



Trends in Operational Software

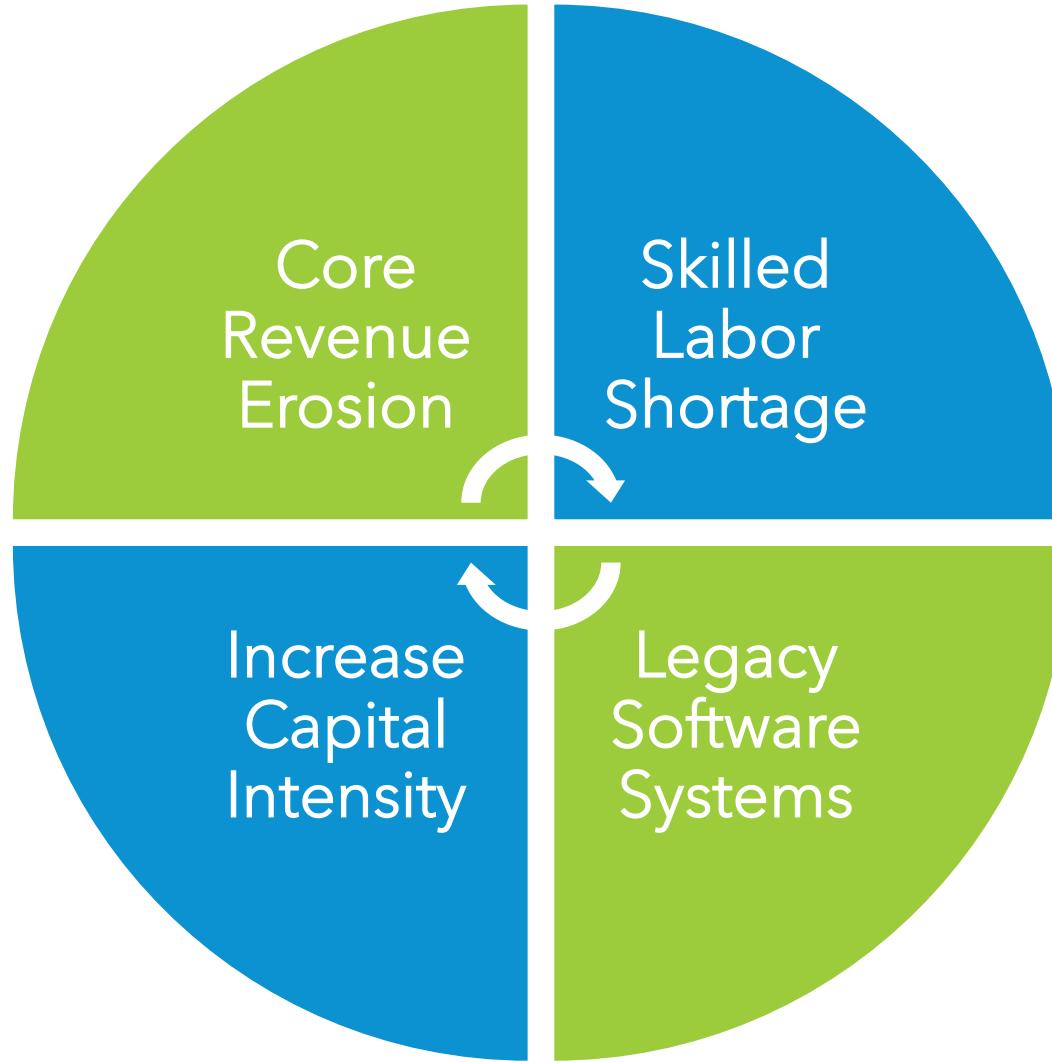
PRESENTED BY BRAD HINE, DIRECTOR, PARTNERS & CHANNELS
ETI SOFTWARE SOLUTIONS



Market Drivers



Service providers are being forced to revamp traditional monetization strategies and underlying operating models.



Market Drivers are Fueling Change



The Three As

The
technology
is here

Forbes

What ChatGPT And
Generative AI Mean
For Your Business?

MARKETS
INSIDER

Nuance and Microsoft Announce the First Fully
AI-Automated Clinical Documentation
Application for Healthcare

TheVerge

ChatGPT is now available in
Microsoft's Azure OpenAI service

COMPUTERWORLD

Microsoft's new Teams Premium tier
integrates with OpenAI's GPT-3.5

VentureBeat

Microsoft gives
Businesses a GPT boost
In Teams and Viva Sales

USATODAY

New Bing with ChatGPT brings the
power of AI to Microsoft's
signature search engine

VentureBeat

Microsoft announces generative AI-powered
Copilot 365 to 'change work as we know it'

CNN BUSINESS.

Real estate agents say they
can't imagine working without
ChatGPT now

TechCrunch

Microsoft brings an AI-powered
Copilot to its business app suite



The Three As

And the
impact is real



Carmax estimates an individual would
take 11 years to do what Azure OpenAI
Service was able to do in days



Progressive is saving \$10M annually
with AI-powered chatbots



EY is saving 250K hours of manual
work per client using intelligent
document automation



The Three As

46%

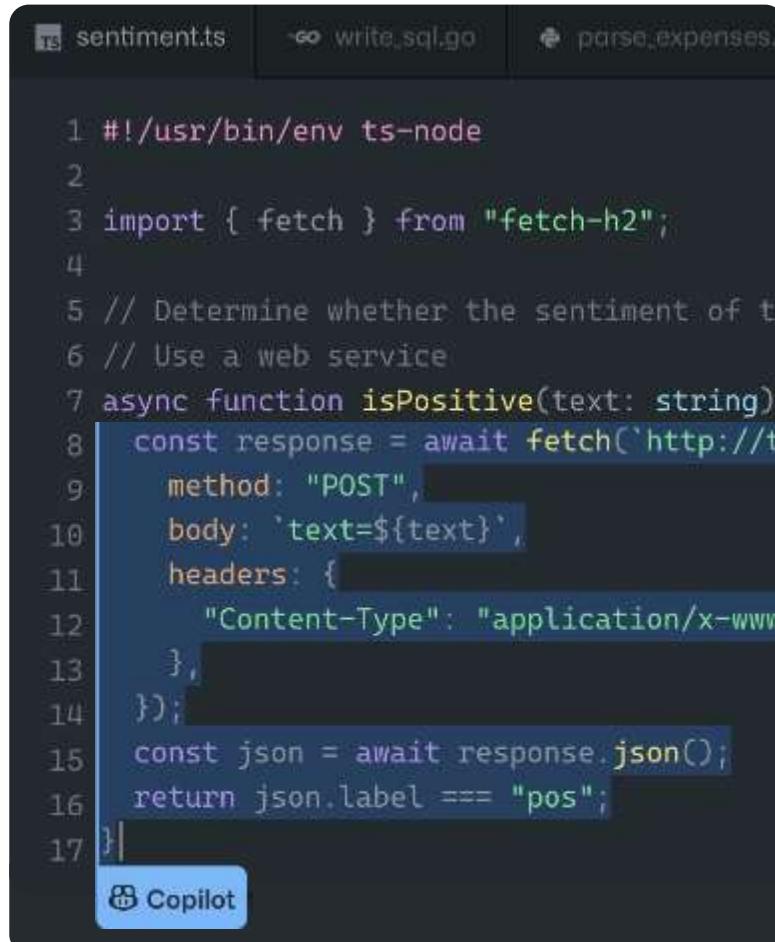
of new code is now
written by AI

55%

faster overall
developer productivity

75%

developers feel more
focused on satisfying work



A screenshot of a code editor interface. The top bar shows tabs for 'sentiment.ts', 'write.sql.go', and 'parse.expenses.js'. The main code editor area displays the following TypeScript code:

```
1 #!/usr/bin/env ts-node
2
3 import { fetch } from "fetch-h2";
4
5 // Determine whether the sentiment of text is positive or negative
6 // Use a web service
7 async function isPositive(text: string): boolean {
8   const response = await fetch(`http://text-processing.com/sentiment`, {
9     method: "POST",
10     body: `text=${text}`,
11     headers: {
12       "Content-Type": "application/x-www-form-urlencoded"
13     }
14   });
15   const json = await response.json();
16   return json.label === "pos";
17 }
```

At the bottom of the code editor, there is a blue button with the text 'Copilot' and a small AI icon.

What is Generative AI?



