
AWS
re:Invent
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DEI201-L

The power of responsibility in AI/ML

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The power of responsibility

We’re on a shared journey with our customers

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The power of responsibility

We are helping our customers transform responsible AI from theory into practice

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The power of responsibility

We take a people-centric approach

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The power of responsibility

We are constantly innovating and iterating

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The power of responsibility

We take a holistic approach

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The journey of responsible AI

Building awareness



Establishing foundations



Emerging capabilities



Integral to operations

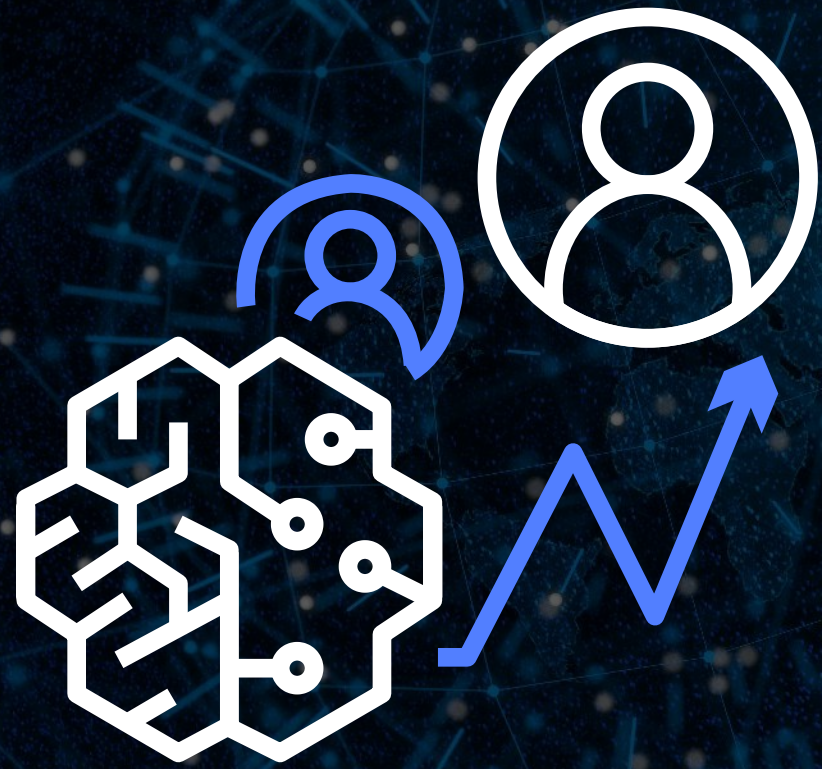


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1

Impact human experience



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As adoption grows, so do considerations

90%

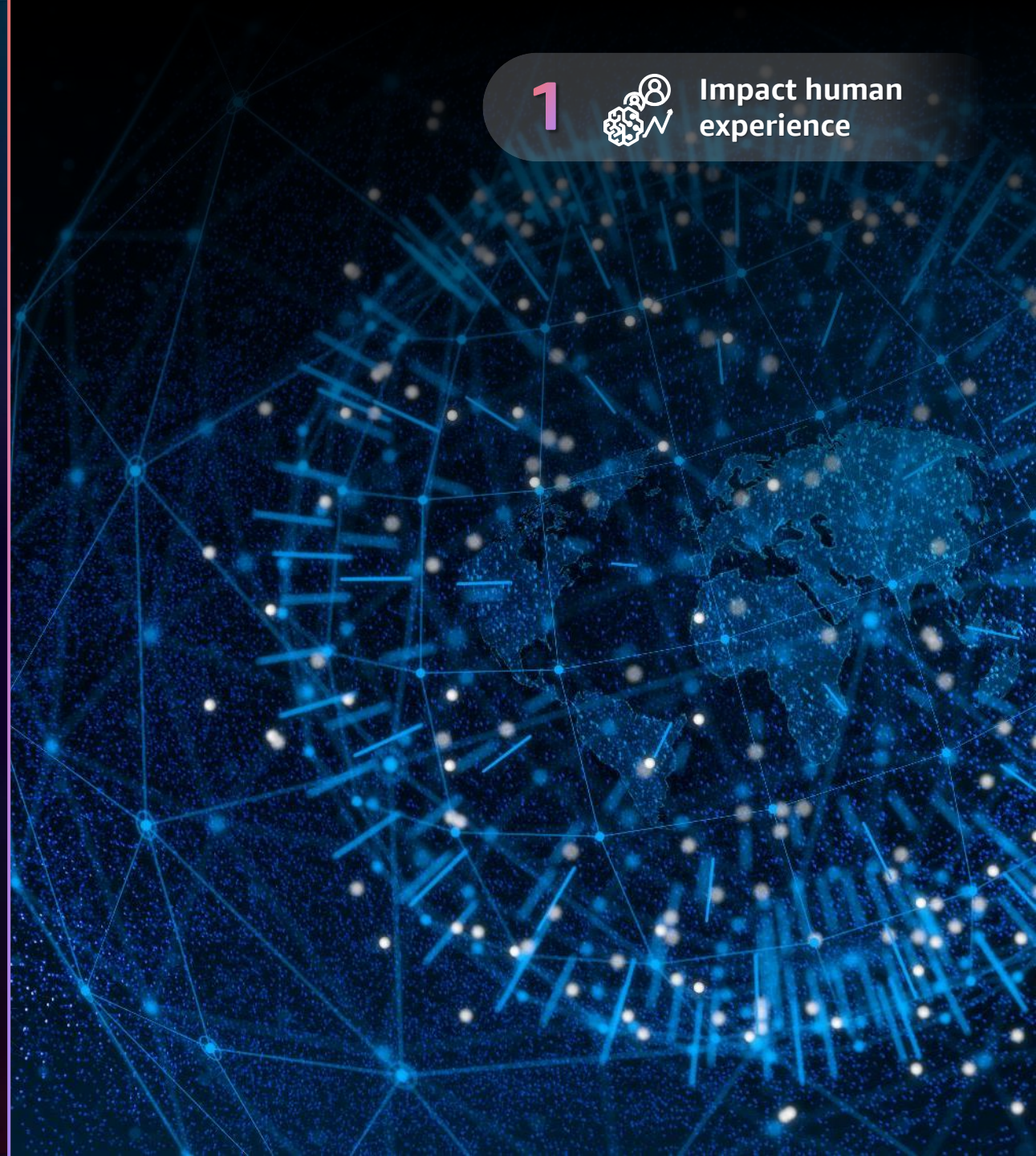
of new enterprise applications will use AI by 2025

