

Citizen Development with the Microsoft Power Platform

Hamburg@work



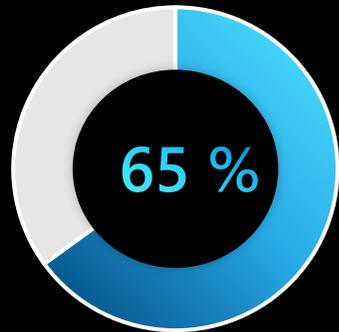
Timo Schramm, Technical Specialist
Business Applications + Power Platform



- What is Citizen Development and why should I care?
- Citizen Development is a teamsport
- Example Use Cases + Apps

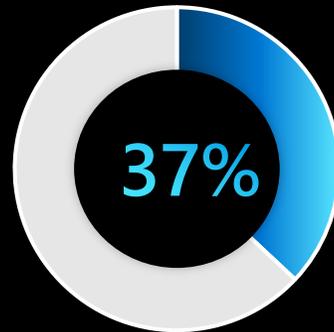
IT and business leaders face various challenges

App development backlog
– apps not delivered



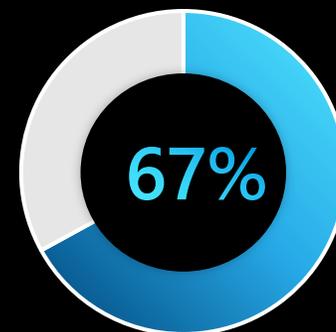
65% of organizations report an app development backlog.

Paper and extensive manual Excel sheet processes



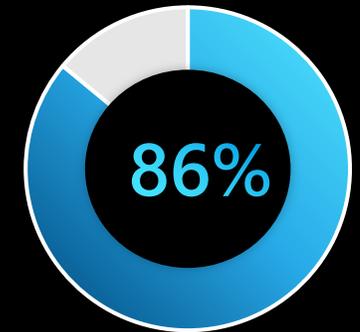
37% of organizations are still using paper to manage critical business processes.

Lack of software developers and technical skill shortage



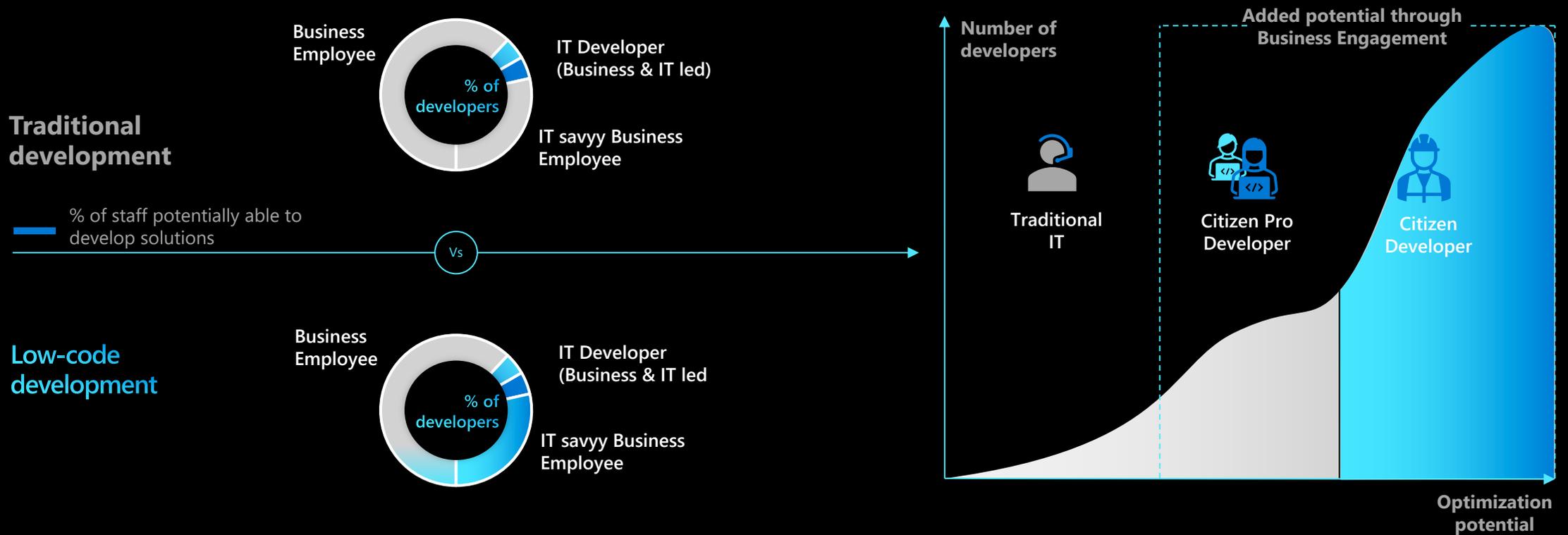
67% of CIOs and tech leaders say IT skills shortages are preventing them from keeping up with the pace of change.