Text



Code



Images



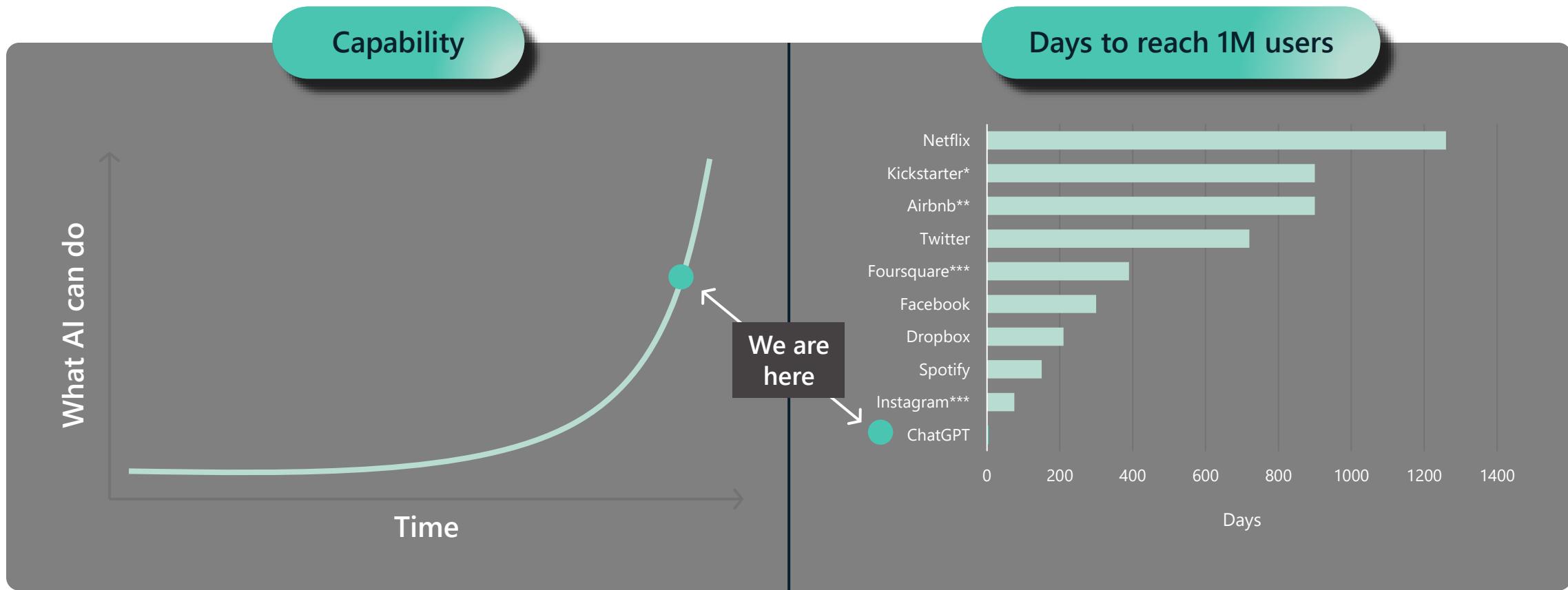
Video



Data

Generative AI refers to a branch of AI that focuses on creating models capable of generating new, original content. It involves training algorithms to understand and mimic patterns in data to generate realistic outputs that resemble human creations.

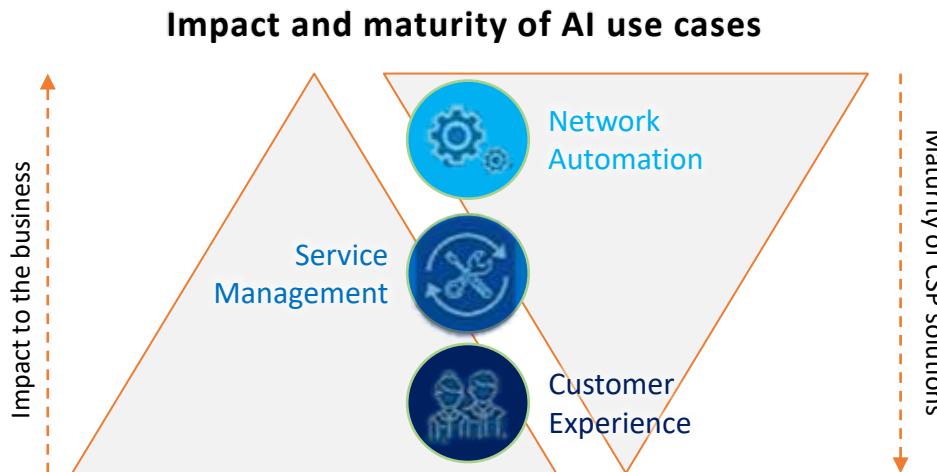
AI Capability and Adoption Growth Rates



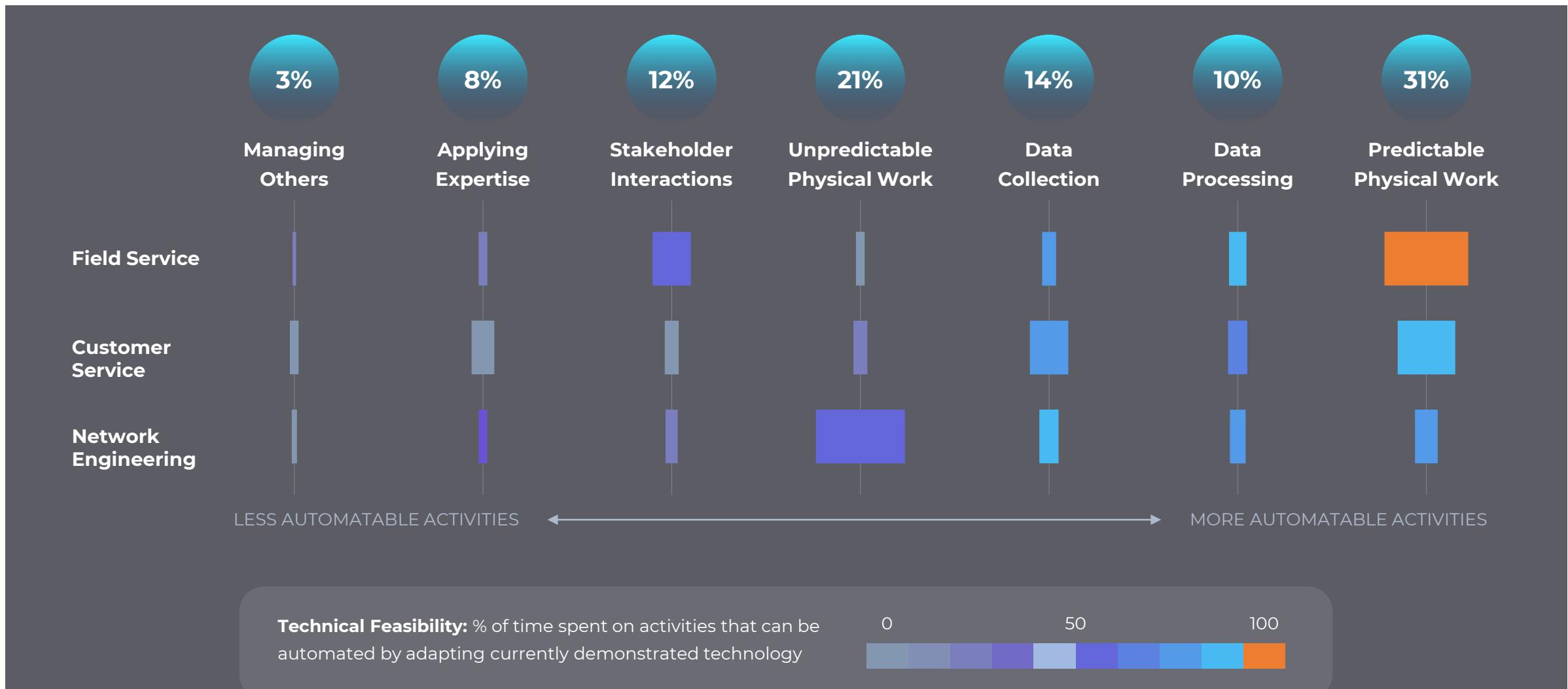
From Hype to Theory to Reality



AI has great potential to address core challenges of the telecom industry:



Automation Technical Potential

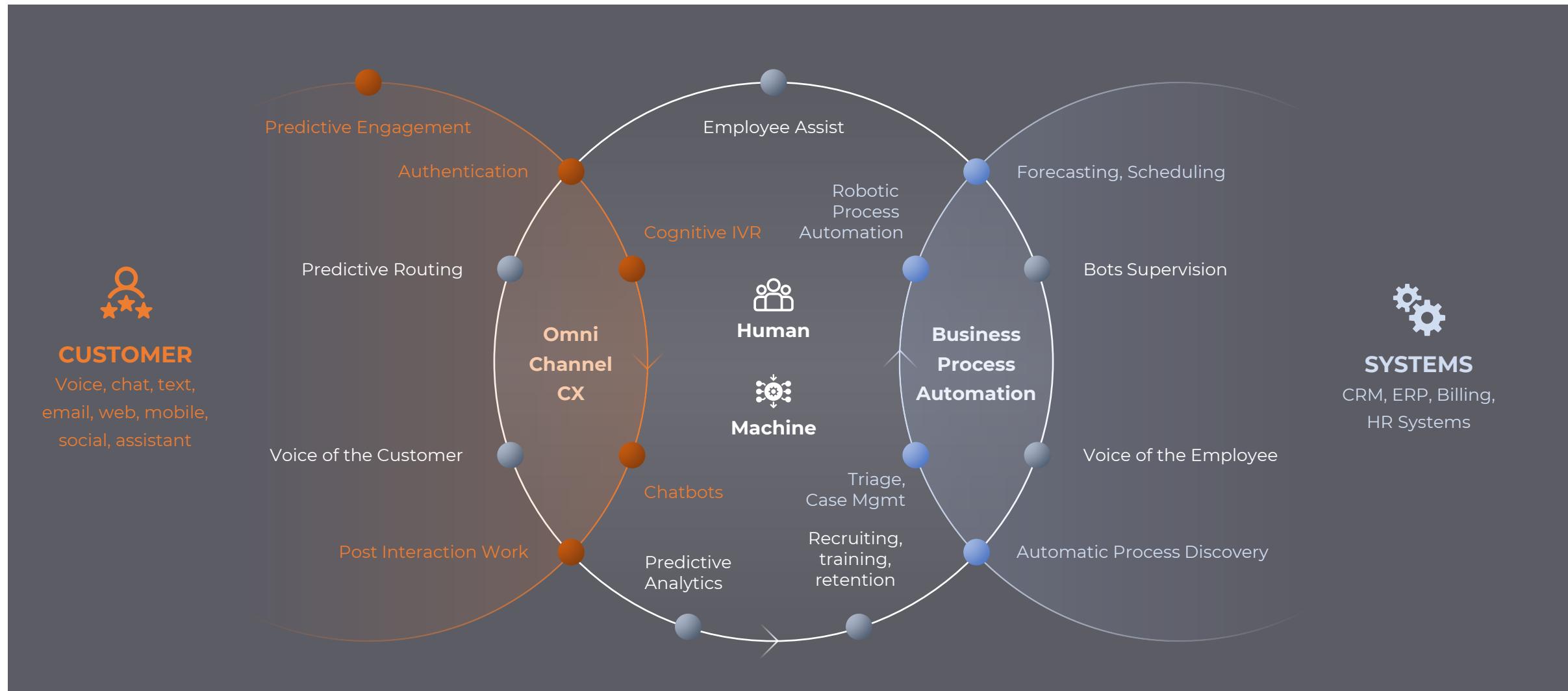


Machine Learning Use Cases



Predictive Maintenance			Customer Service...			Fraud Prevention			Revenue Growth			Network Optimization							
Machine Learning		Descriptive Statistics	Project/Estimates		Scenario/Process Analysis	Optimization/Game Theory		Descriptive Statistics	Machine Learning		Optimization/Game Theory	Project/Estimates		Scenario/Process Analysis	Network Science				
Detection and Warning		Project/Estimates	Network Science		Optimization/Game Theory	Network Science		Scenario/Process Analysis	Web Scraping and Sentiment Analysis		Network Science	Descriptive Statistics		Machine Learning	Optimization/Game Theory	Det... and Se... An...	Web Scr... and Se... An...		
Web Scraping and Sentiment Analysis	Optimization/Game Theory	Scenario/Process Analysis	Detection and Warning	Web Scraping and Sentiment Analysis	Machine Learning	Detection and Warning	Machi... Learni...	Web Scraping...	Scenario... Process Analysis	Project/Estima...	Descriptive Statistics	Project/Estimates	Machine Learning	Scenario/Process Analysis	Optimization/Game Theory				
															Robotic Process Automation (RPA) for...				
															Scenario/Process Analysis				
															Optimization/Game Theory				
															Web Scraping...				
															Detection and Warning				
															Descriptive Statistics				
															Network Science				

End to End Automation Capabilities



Case Study: Improving Frontline Worker Efficiency



80% of employees are **frontline workers**¹ so it is vital to enable them with digital tools

74%

of business leaders say that automating manual processes improved the efficiency of their workforce²

#3

Technology ranks third on the list of factors that workers say could help reduce workplace stress¹

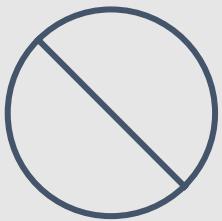
63%

Of frontline workers are excited about the job opportunities technology creates¹

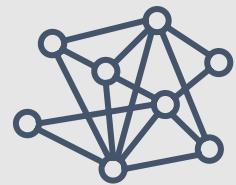
Sources: 1. [Microsoft Work Trend Index, January 2022](#) 2. [Deloitte, "IT, disrupt thyself: Automating at scale", December 2021](#).



But challenges stand in the way of creating an agile and efficient frontline



One-third of frontline workers don't have the right technology tools to do their job effectively¹



Dispersed systems of records complicates access and disrupts the frontline flow of work



Frontline workers lack reliable methods to pass critical information to the next shift, burdening productivity and preventing efficient task management²



52% of frontline workers feel supply chain issues and labor shortages make their jobs more difficult¹

Empowering frontline workers with the right technology helps them concentrate on what matters



- Automate business processes
- Connect to line-of-business applications and industry devices
- Enhance shift and task management
- Gain operational visibility for real-time insights

Empower frontline workers across your organization to do more with less



345%

USD 2.7 million

USD 9.1 million

USD 6.1 million

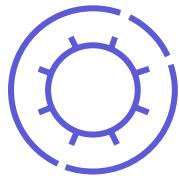
ROI by deploying Microsoft Teams for frontline workers over 3 years¹

Increased revenue from better customer experiences over 3 years¹

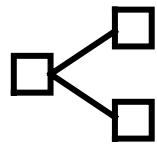
Recouped from improved frontline manager working time over 3 years¹

Gains from reduced errors and improved frontline outcomes over 3 years¹

Increase frontline
operational efficiency



Automate business processes



Connect to line-of-business
applications and industry devices



Enhance shift and task management



Gain operational visibility for
real-time insights

Challenges to automating business processes



Fragmented, paper-based systems hold back efficiency by creating more work



Repetitive processes inhibit the frontline from focusing on higher-value activities



Legacy systems limit real-time guidance and assistance opportunities

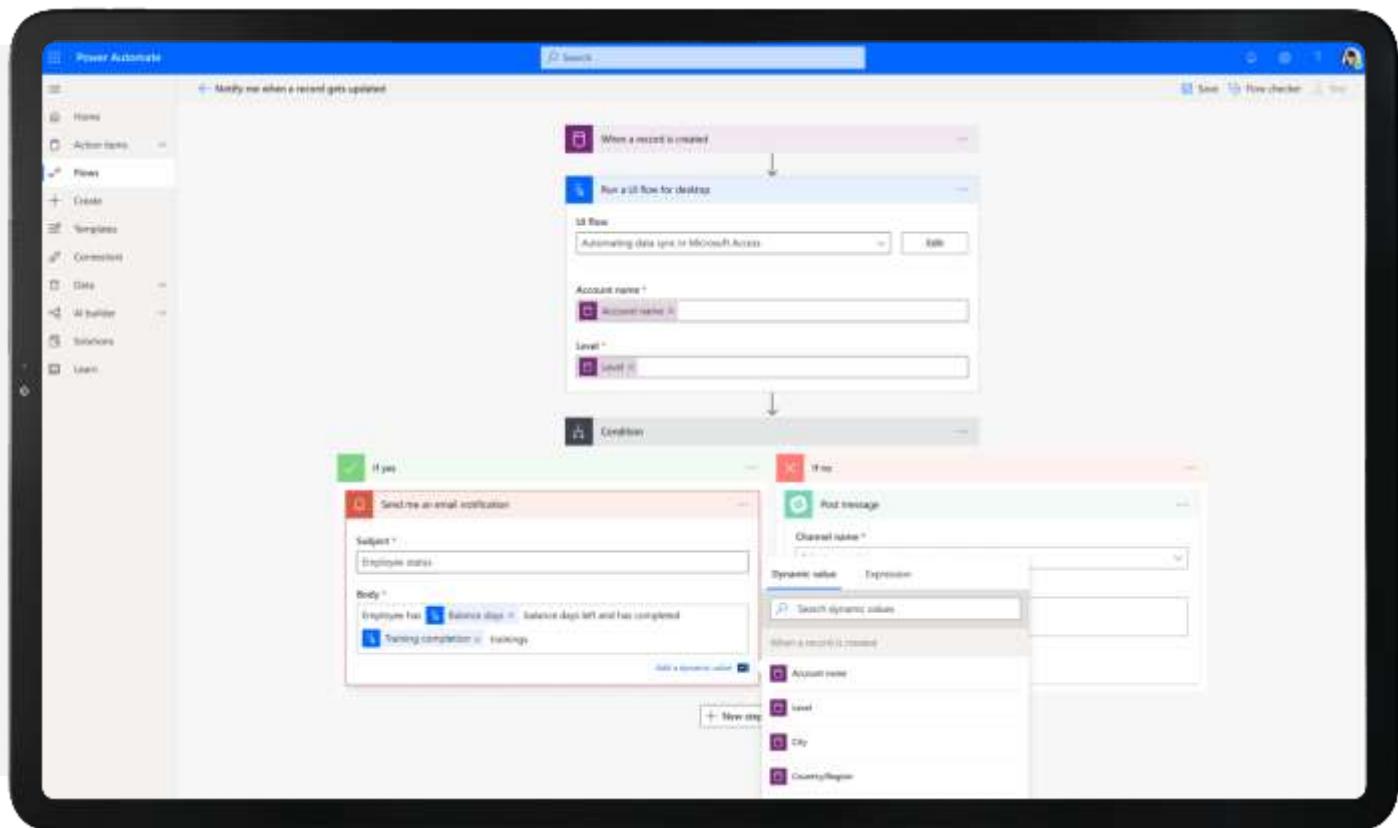


Aging facilitation and follow-up procedures limit the quality of customer relationships