IDC forecast

76%

of CEOs are most concerned with the potential for bias and lack of transparency

Gartner



1 Impact human experience

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We believe that AI should be human-centered; it should respect the rule of law and be built to preserve our shared values of equity, privacy, and inclusiveness



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1 Impact human experience

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Empowering people to make informed decisions is mission critical to our work

Trust is foundational in how we move forward

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2

People-centered approach



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2 People-centered approach

Together we can...



Co-create



Consider the outliers



Plan for impact



Focus on a holistic experience



Balance human and business needs

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2 People-centered approach

Unlock value responsibly and equitably

Focus on building the right skills for your engineers

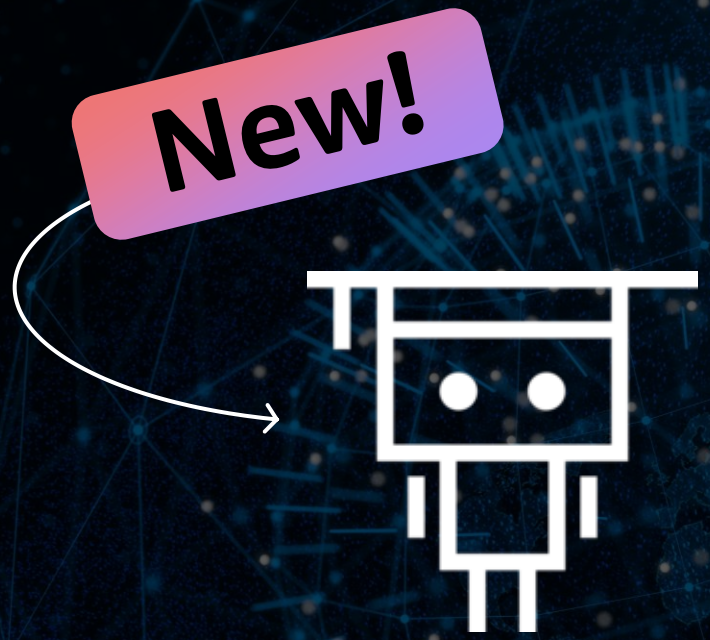
Invest in growing future skills

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Machine Learning University (MLU)

New course on responsible AI

- Free, public, hands-on course on fairness criteria and bias mitigation
- Taught by the same Amazon scientists that train our own AWS employees on machine learning
- Over 9 hours of lectures and hands-on exercises available



Machine Learning University

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2 People-centered approach

AWS AI & ML Scholarship Program

In collaboration with:

intel UDACITY

Help underserved and underrepresented high school and college students learn foundational ML concepts

Provide educational content with hands-on learning and career mentorship

2,500 Udacity Nanodegree scholarships awarded annually for the AI Programming with Python Nanodegree and advanced Deep Learning Nanodegree

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3

Integrate DEI



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3 Integrate DEI

The power of responsibility is a journey, not an outcome, not a single improvement or refinement

Different folks are at different points of the spectrum on the journey

The first step is understanding where we are, where we seek to go, and what the challenges and opportunities are in moving forward



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3 Integrate DEI

Integrating DEI into workstreams takes commitment and resources from the top down

It takes accountability measures to move from tick-box exercises to truly evaluating what is the impact and how this work is being adopted

It takes being committed to doing the work



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4

Scale globally

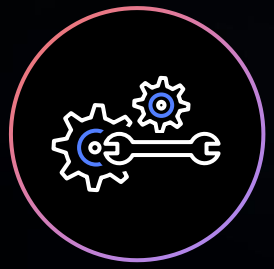


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Helping to identify systemic barriers to inclusion

4 Scale globally

Technical



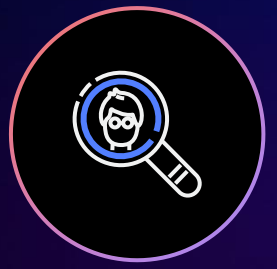
"I don't have any knowledge or experience in AI/ML."

Structural



"The company doesn't offer flexible work, so I can't pick up my kids."

Visual



"That team is all just dudes in hoodies – I can't see myself there."

Cultural



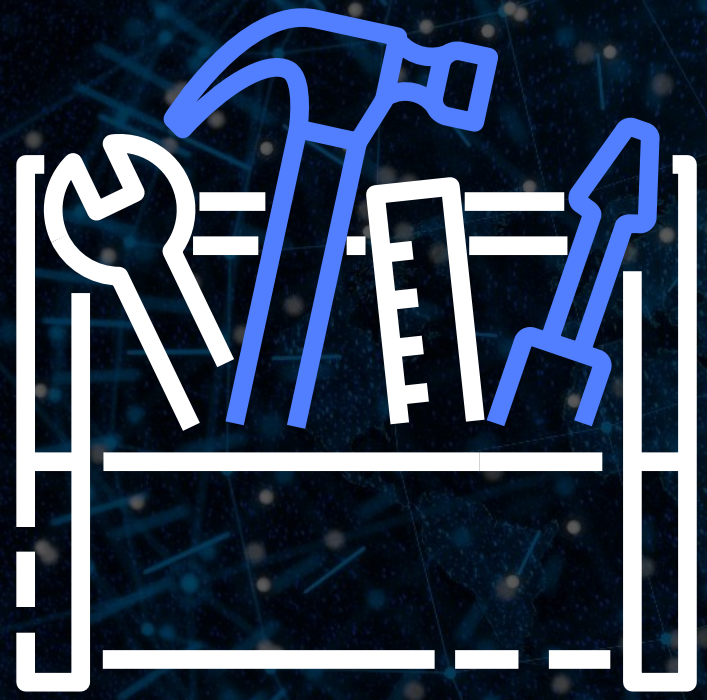
"My perspective is not valued by my peers. I often get overlooked."