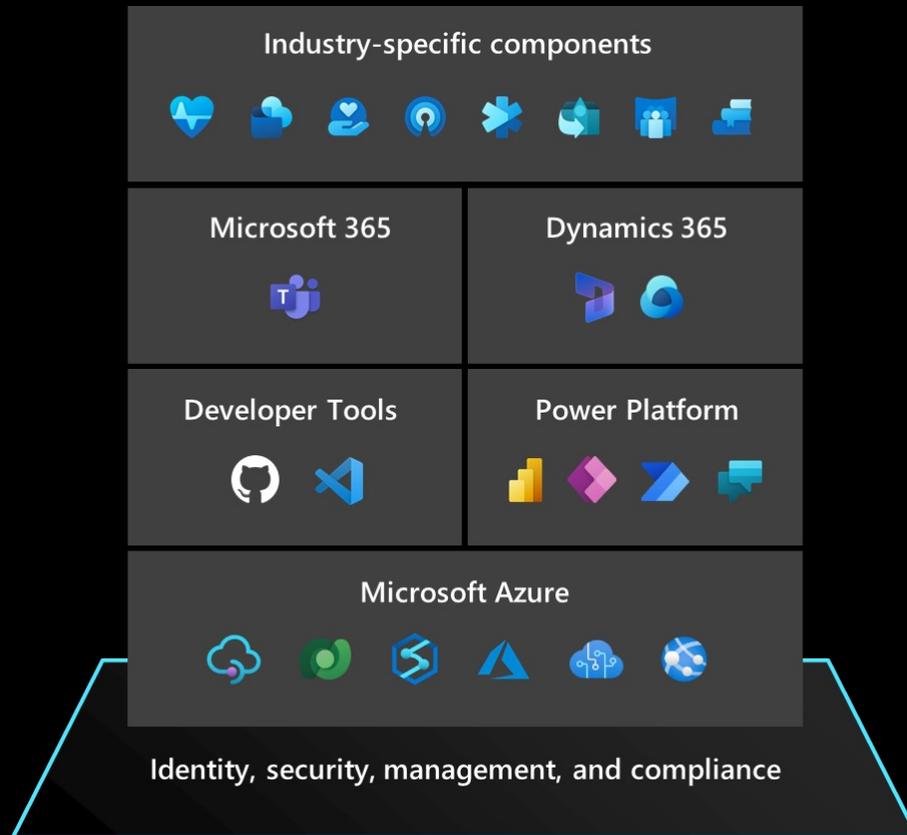
Shortage of talent



86% of organizations struggle to find technical talent to build applications.

Low-code boosting app & workflow development





“Although citizen developers didn’t need to know computer programming languages, they still previously had to understand the logic of writing formulas in Power Fx. Using an **advanced AI model like GPT-3** can help our low-code tools become even more widely available to an even bigger audience by truly becoming what we call no code.”

- Charles Lamanna, CVP Low Code Platform

Why digital transformation with low-code?



Transformation velocity increases due to rapid development



Bridging talent gap of professional developers by enabling a new group of code developers



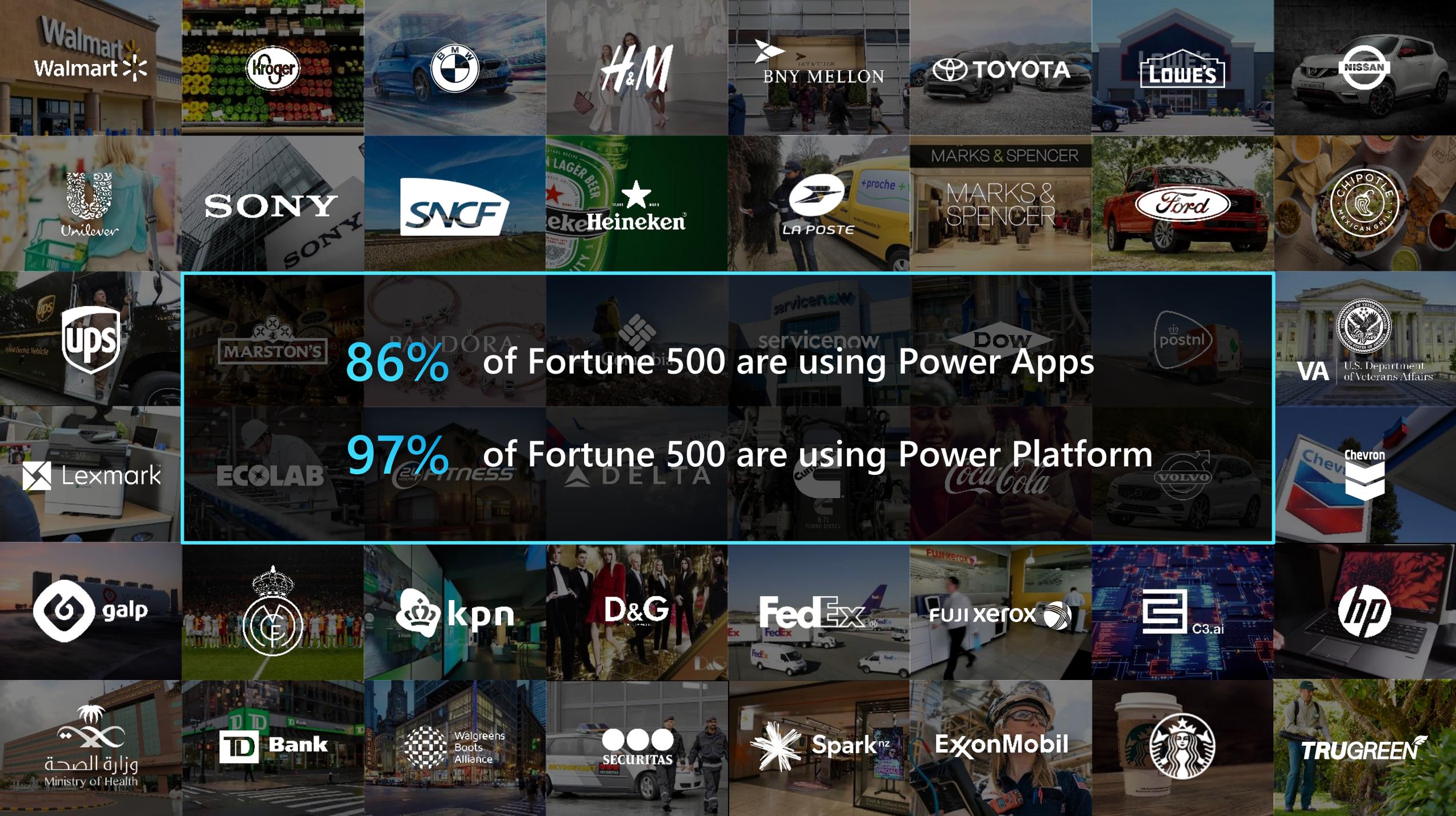
Reducing tech debt and total cost of ownership (TCO) by adding an additional layer on top of existing systems and build new apps rapidly



Offering a unique orchestration layer and integrating with existing information systems or unifying siloed applications



Reducing vendor overload and software evaluation cycles since one platform can fulfill multiple needs