Streamline repetitive processes*



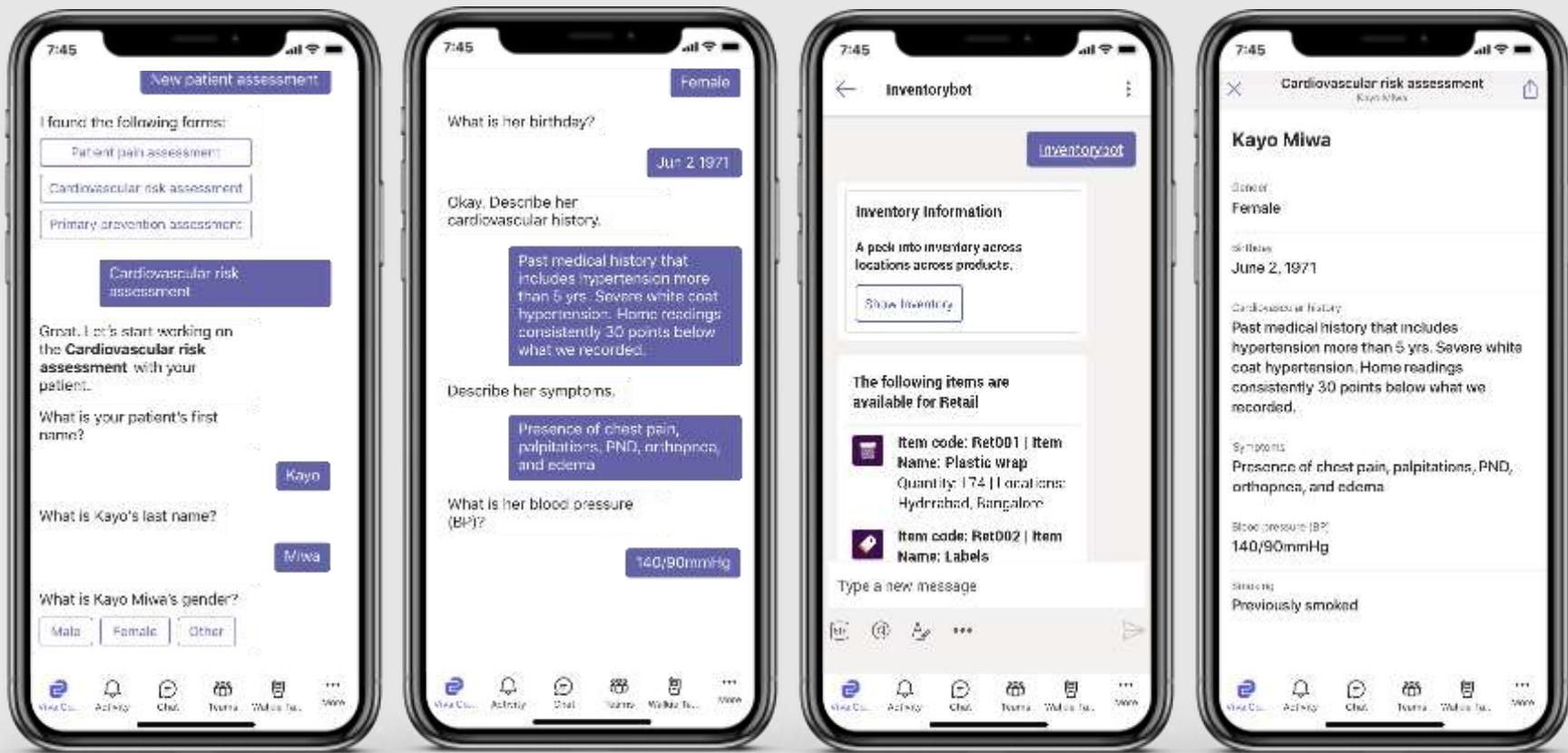
Free your frontline workers to focus on higher-value activities by streamlining repetitive processes using intelligent workflows.



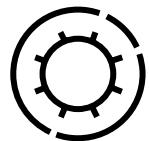
Provide digital assistance*



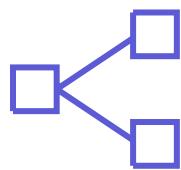
Build intelligent conversational
bots
to empower your frontline
with digital assistance through
actionable live updates,
general guidance, and easy
workplace accessibility.



Increase frontline
operational efficiency



Automate business processes



Connect to line-of-business
applications and industry devices



Enhance shift and task management



Gain operational visibility for
real-time insights

Challenges to connecting to line-of-business applications and industry devices



Lack of one central platform complicates deskless worker access and communications



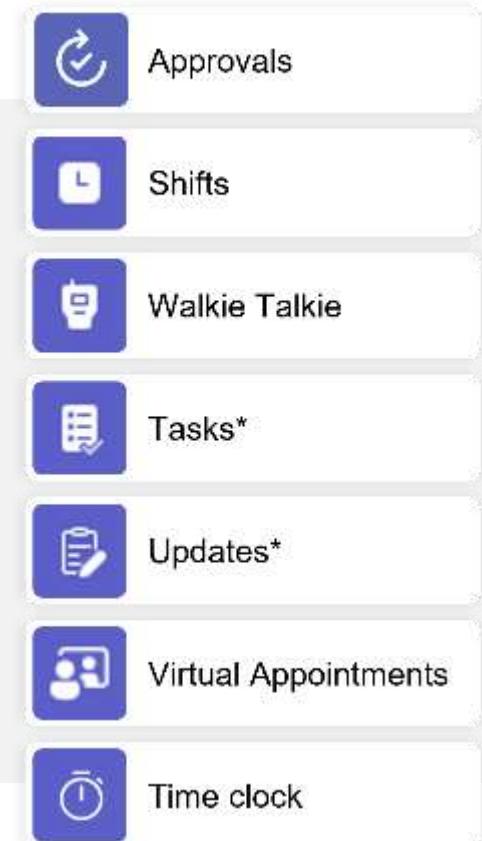
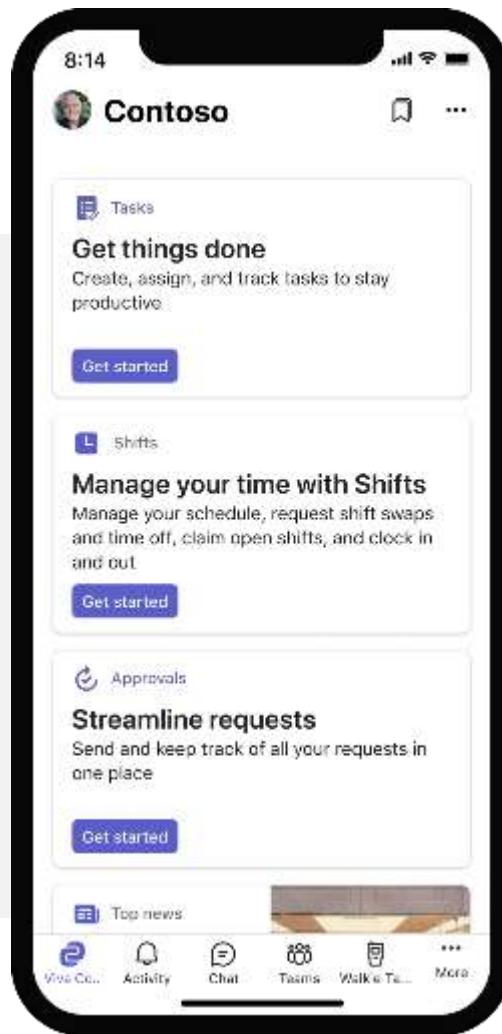
Navigating third-party apps outside of Microsoft Teams disrupts the frontline flow of work



Carrying multiple devices makes work fragmented and cumbersome

Provide one platform for your frontline applications

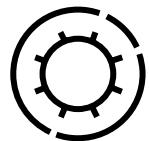
Add the services your frontline workers use most into one location for easy access.



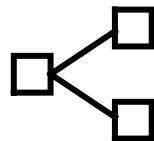
*coming soon



Increase frontline
operational efficiency



Automate business processes



Connect to line-of-business
applications and industry devices



Enhance shift and task management



Gain operational visibility for
real-time insights

Challenges to enhancing shift and task management



Paper-based processes make updating shift schedules time consumptive

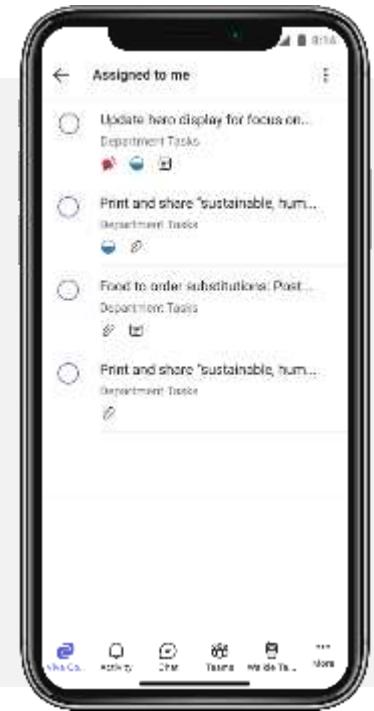
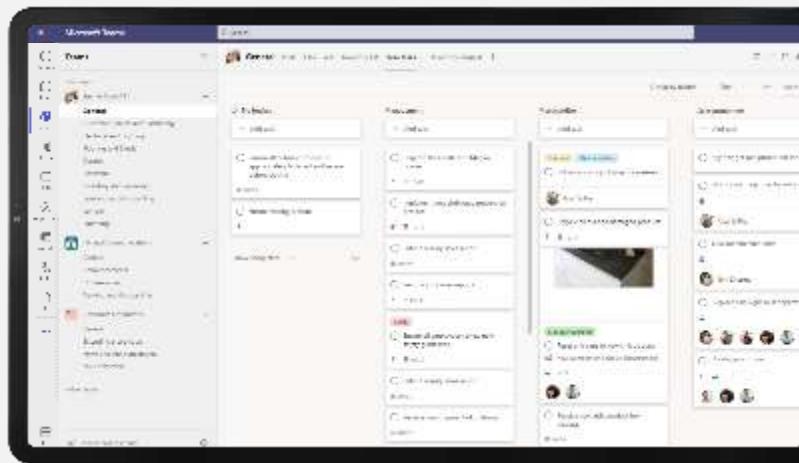
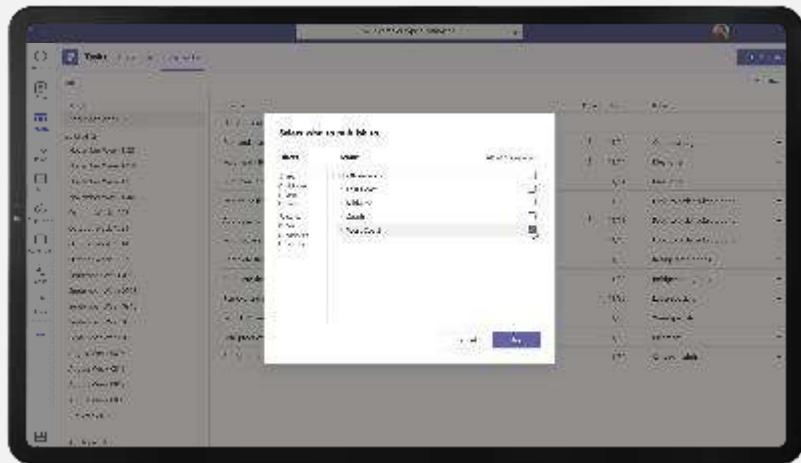