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5

Tools and products



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5 Tools and products



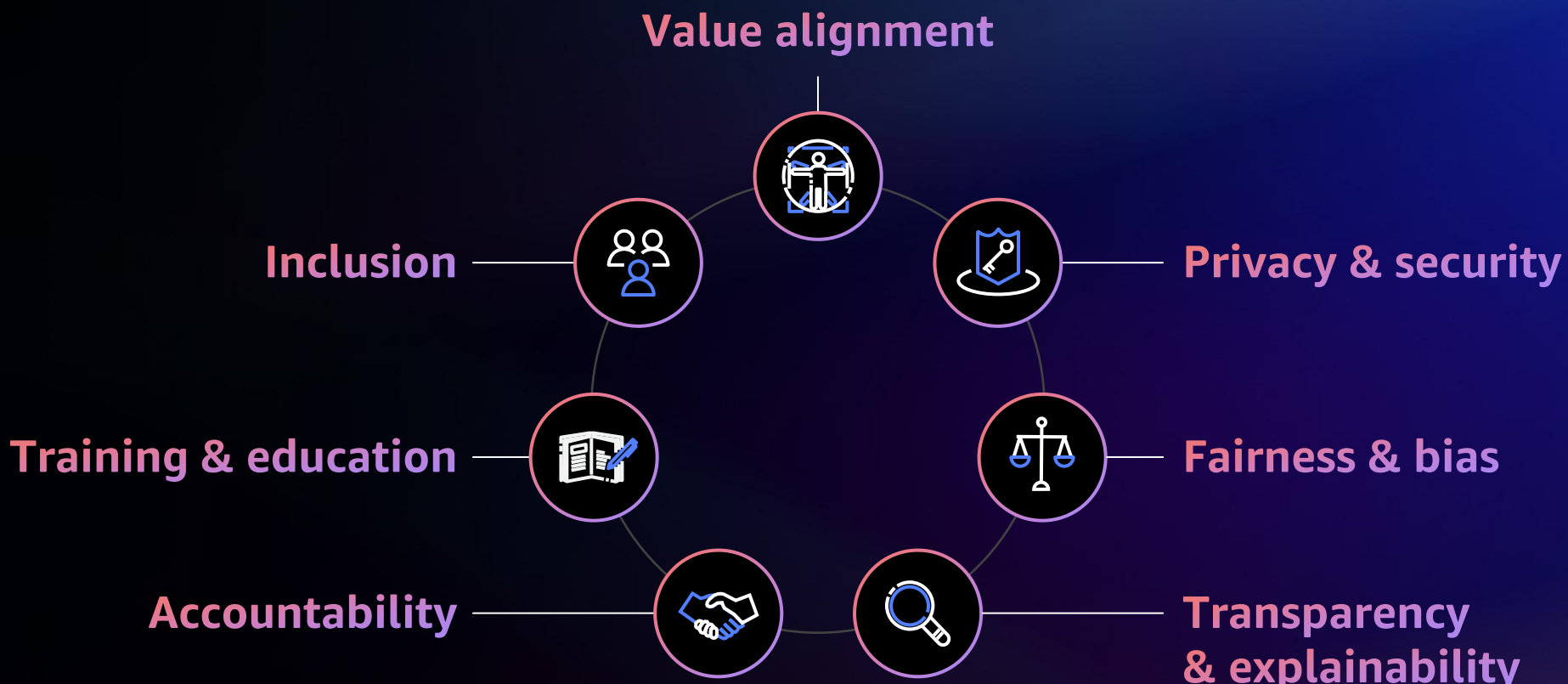
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How we engage

5 Tools and products



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Services and features to help build responsibly

5 Tools and products



Accountability

Amazon Augmented AI (A2I)

Amazon SageMaker ML Lineage Tracking

Amazon SageMaker Experiments



Privacy & security

Amazon Macie

AWS Lake Formation

Amazon CodeWhisperer

AWS Glue DataBrew

AWS security/identity services



Bias & fairness

Amazon SageMaker Clarify

Amazon SageMaker Model Monitor

Amazon SageMaker Data Wrangler

Amazon SageMaker Autopilot

Amazon Augmented AI (A2I)



Explainability

Amazon SageMaker Clarify

Amazon SageMaker Model Monitor

Amazon SageMaker Model Registry

Amazon SageMaker ML Lineage Tracking

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Purpose-built services



5 Tools and products

Enable customers to operationalize responsible AI

Amazon SageMaker

Train, tune, automate, and improve model performance and quality

Amazon SageMaker Clarify

Explain machine learning models and assess your data and models for bias

Amazon CodeWhisperer

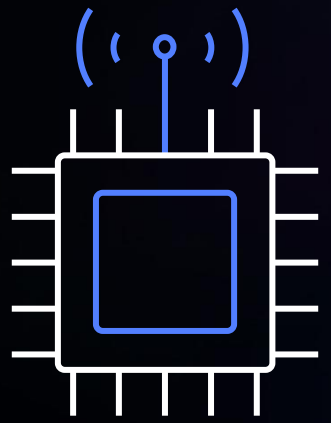
Develop with recommendations that consider references, security, toxicity

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Making the shift

5 Tools and products





Technology

Organizational

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Take the next steps in your responsible AI journey

Contact us for your complimentary assessment:

https://aws.amazon.com/responsibleai



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6

Theory to practice



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6 Theory to practice



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Global scale, local flexibility

1 in 6
Americans paid

3.1T
moved globally per year

2.8B
ADP Mobile annual logins

1M
clients

39M
people paid globally

80M
tax statements

25M
in the US

14M
outside the US

35+
languages

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Data-driven insights

LEVERAGE AI/ML IN THE FLOW OF WORK

1M

companies listed in the database

135K

active executives and managers using people data and insights via mobile and web

90M

unique employees paid over the last 10 years



6 Theory to practice

64M

resumes powering skill graph

39M

job postings powering skill graph

30M

employee records powering skill graph

7,102

unique jobs

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Data is at the foundation of everything we do

Machine learning models trained on our data **inform, improve, and enhance our offerings**



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Every data point represents...