86% of Fortune 500 are using Power Apps

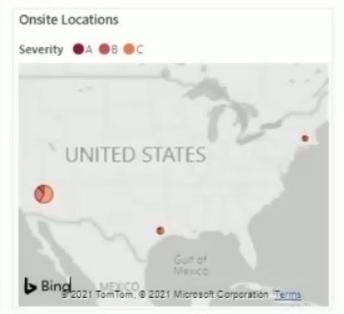
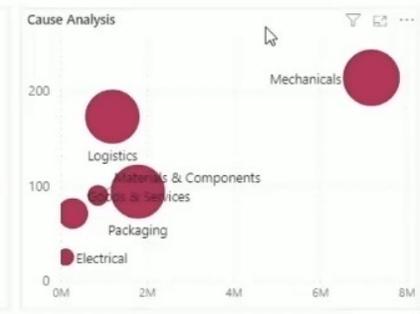
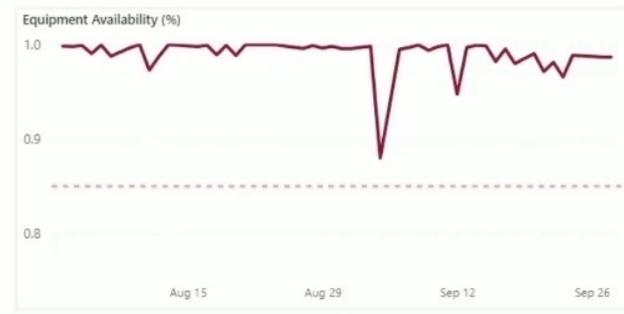
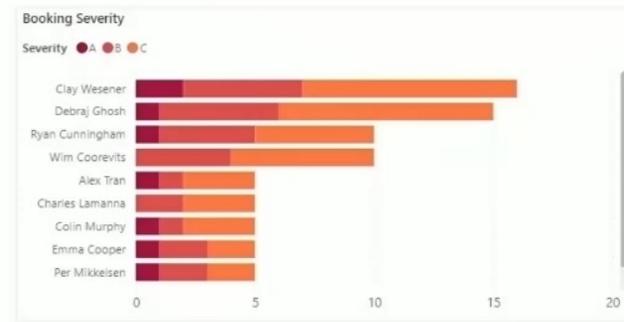
97% of Fortune 500 are using Power Platform

- Home
- Recent
- Pinned
- Team Management
 - Team Summary
 - Accounts
 - Technicians
 - Technician Profile

Team Overview

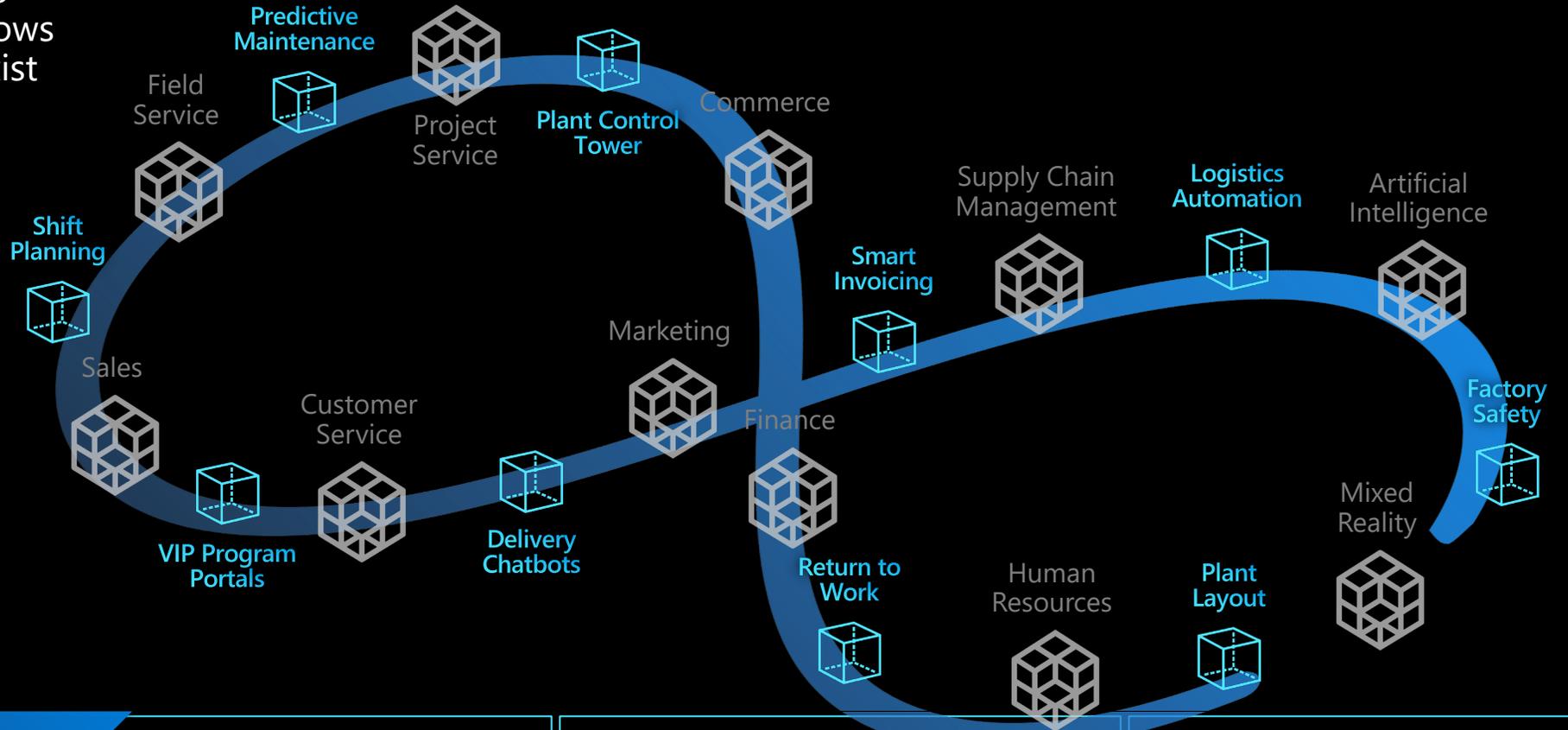
Ask a question about your data

Customer Satisfaction 139! <small>Goal: 140</small>	Response SLA (Hours) 1.50! <small>Goal: 2.00</small>	Utilization (%) 88! <small>Goal: 95</small>
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Manufacturing

Empowering customers to create applications and flows that currently does not exist