Analog time tracking systems reduces time and attendance accounting accuracy



Fragmented planning systems make it difficult for managers to track tasks

Streamline task management* CSR



Corporate

Create tasks centrally and publish to different locations with the ability to choose specific store layouts, factory capabilities, or other customizable attributes of your frontline teams

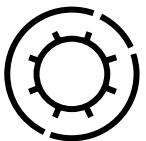
Managers

Manage tasks regionally and assign them to the right individual in the store

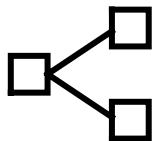
Frontline workers

Execute tasks locally with clear, detailed directions from HQ/Operations

Increase frontline
operational efficiency



Automate business processes



Connect to line-of-business
applications and industry devices



Enhance shift and task management



Gain operational visibility for
real-time insights

Challenges to gaining operational visibility for real-time insights



Legacy systems limit informed decision-making and a holistic view of performance



Lack of organization-wide structures prevent central operations and management from tracking task execution in real-time



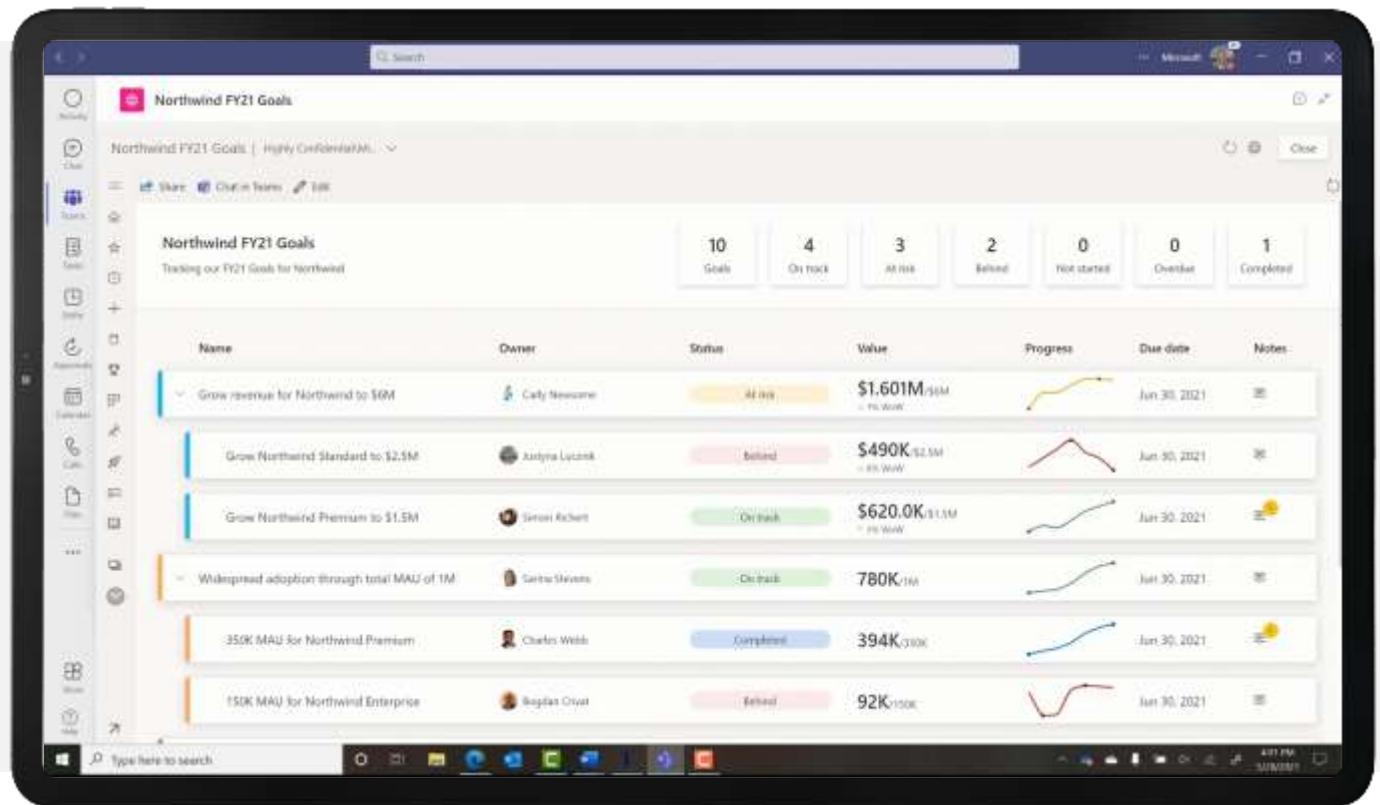
Distributed workforces make it difficult for the frontline to quickly share information

Obtain critical insights from the frontline



Enable the frontline to use self-service analytics with built-in AI to make informed decisions.

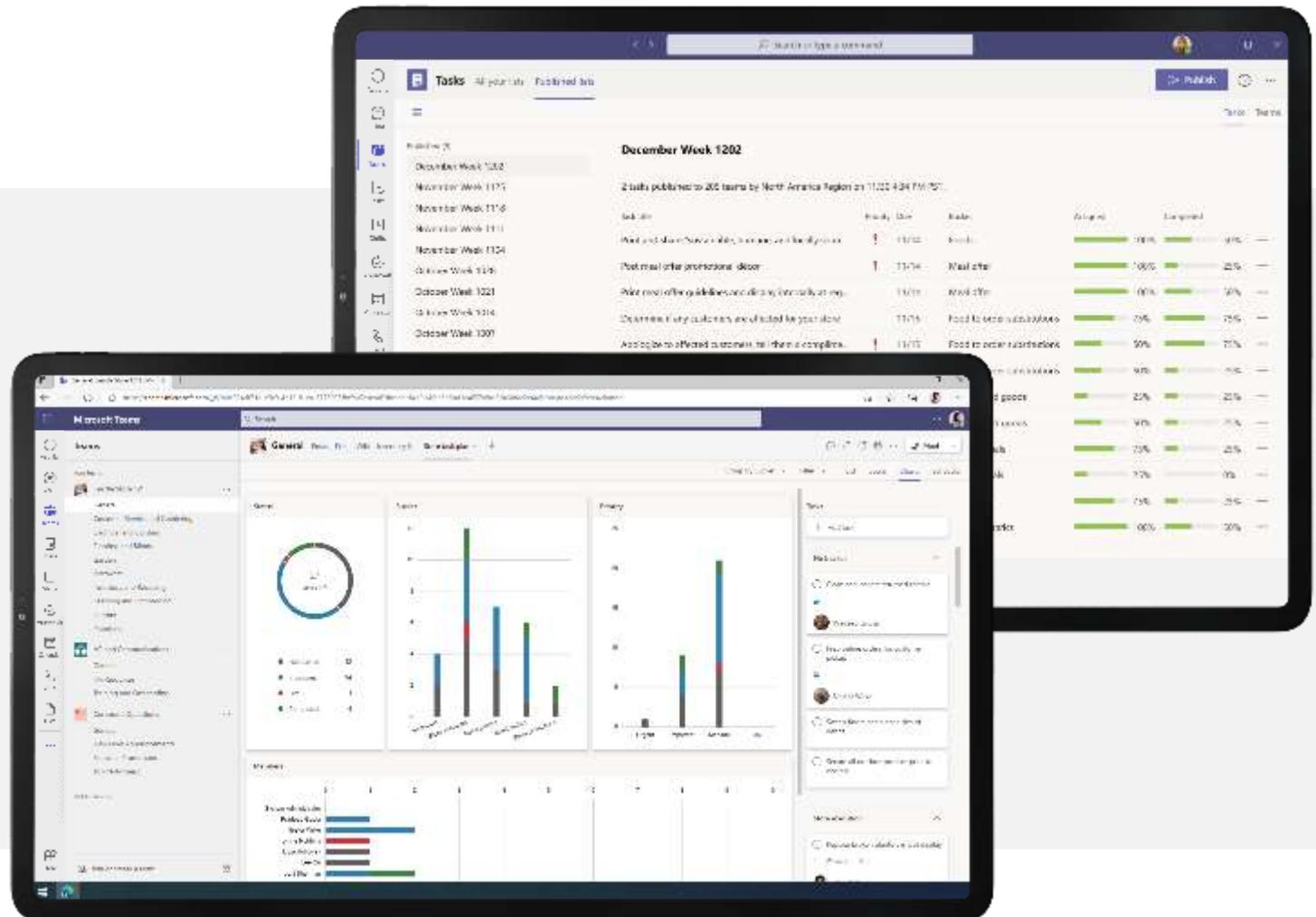
Provide a holistic view of frontline performance to decisions makers.