Human stories

Meaningful interactions

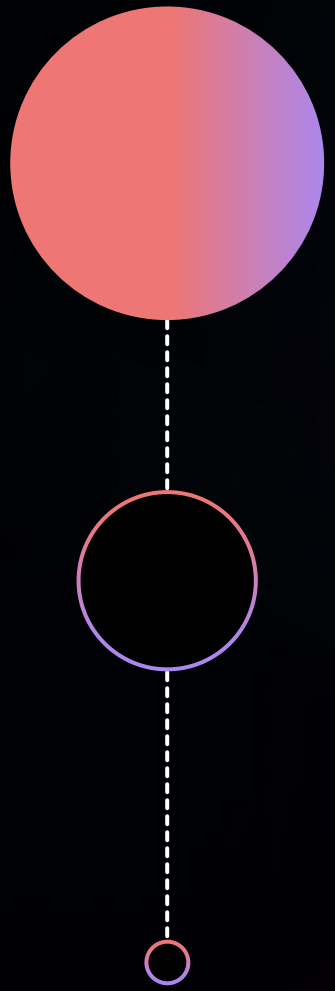
Insightful expertise

Greater efficiency



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Whole human experience

Machine learning

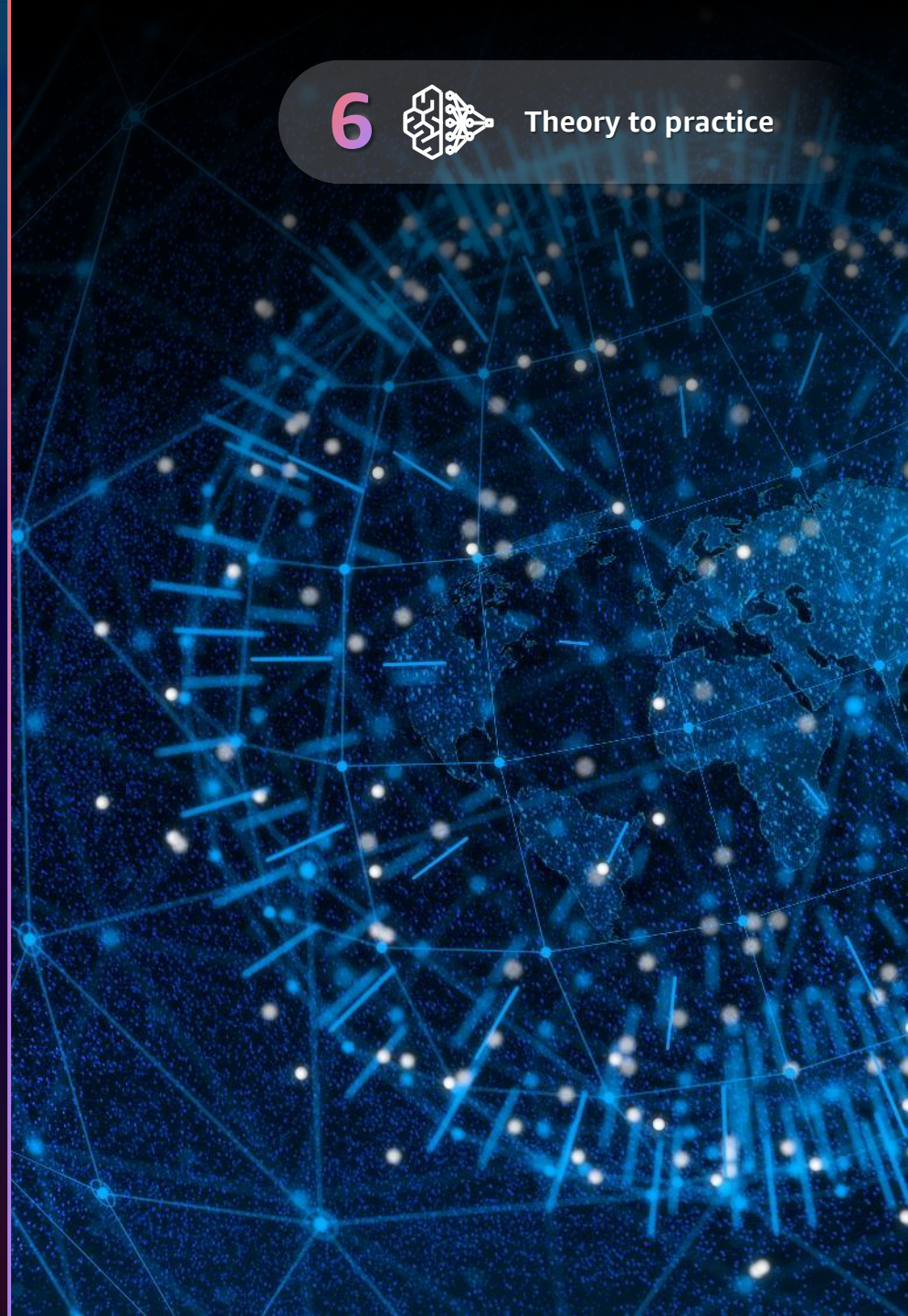
Data

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Data governance

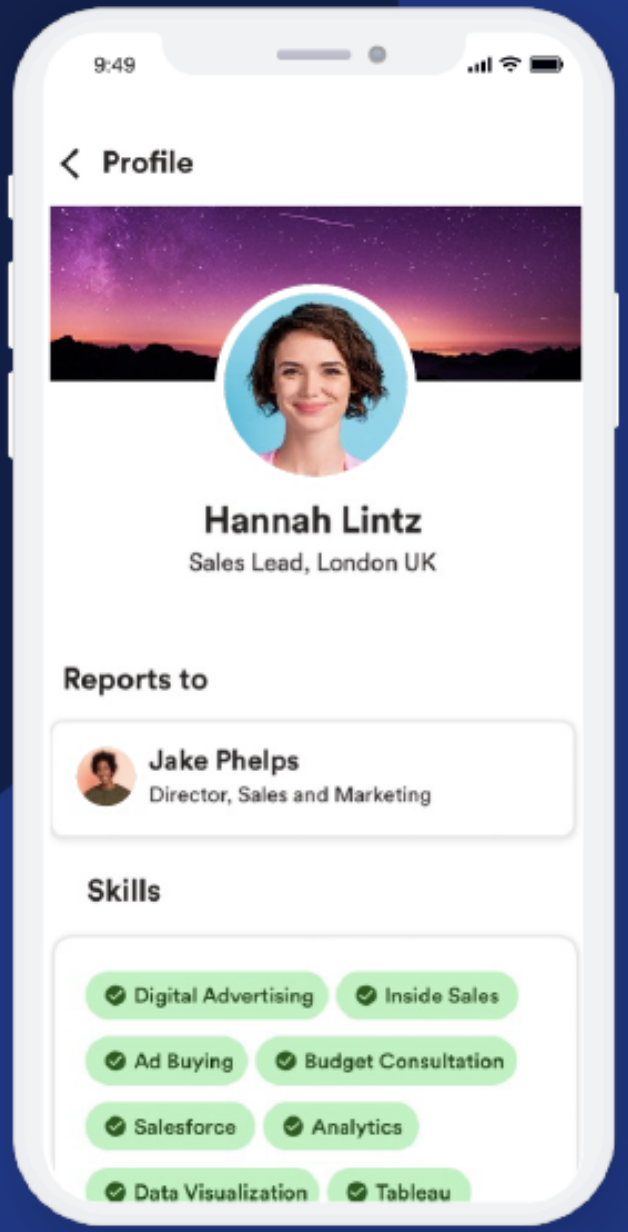