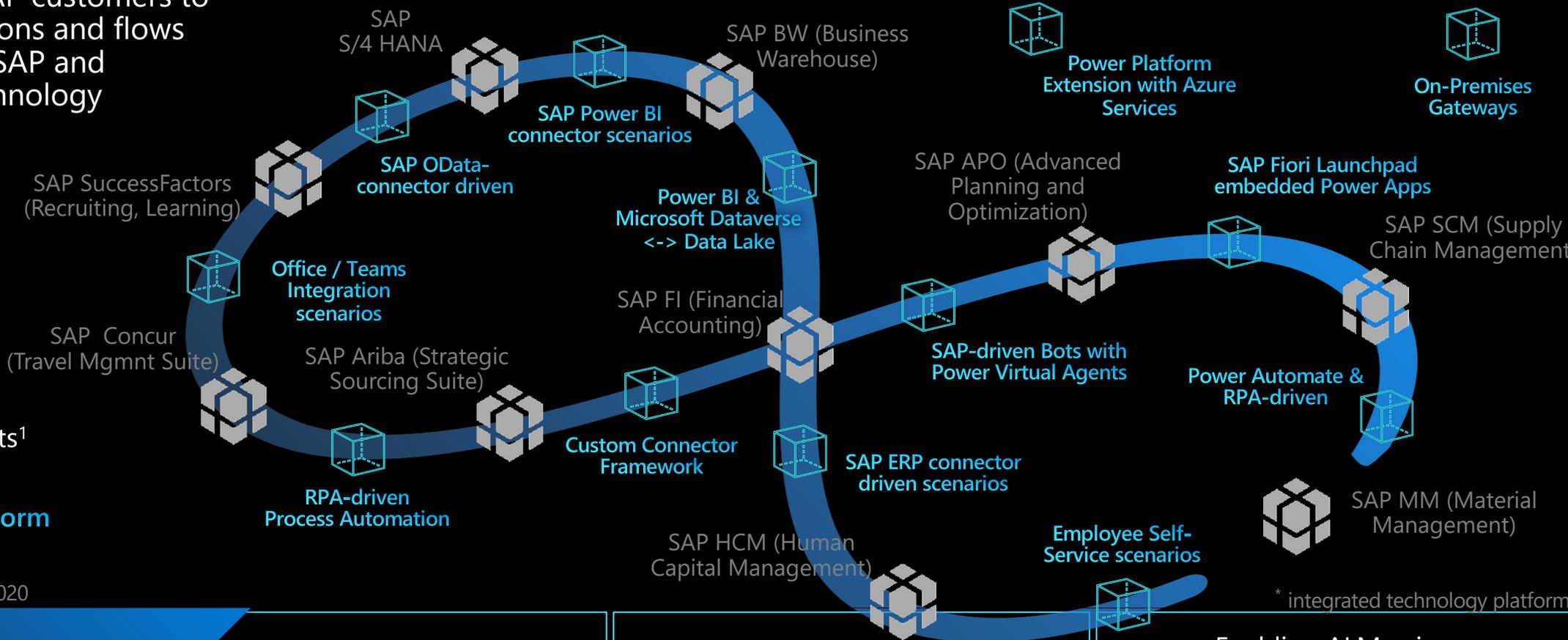
Microsoft Dataverse	Role-based security	Scalable Data Services	Enabling ALM using Solutions framework
	Azure Services	Active Directory	Security

SAP customers

Empowering SAP customers to create applications and flows that combines SAP and Microsoft's technology



¹ highest visibility in 2020



* integrated technology platform

Microsoft Dataverse	Role-based security	Scalable Data Services	Enabling ALM using Solutions framework
Azure Services	Active Directory	Security	API Management

Microsoft Power Platform

No code, low code, and code first—all are welcome



Power BI

for low-code
data exploration,
analytics and reporting



Power Apps

for low-code
web and mobile
application development



Power Automate

for low-code
robotic process automation
or workflow automation



Power Virtual Agents

for low-code
chatbots and
conversational agents



Dataverse



AI Builder



Data Connectors

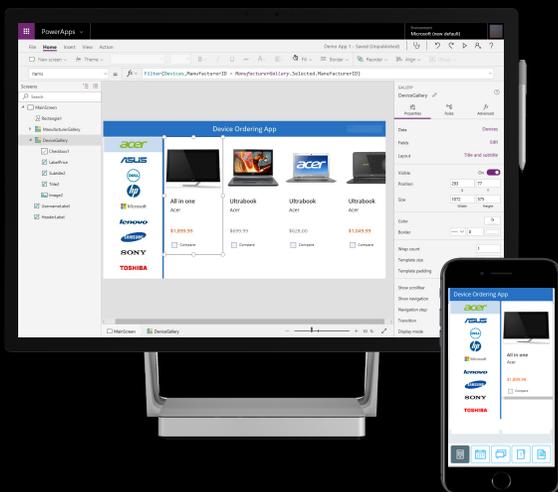


Power Fx



Power Apps

A low-code approach to building apps



Easily build web & mobile apps with a full featured low-code/no-code platform (primarily LOB + B2E apps today)

Connect to your existing data with 500+ pre-built connectors and custom connectors

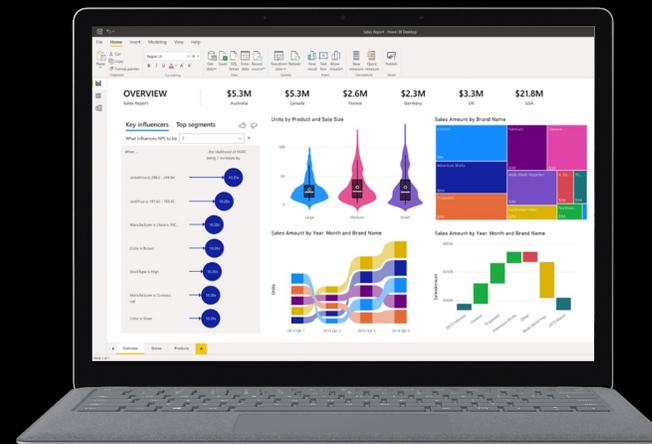
Strong enterprise governance & security

Pro-dev extensibility enable "no limits" development



Power BI

A low-code approach to self-service BI



Drive a data culture for everyone, every decision, at any scale

Empower every individual with familiar data experiences and AI infused insights

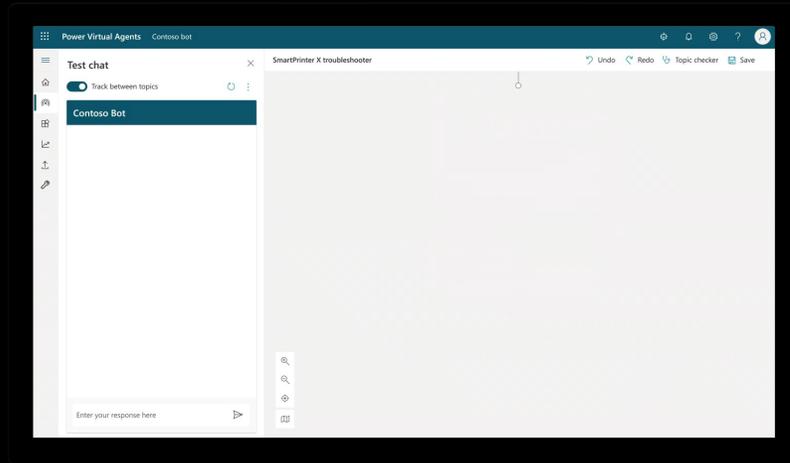
Infuse teamwork with data by weaving BI into the fabric of where you work