Monitor task progression



Central operations view



December Week 1202

Task	Description	Start Date	End Date	Actual Status	Planned Status
December Week 102	2 tasks published to 205 teams by North America Region on 11/22 4:24 PM '17	11/22/2017	11/22/2017	Completed	Completed
November Week 1115	Post and share the available, relevant and timely process	11/12/2017	11/12/2017	Completed	Completed
November Week 1116	Post and share the available, relevant and timely process	11/13/2017	11/13/2017	Completed	Completed
November Week 1124	Post and share the available, relevant and timely process	11/14/2017	11/14/2017	Completed	Completed
October Week 1125	Post and share the available, relevant and timely process	11/15/2017	11/15/2017	Completed	Completed
October Week 1221	Post and share the available, relevant and timely process	11/16/2017	11/16/2017	Completed	Completed
October Week 1224	Post and share the available, relevant and timely process	11/17/2017	11/17/2017	Completed	Completed
October Week 1227	Post and share the available, relevant and timely process	11/18/2017	11/18/2017	Completed	Completed

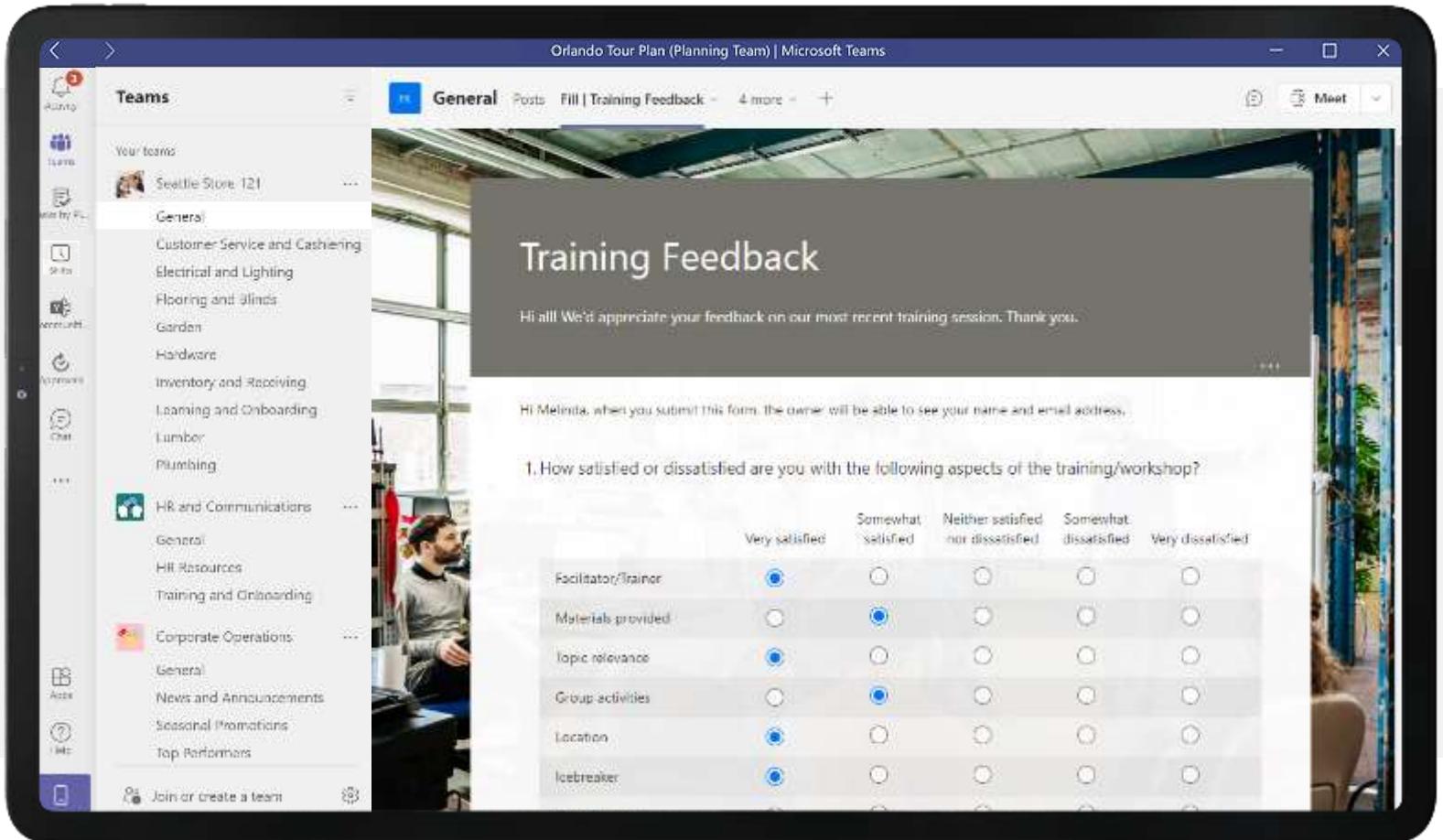
Manager view

Track task execution in real-time at a specific frontline location for managers or across locations for corporate.

Tap into frontline worker insights*



Quickly gather information and feedback from your frontline workforce

A screenshot of a Microsoft Teams interface. On the left, the 'Teams' sidebar shows several teams: Seattle Store 121, HR and Communications, and Corporate Operations. The 'Seattle Store 121' team is selected, showing sub-categories like General, Customer Service and Cashiering, Electrical and Lighting, etc. The main window shows a 'General' channel with a post titled 'Training Feedback'. The post contains a message: 'Hi all! We'd appreciate your feedback on our most recent training session. Thank you.' Below the message is a survey titled '1. How satisfied or dissatisfied are you with the following aspects of the training/workshop?'. The survey includes six questions with a five-point Likert scale: 'Facilitator/trainer' (Very satisfied), 'Materials provided' (Somewhat satisfied), 'Topic relevance' (Neither satisfied nor dissatisfied), 'Group activities' (Somewhat dissatisfied), 'Location' (Very dissatisfied), and 'Icebreaker' (Very dissatisfied).

	Very satisfied	Somewhat satisfied	Neither satisfied nor dissatisfied	Somewhat dissatisfied	Very dissatisfied
Facilitator/trainer	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Materials provided	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Topic relevance	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Group activities	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Location	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Icebreaker	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Benefits of the Three A's



Grow revenues from network expansion, new services, partnerships



Ensure ubiquitous and reliable connectivity



Decrease operational expenses



Outpace competition by offering new services faster



Rest easy with enhanced security to fend off data breaches



Make informed decisions with data-driven insights



Thank you!

etisoftware.com

Increase frontline operational efficiency

Automate processes with connected digital workflows, creating a unified platform for your workforce

Common COO challenges

Unsanctioned shadow IT fills current communication gaps while **cultural barriers** limit new technology rollout and adoption

Fragmented systems, tools and business processes that are often manual and redundant

Constant need to have visibility into on the ground operations

Microsoft Teams can help you

Workforce efficiency

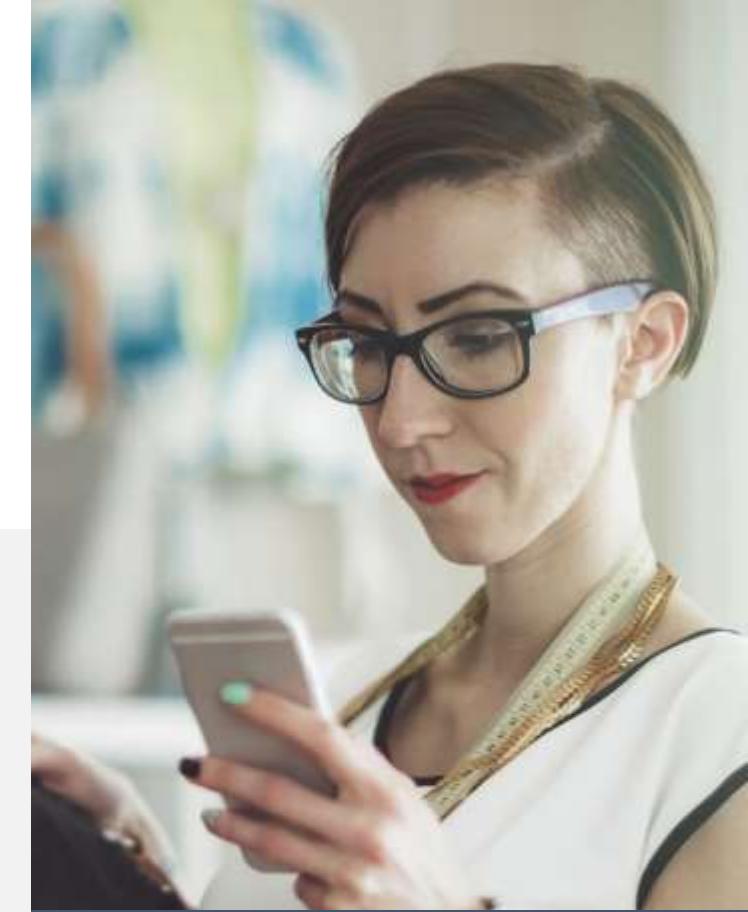
- Improve workforce flexibility and respond quickly with [Walkie Talkie](#)
- Improve coordination between business functions and frontline teams with [Tasks and task publishing](#)

Resource optimization

- Provide integrated solutions that improves profit margins and operational efficiency with [Microsoft Teams as a platform](#)

Inventory shrinkage

- Optimize business processes thru data-driven insights and automation of routine tasks and processes with [Power BI](#) and [Power Apps](#) like [Inventory Management](#)



Through Teams and task publishing, we ensure that our 300 stores are well stocked, our service is outstanding, and that displays, seating, and selection is consistent.