- How data is being used and what it’s used for
- Who should have access to which data
- How data is connected
- How to securely store and move data
- How data could be misused



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ADP Career Profile

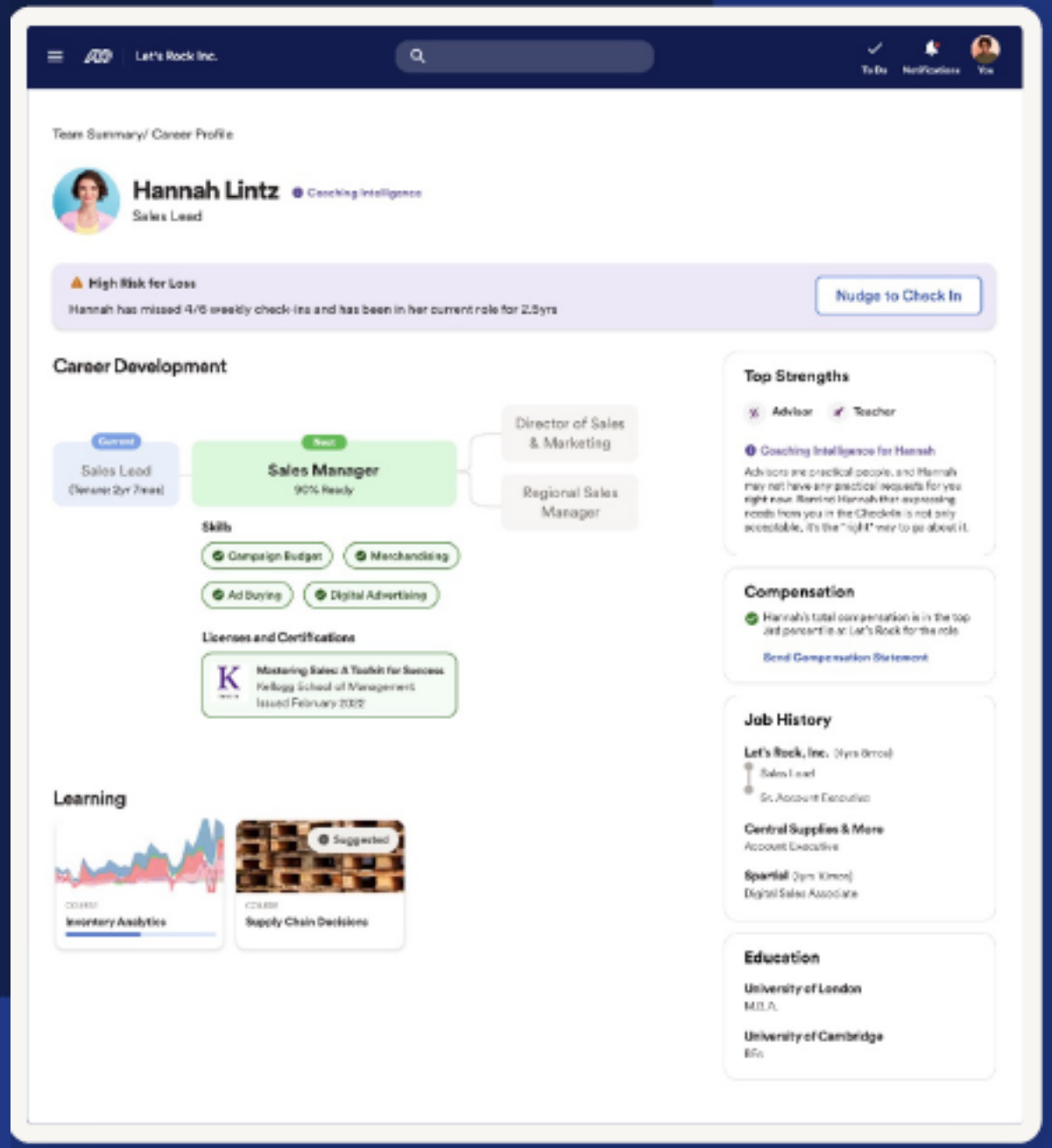
The heartbeat of deeply understanding what makes people tick