Scale to 100,000s of users, meeting the most demanding enterprise needs



Power Virtual Agents

A low-code approach to conversation



Engage with your customers and employees conversationally. Resolve routine issues easily, freeing up staff to focus on complex matters

Empower your subject matter experts. Easily create powerful bots using a guided, no-code graphical interface and AI-driven suggestions

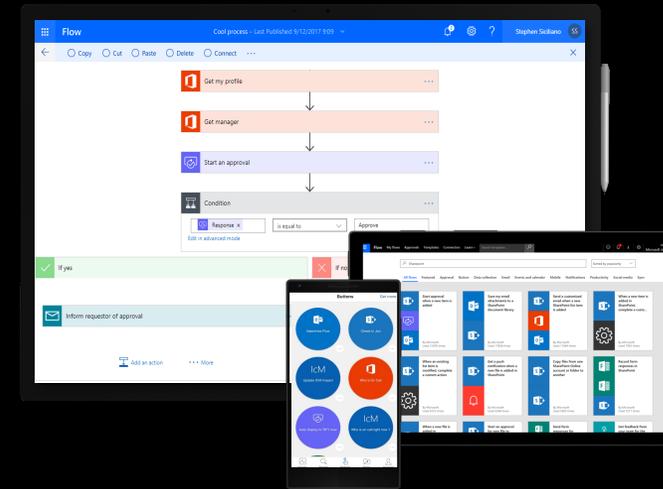
Less talk more action. Leverage all the Power Platform connectors or call APIs and custom processes using Power Automate

Easily extend your bots. Add even more complex capabilities using Microsoft Bot Framework



Power Automate

A low-code approach to automation



Model business processes and automate workflows and your apps and services

Connect to all your data with 500+ pre-built connectors, RPA and custom connectors

Strong enterprise governance and security

Pro-dev extensibility with Azure and custom logic



Microsoft Dataverse

A SaaS backbone of Power Platform Services

Table	Name	Type	Customization	Tags
Account	account	Standard	✓	Core
Activity	activitypointer	Custom	✓	Standard
Address	customeraddress	Standard	✓	Standard
Appointment	appointment	Standard	✓	Productivity
Attachment	activitymimeattachment	Standard	✓	Productivity
Business Unit	businessunit	Standard	✓	Standard
Contact	contact	Standard	✓	Core
Currency	transactioncurrency	Standard	✓	Standard
Email	email	Standard	✓	Productivity
Email Template	template	Standard	✓	Standard
Fax	fax	Standard	✓	Productivity
Feedback	feedback	Standard	✓	KB
Letter	letter	Standard	✓	Productivity
Mailbox	mailbox	Standard	✓	Configuration
Organization	organization	Custom	✓	System
Phone Call	phonecall	Standard	✓	Standard
Position	position	Standard	✓	System

Dataverse lets you securely store and manage data that's used by business applications. Data within Dataverse is stored within a set of tables.

Dataverse includes a base set of standard tables that cover typical scenarios, but you can also create custom tables specific to your organization and populate them with data by using Power Query.

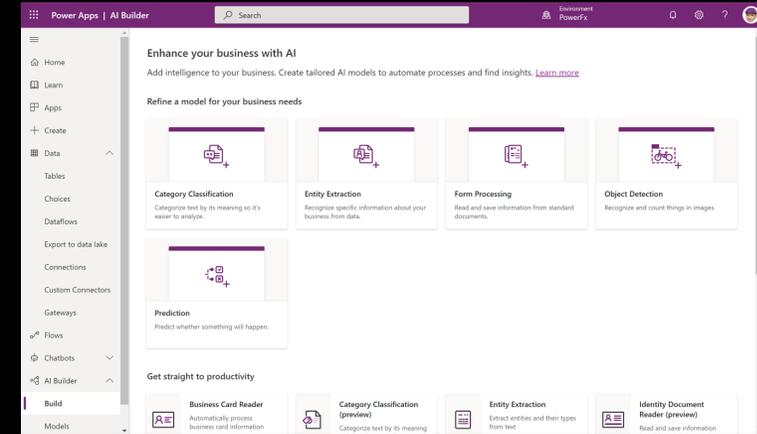
App makers can then use Power Apps to build rich applications that use this data. Standard and custom tables within Dataverse provide a secure and cloud-based storage option for your data.

Application Lifecycle Management (solutions) and Microsoft solutions – such as Microsoft Approvals – are based on Microsoft Dataverse



AI Builder

A low-code approach to Microsoft AI



AI Builder enables your business to use AI to automate processes and glean insights from your data in Power Apps and Power Automate.

AI Builder is a turnkey solution that brings the power of AI through a point-and-click experience, so you don't need coding or data science skills to access the power of AI.

With AI Builder, you can build custom models tailored to your needs, or choose a prebuilt model that is ready to use for many common business scenarios.



Microsoft Power Fx

The low-code language used across Power Platform

Power Fx formula:

```
fx "Employee: " & Lookup( Orders, Number=Selected ).Employee.'First Name'
```

Employee: Elisa

JavaScript equivalent requires explicit: **Asynchronous and lambda**

```
1 RunQueryAsync( Orders,
2   $filter=nwind_ordernumber+eq+ + Escape(Selected) +
3   "&&expand=nwind_EmployeeID($select=nwind_employeesid,nwind_firstname)" +
4   "&&select=nwind_ordersid,nwind_ordernumber,nwind_EmployeeID,_nwind_employeeid_value" +
5   "&&top=1"
6 ).then(
7   (result) => "Employee: " + result.nwind_firstname
8 );
```

Extracting and expanding the formula language that is in Power Apps Canvas today. Think Excel!

Reduce barriers by leverages the existing knowledge of millions of Excel users.

An open-source language that will be available for everyone to use and implement.

Accelerate with the simplicity of formulas and add code where it matters using favorite developer tools.

