
- Start **small**
- Use research spikes (heavily)
- Leverage **SMART** user stories

Managing the Unknown

Good Stories:

As an equipment technician, I want to be alerted if the temperature drops below a threshold.

As a website user, I want to see a list of recommended products when I log in.

Bad Stories:

Improve the model.

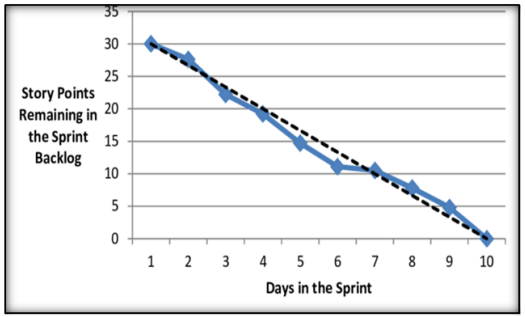
As a model developer, I would like to tell to stakeholders that their models are noisy and are not very reliable on their own, hence why if we are going to ultimately take a segmentation approach (which we may), we must motivate why we take a more intricate one. *(true story)*

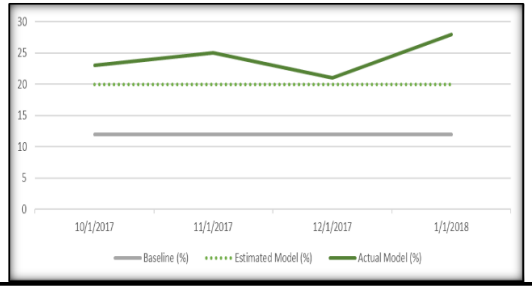
Managing the Unknown

- **Build in slack** upfront and throughout
- Keep your stakeholders **informed** of risks, issues and possible scope changes
- Capture and communicate Agile **metrics**
- Practice **continuous improvement**

Measure Everything

Increase membership by 10%
Improve member retention by 5%





Strategic Metrics

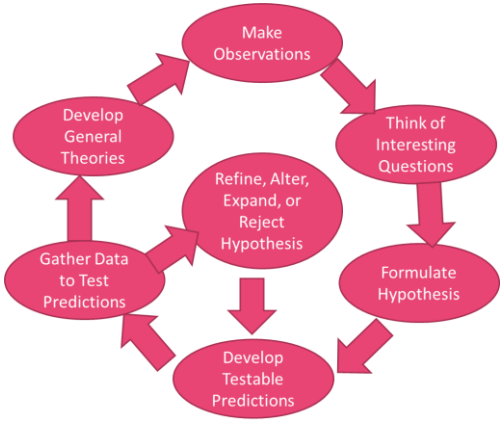
+

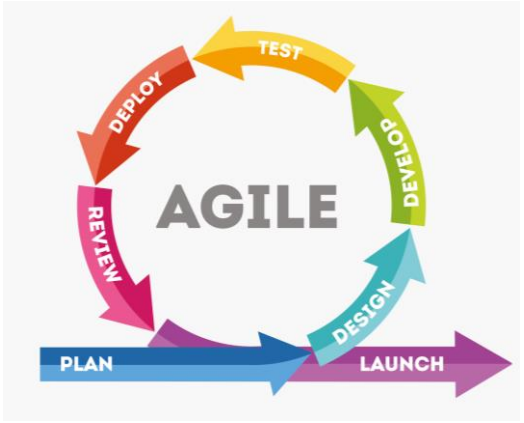
Tactical Metrics

+

Analytical Metrics

Why Agile is the best methodology for managing AI/ML product delivery





Thank you!

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