Talent Capabilities

- Compensation benchmarks to guide critical pay decisions
- Team leader coaching to help focus on the needed skills
- Relevancy views to select the right person for the right role

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Talent Activation

Talent Intelligence

Key insights that drive leaders to focus on most critical areas first. Benchmark data from ADP DataCloud to build trust in information that's relevant & timely

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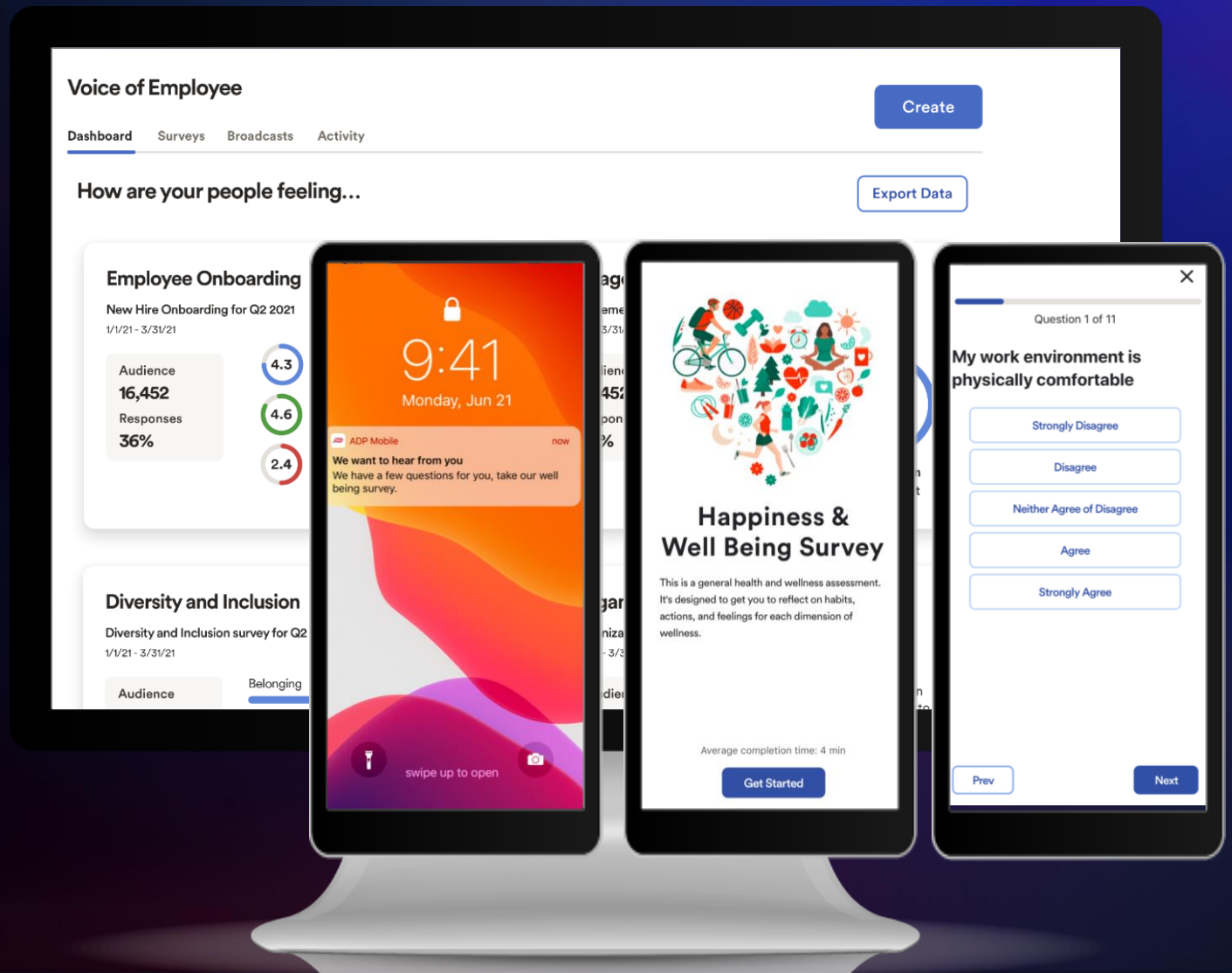
ADP Voice of the Employee

Gain an understanding of what employees need to be successful

Deploy surveys based on **triggers and targeted audiences, across the lifecycle—** from new employee experience and process feedback to culture, health, and wellbeing

Create custom surveys and send broadcast communications

Track, analyze, and benchmark survey results



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Voice of the Employee gathers and analyzes feedback across the lifecycle

6 Theory to practice

Understand your employees' needs

Execute easily and with confidence

Quick to configure and customize

Unlock powerful and actionable insights



New employee experience
- Candidate experience survey
- Onboarding process survey