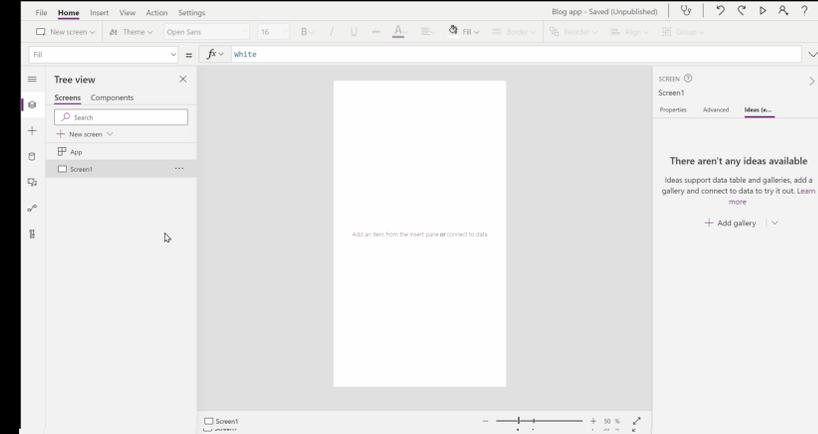
Building a complex solutions becomes as easy as building a spreadsheet.

Enabling a native experience for data sources, including Dataverse, Microsoft SQL Server and Sharepoint.



GPT-3 & PROSE

Transform natural language to code



Empower citizen developers to quickly unlock the power of formulas by transforming natural language to code.

Enable professional developers to speed up authoring by reducing time spent searching and tuning formulas.

Supported in Gallery and Data tables first and expanding to more controls and formulas based on user feedback.

Increase productivity by enabling developers to program by example reducing time spent searching, writing, and fixing formulas.

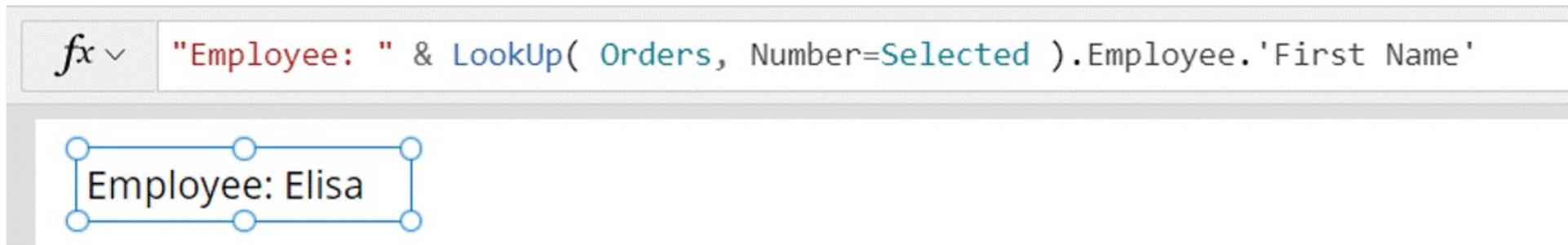
Empower developers to easily manage and manipulate data within Galleries and Data tables, by applying patterns or formula on the original value.



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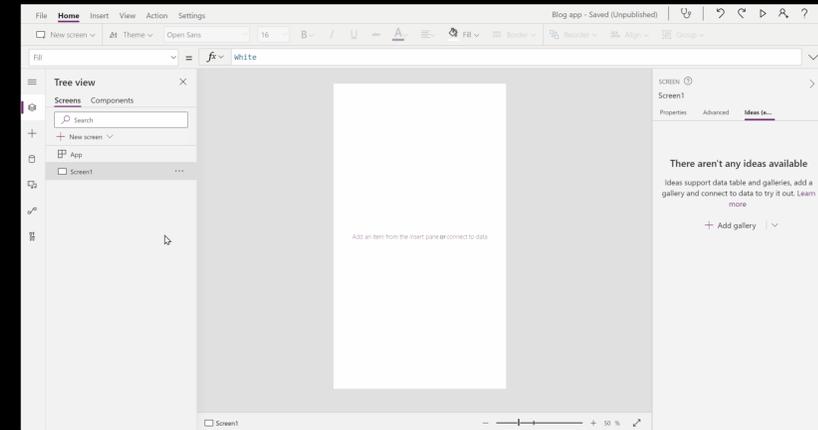
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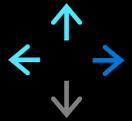
The screenshot displays the Axure RP software interface. At the top, the menu bar includes File, Home, Insert, View, Action, and Settings. The title bar shows "Blog app - Saved (Unpublished)". The toolbar contains various icons for navigation and editing. Below the toolbar, the "Fill" property is set to "White".

The main workspace is divided into three panels:

- Tree view (left):** Shows a hierarchical structure with "Screens" and "Components" tabs. Under "Screens", there is a search bar, a "New screen" button, and a tree containing "App" and "Screen1".
- Central Canvas:** A large white rectangular area with the text "Add an item from the insert pane or connect to data" centered on it.
- Properties panel (right):** Titled "SCREEN 1", it has tabs for "Properties", "Advanced", and "Ideas (e...)". The "Ideas" tab is active, displaying the message "There aren't any ideas available" and a button to "Add gallery".

At the bottom of the interface, there is a zoom control set to 50% and a status bar showing "Screen1".