[Ernesto Davila: Area Manager, Chedraui](#)

Safeguard your business

Secure your business with built-in security and compliance across endpoints and devices.

Common challenges

Lack of visibility and manageability across entire device landscape for dispersed workforce

Difficult to ensure the right policies are applied to all apps

Enabling user productivity without sacrificing security

Microsoft Teams can help you

Easily manage your devices

- Centrally secure, manage, and troubleshoot your organization's endpoints with [Microsoft Endpoint Management \(MEM\)](#)
- Delegate user identities with [My Staff in Azure Active Directory](#)

Ensure the right apps and policies are applied

- Restrict worker's access to apps while off-shift with [off-shift access controls](#)
- Easily apply the right policies for your frontline workforce at scale with [policy packages built for them](#)

Protect against reputational & compliance risks

- Fortify compliance in the event of a compromised device loss with [Data Loss Protection](#)
- Full visibility into threats with an integrated solution with [Microsoft Defender for Office 365](#)



Security played an essential role in our decision to deploy Teams. The fact that we can authenticate every user within the organization and ensure the data remains encrypted in transit and at rest gives us peace of mind that our information is secure.

[Pilar Rojas Suárez: CIO and Director of Systems, Chedraui](#)

Dashboard

Analyze and visualize infrastructure data in real-time. You can easily create custom dashboards, charts, and graphs that help you gain valuable insights into your data.

- Real-time visualization of your data. This means that you can see changes to your data as they happen, allowing you to make more informed decisions based on the latest information.
- Identify patterns and trends in your data. With its powerful analytics features, you can quickly identify correlations and outliers, and gain a deeper understanding of your data.
- Integrates seamlessly with a wide range of data sources, including Elasticsearch, Logstash, and Beats, so you can easily connect to your existing data infrastructure.

Observability

Triad provides a service mesh capability that adds visibility, security and reliability to your Triad environment. Collect metrics and logs about every request and response to identify bottlenecks, troubleshoot problems, and optimize your system.

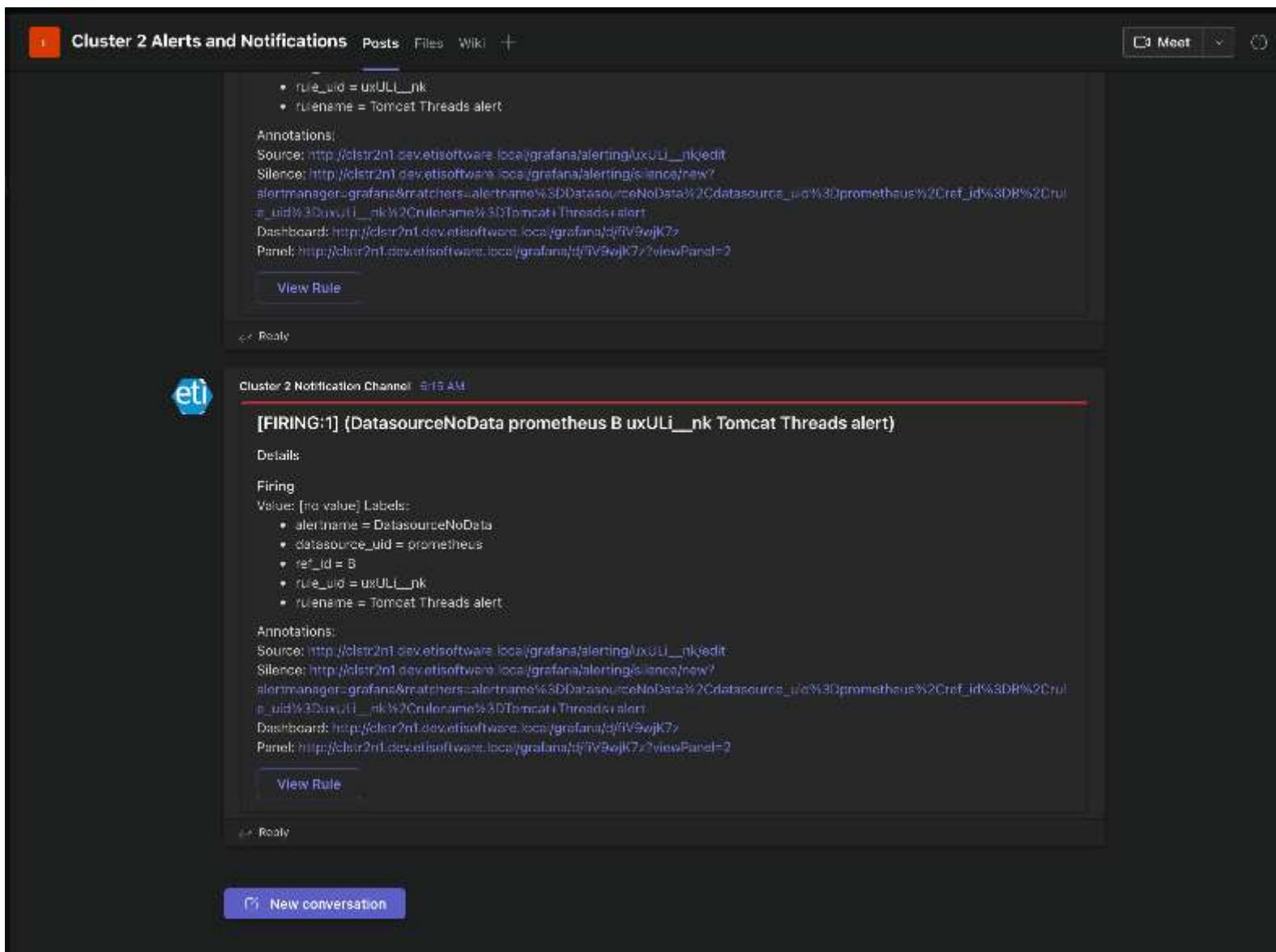
- Identify bottlenecks - Shows you which services are spending the most time processing requests, which can help you identify where to focus your optimization efforts.
- Troubleshoot - Shows you which services are failing and why, which can help you identify the root cause of the problem.
- Optimize systems - Shows you how your systems are using resources, which can help you identify opportunities to reduce costs or improve performance.

Monitoring

Improved monitoring including:

- Metrics: Collects a wide variety of metrics from your applications and infrastructure, including CPU usage, memory usage, and network traffic.
- Alerting: Can send alerts when certain metrics exceed a threshold. This can be used to notify you of problems with your applications and infrastructure.
- Grafana: Works with Grafana to create dashboards and visualizations of your metrics. This can help you to better understand your applications and infrastructure.

Alerting – Enterprise Communications



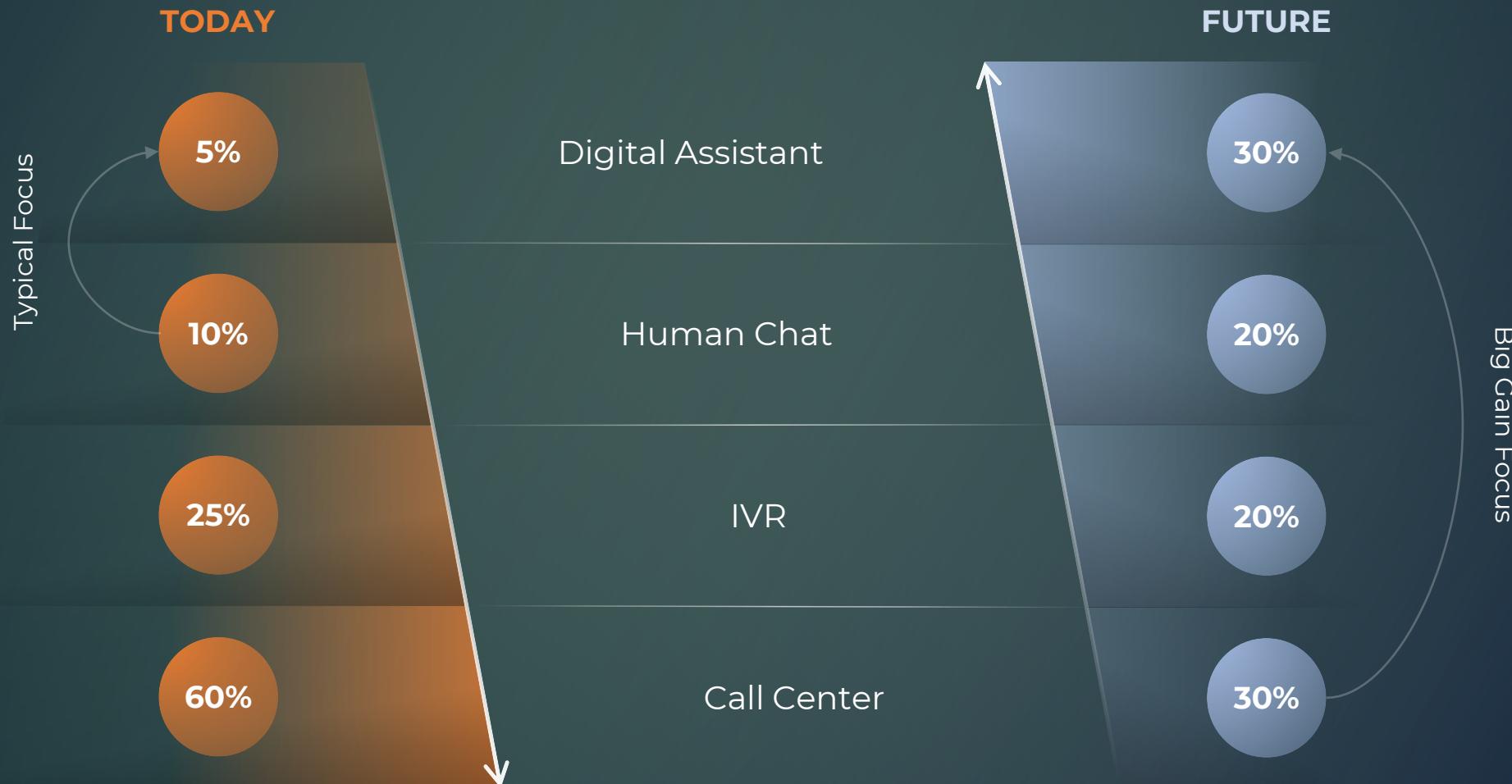
The image displays a composite view of two interfaces. The top half shows a Grafana alert configuration page titled 'Cluster 2 Alerts and Notifications'. It lists a single alert rule with the following details:

- Rule ID: uxULI__nk
- Rule Name: Tomcat Threads alert

The 'Annotations' section provides URLs for the alert's source, silence, alert manager, dashboard, and panel. Below the rule details is a 'View Rule' button and a 'Reply' link. The bottom half shows a Slack message in the 'Cluster 2 Notification Channel' at 9:15 AM. The message is titled '[FIRING:1] (DatasourceNoData prometheus B uxULI__nk Tomcat Threads alert)'. It includes the same alert details and annotations as the Grafana interface. It also features a 'View Rule' button and a 'Reply' link. At the bottom of the Slack message is a blue 'New conversation' button.



INTELLIGENT CUSTOMER ENGAGEMENT (ICE)



RESULTS USING RECOMMENDATIONS AI

A large blue circle with a white outline, containing the text '+400%' in white.

More Relevant
Recommendations
Displayed on Page

A blue circle with a white outline, containing the text '+30%' in white. A brown wedge shape is visible at the bottom left of the circle.

Increase in Click
Through Rate

A blue circle with a white outline, containing the text '+2%' in white. A blue wedge shape is visible at the bottom left of the circle.

Surge in Average
Order Value

So why not do this yourself?

Cost

Sustainability

Hallucinations

Regulation

Trust in AI

Ethical Backlash

F Forbes
<https://www.forbes.com/tiriasresearch/2023/05/12/> :

Generative AI Breaks The Data Center

May 12, 2023 – Tirias Research forecasts that on the current course, generative AI data center server infrastructure plus operating costs will exceed \$76 ...

Training GPT-3, which is a single general-purpose AI program that can generate language and has many different uses, took 1.287 gigawatt hours, according to a research paper published in 2021, or about as much electricity as 120 US homes would consume in a year. Mar 9, 2023

B Bloomberg
<https://www.bloomberg.com/news/articles/2023-03-09/artificial-intelligence-is-booming-so-is-its-carbon-footprint> :

Artificial Intelligence Is Booming—So Is Its Carbon Footprint

F Fortune

'Prone to hallucinations and bias': A Texas judge puts A.I. in its place

Judge Brantley Starr strikes back against generative A.I. hype.

B Bloomberg.com

Biden Administration Split Over Policy on OpenAI as EU Pushes New Rules

Biden administration officials are divided over how aggressively new artificial intelligence tools should be regulated – and their...

G Gartner

Why Trust and Security are Essential for the Future of Generative AI

As generative AI innovation continues at a breakneck pace, concerns around security and risk have become increasingly prominent.

NBC News

Lensa reignites discussion among artists over the ethics of AI art

Lensa, the AI portrait app, has reignited discussion among artists over the ethics of creating images with models that have been trained...

Industry trends



The future holds in balance: Telco at the tipping point to Renaissance



Business Model
Re-Invention



Customer
Re-Imagination



Telco to Tech-co
Revolution

Complexity and excitement: Media's Next Wave of Change



Modernization and
Technological
Differentiation



Audience
Monetization
& Engagement



Accelerate
Platforms and
Business Models

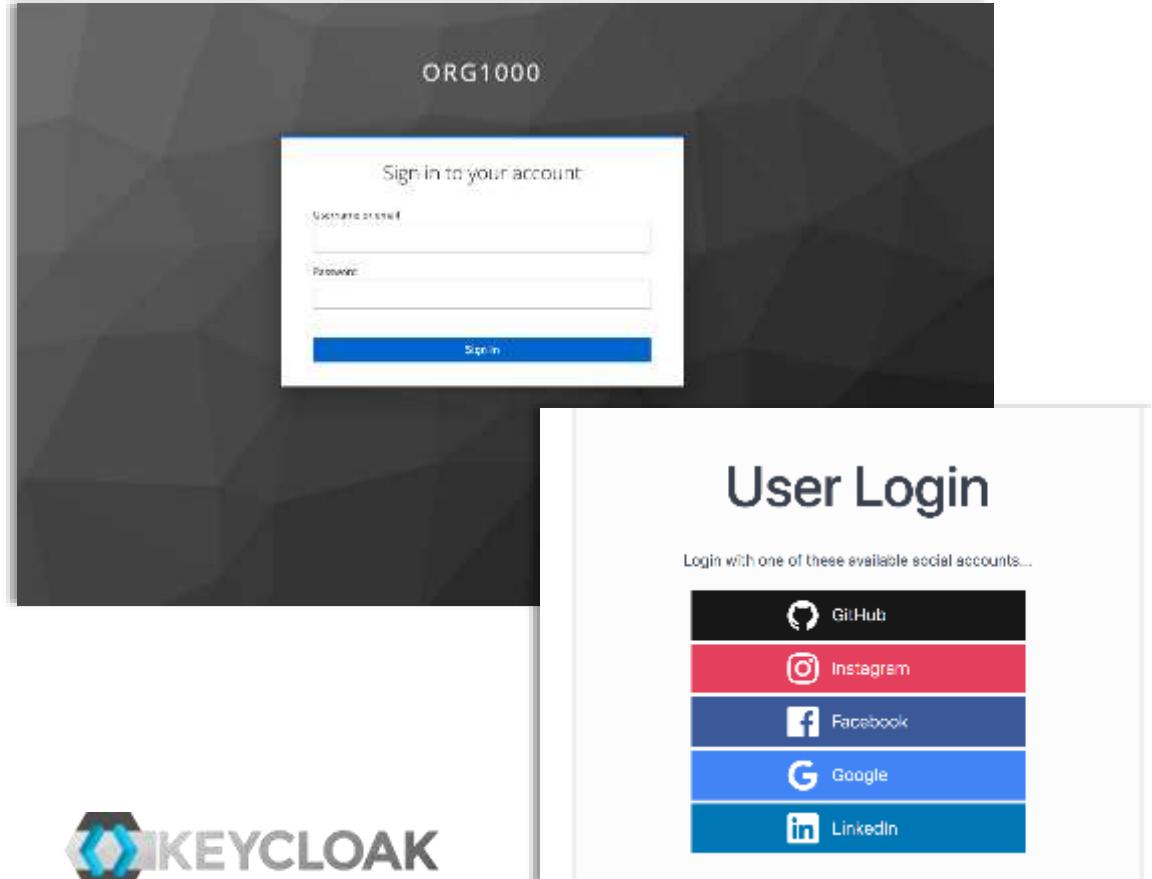
Enhanced Security

- Constant scanning your cluster for new vulnerabilities and then automatically updating your security reports. This allows you to stay up to date on the latest vulnerabilities and to fix them as soon as they are discovered.
- Generate security reports that show you the vulnerabilities that have been found in your cluster. This will help you prioritize your security updates and to fix the most critical vulnerabilities first.
 - Vulnerability and Config audit reports show where the issues have been found.
 - RBAC reports that show the access rights that have been granted to users and groups in your Kubernetes cluster.
- Track the progress of your security updates. For example, it can generate reports that show the number of vulnerabilities that have been fixed over time. This data can help you identify areas where you need to improve your security posture.

Identity and Access Management



- Single-Sign On
- Identity Brokering and Social Login
- User Federation
- OpenID Connect, Oauth 2.0, SAML, Kerberos protocol standards
- Role-based and fine-grained Authorization Services
- LDAP, Active Directory, or RDBMS
- Password Policies
- Admin Console
- Account Management Console
- Extensible



The image shows a composite of two screenshots of a Keycloak login interface. The top screenshot is a dark-themed login screen with a 'Sign in to your account' form containing 'Username or email' and 'Password' fields, and a 'Sign in' button. The text 'ORG1000' is visible in the top right. The bottom screenshot is a light-themed 'User Login' screen with the text 'Login with one of these available social accounts...'. It lists five social media providers with their respective icons: GitHub (black), Instagram (pink), Facebook (blue), Google (light blue), and LinkedIn (teal). The Keycloak logo, consisting of a hexagonal icon with blue and white segments and the word 'KEYCLOAK' in a bold, sans-serif font, is located at the bottom of the composite image.

Zero Trust Security



- Role-Based Access Control (RBAC)
- Secrets are encrypted at rest and purposely kept separate from applications
- (ITU) X.509 standard based digital certification
- Transport Layer Security TLS 1.2
- Monitor Network Traffic
- Audit Logging
- Third-Party Authentication



CERTIFY

User Login

Login with one of these available social accounts...





Based on findings and recommendations Microsoft, Open AI, the TM Forum, Deloitte, McKinsey, PwC, BCC, and Bain, this session will facilitate automation strategies for workforces and explore AI-driven innovations for core business offerings. AI can address the broadband worker shortage by offering intelligent business applications that empower everyone to deliver operational excellence and create more engaging customer experiences.