Health & well-being
- Benefits satisfaction
- Resilience survey



Culture
- Employee engagement survey
- Inclusion survey
- Exit survey



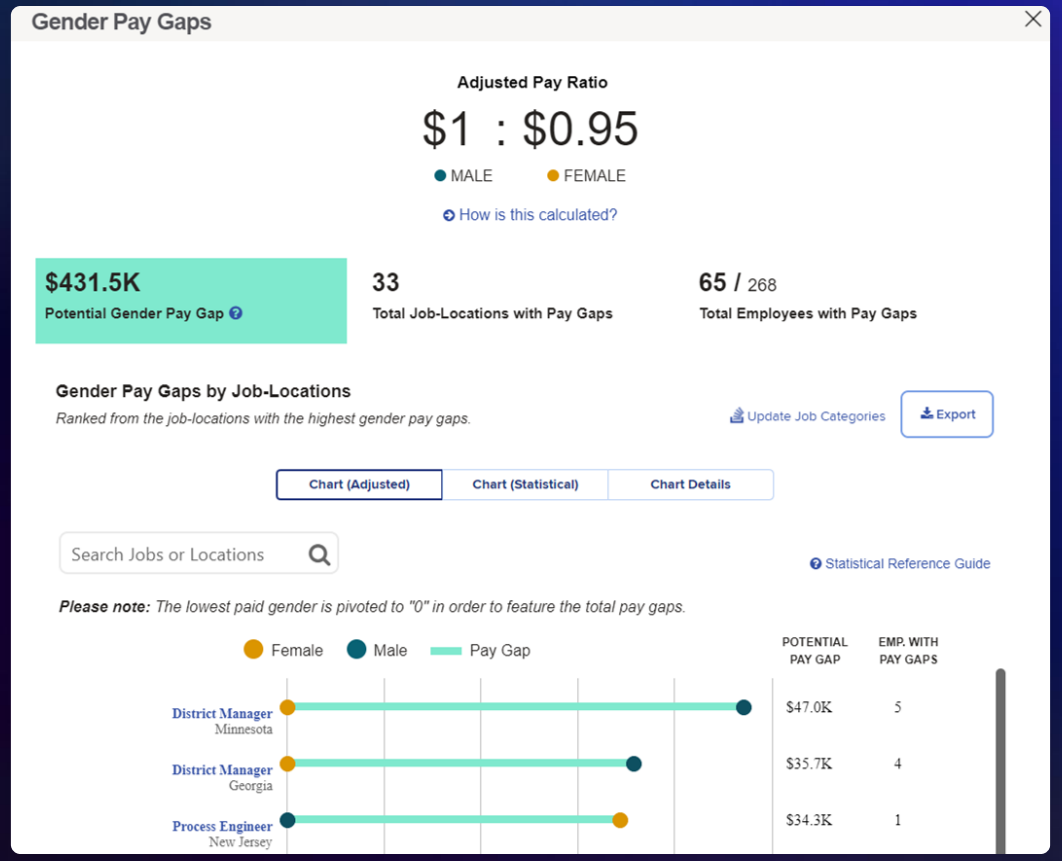
Process feedback
- HR service review/HR NPS survey
- Performance review survey

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ADP
Pay Equity Storyboard

Quantifies pay gaps across your organization and provides targeted plans and integrated best practices to turn insights into action