Everyone's platform for transformation



No Code

Drag and drop experiences that are like PowerPoint



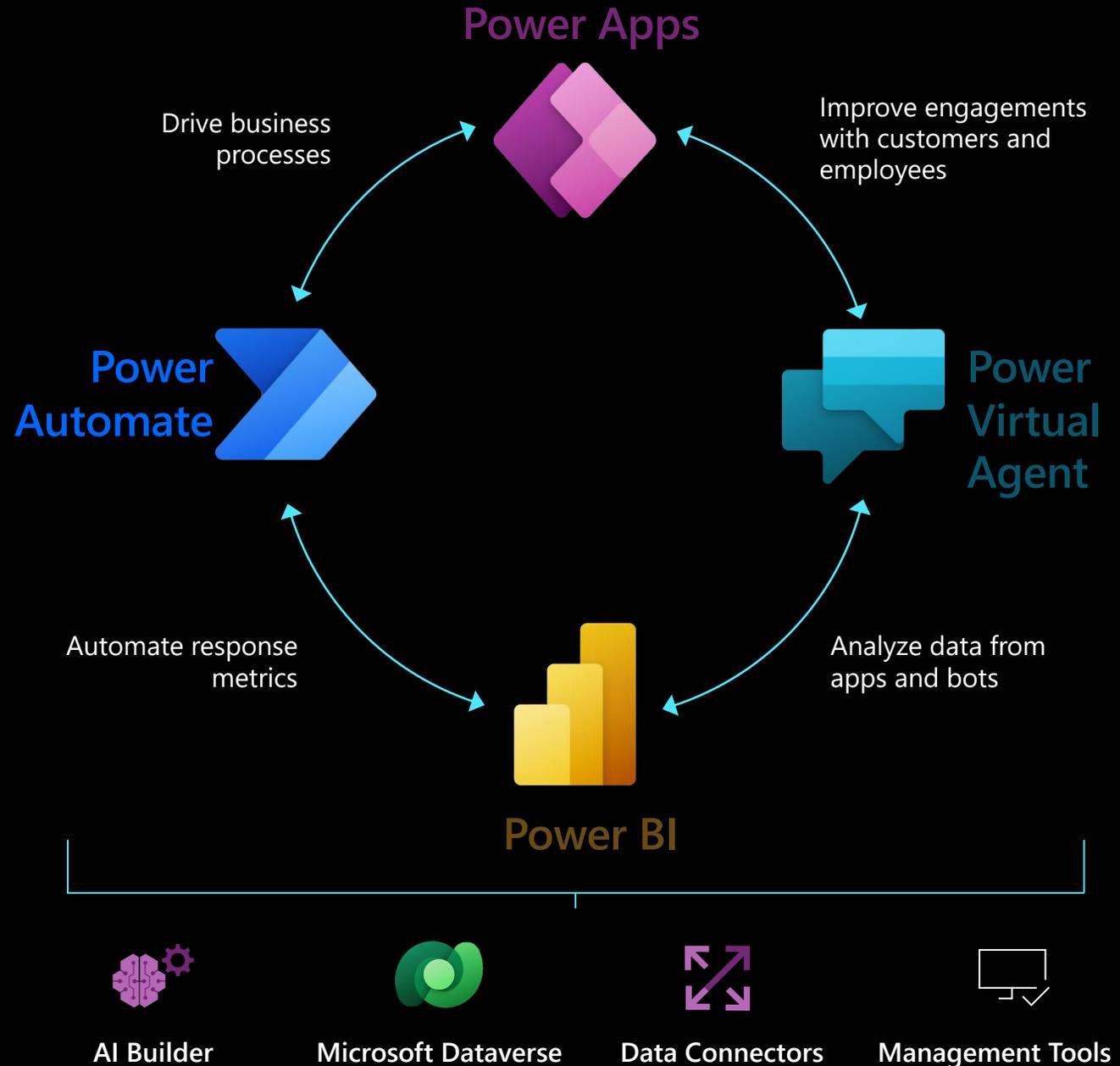
Low Code

Drag and drop plus Excel-like formulas for functionality

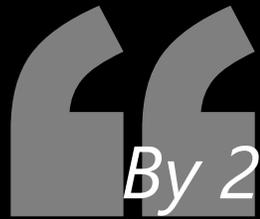


Code First

Professional development and extensibility across Microsoft

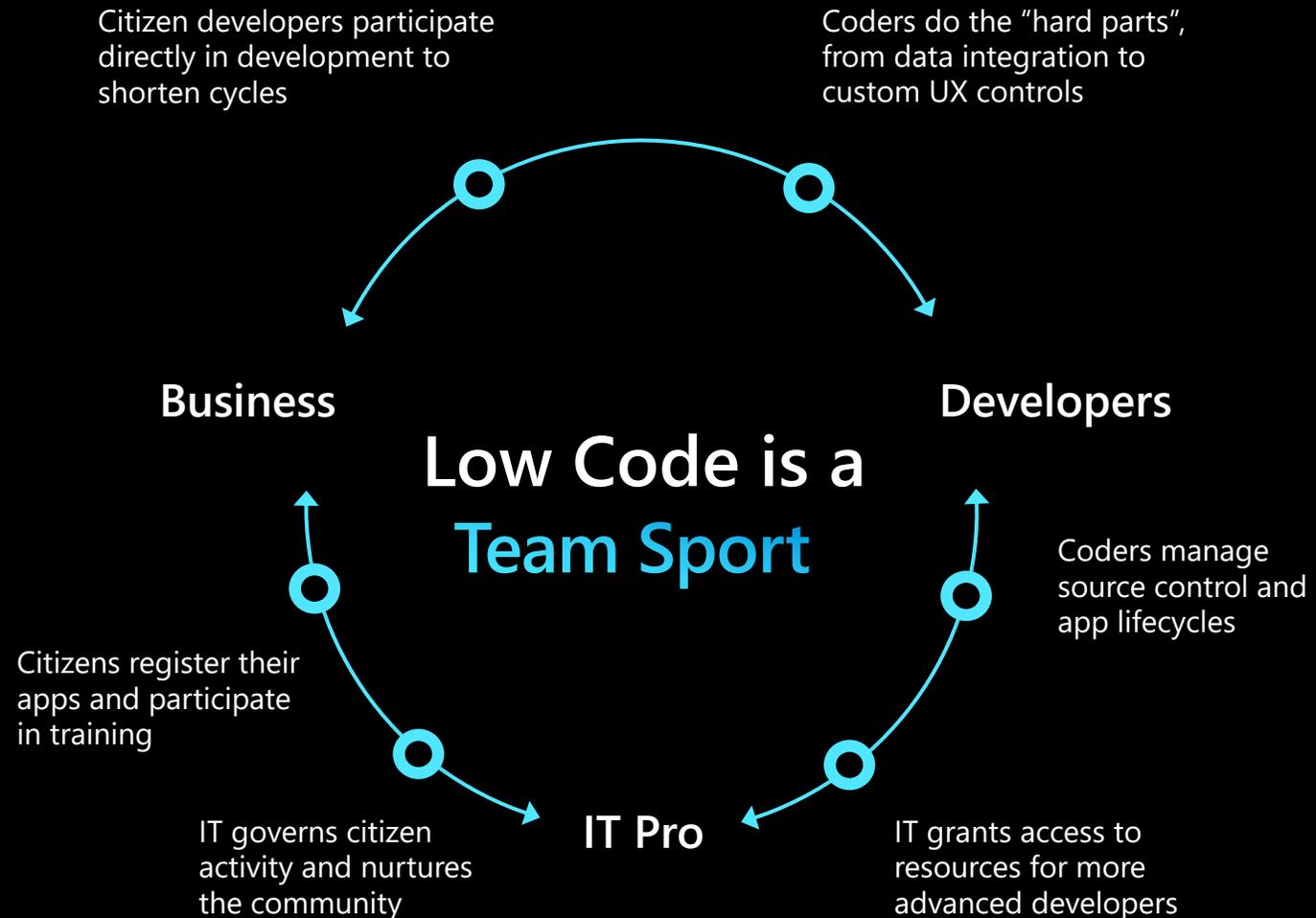


That enables a new way to develop solutions



By 2022, 50% of organizations will have business-IT collaboration teams driving technology-based business innovation.