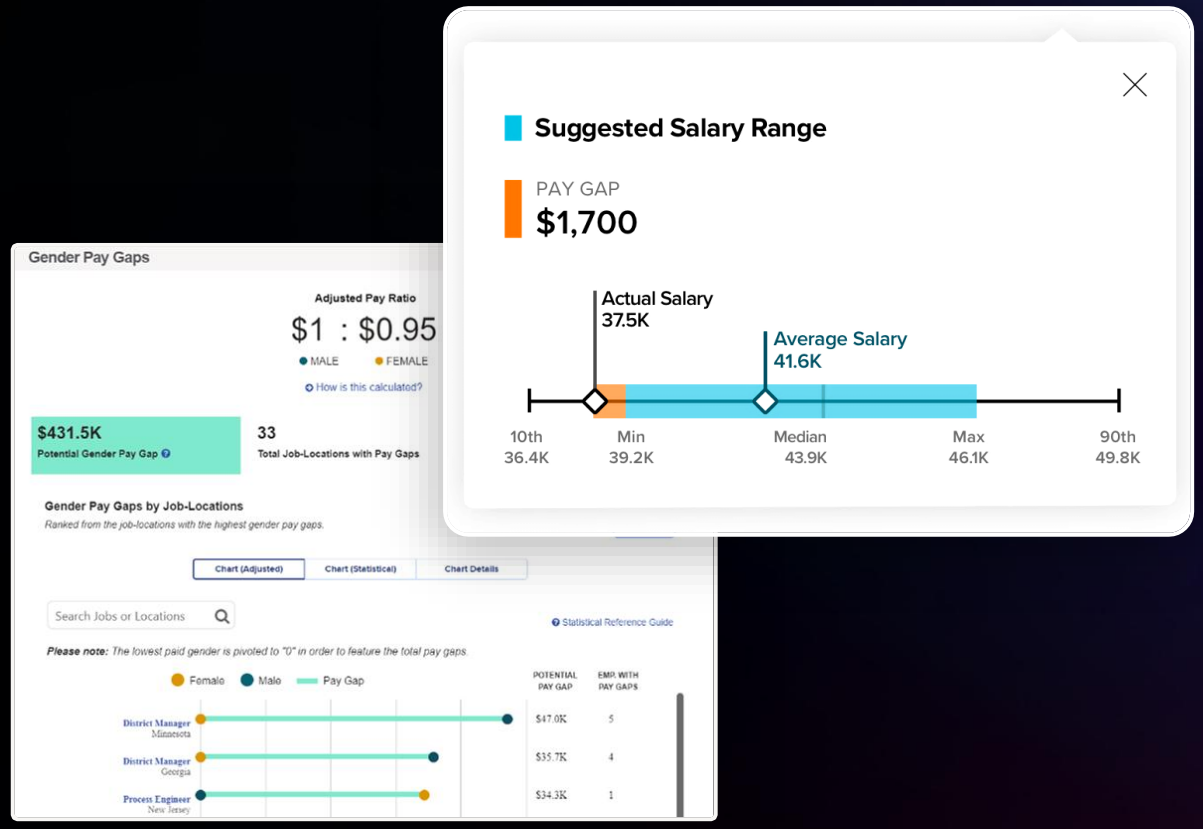


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ADP
Pay Equity Storyboard

6 Theory to practice

Emerging realities of work



1K+
clients using the storyboard

$1.4M
average impact

75%
showing improvement in pay equity

$5K
returned per person

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$1.1B

returned to communities



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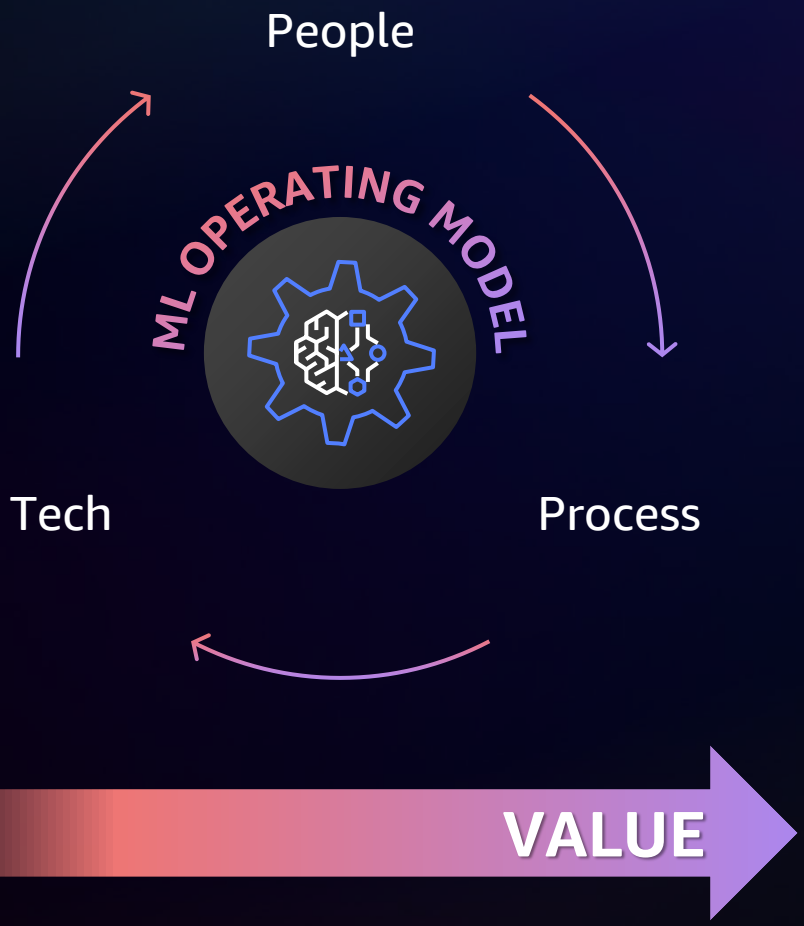
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There’s a virtuous cycle

Develop people resources and skills

Build operational capability

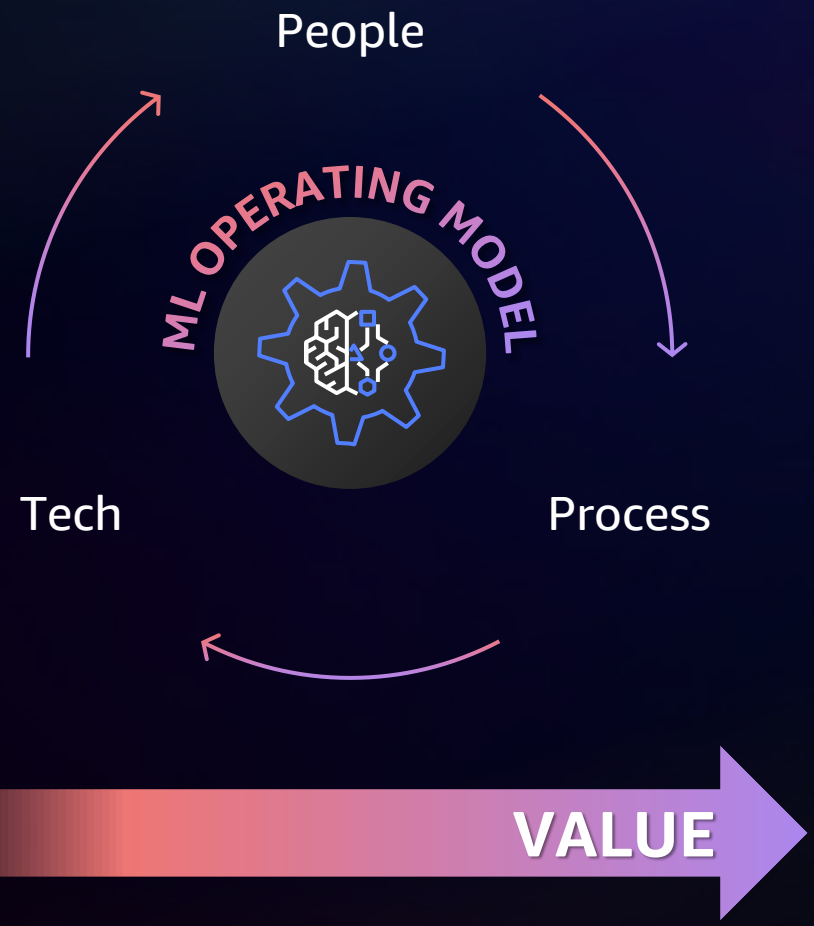
Drive inclusive innovation



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There’s a virtuous cycle

- Accelerate business adoption
- Institute appropriate governance structure
- Align AI risk management with broader risk efforts



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Thank you!



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