Gartner Predicts 2020 Application Leaders

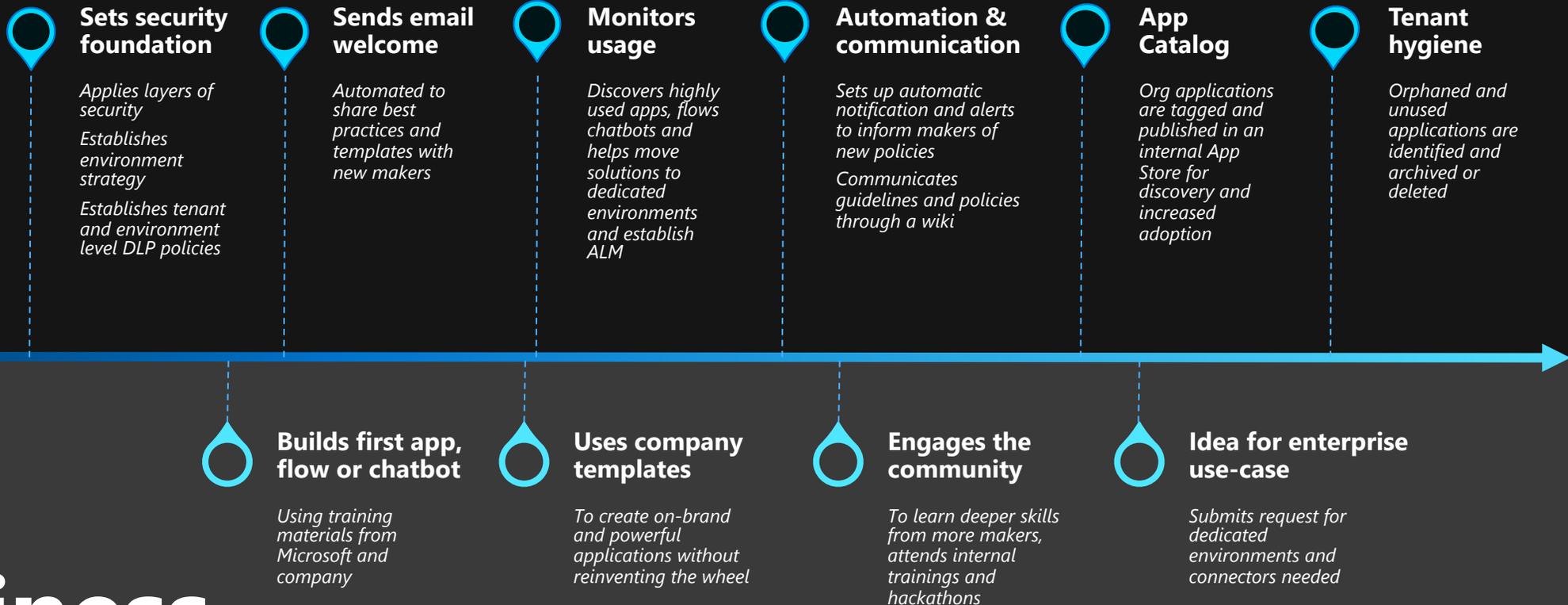


Empowerment through Governance

An example of an empowered, yet fully governed approach

<https://aka.ms/PowerPlatformGuidance>

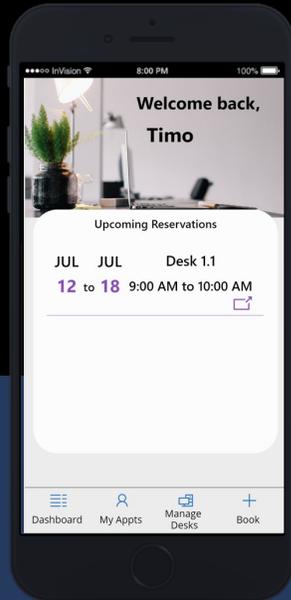
IT



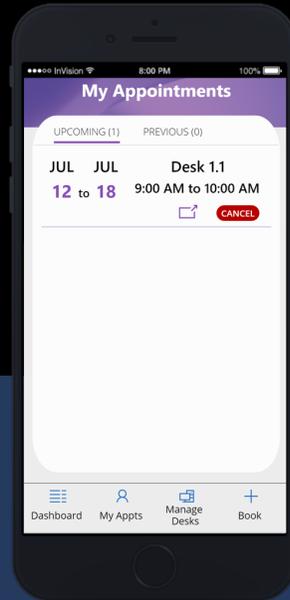
Business

Use Case: Desk Booking Power App

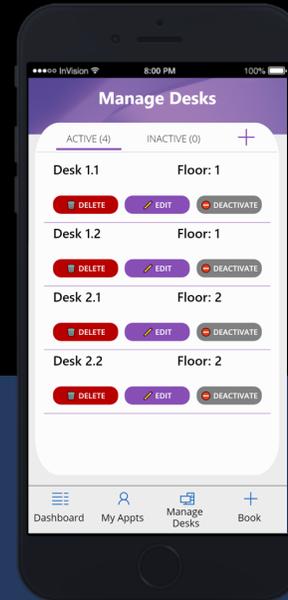
Desk Booking App Template



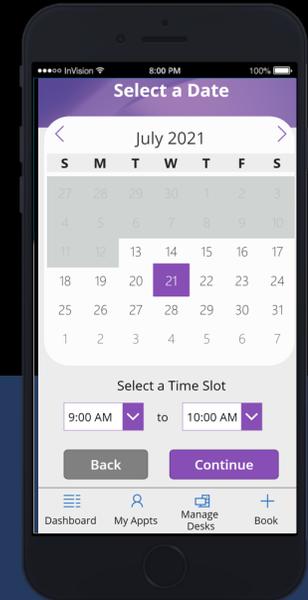
Employee determines location and checks-in



Employee self-screens and attests to state of health



Employee receives a day pass for entry to the location



Get template on [GitHub](#)



Teams

Pinned

MD General
Master Data Team / Clearing

Your teams

BA BMW Account Team

BA All Employees

General

Events

Idea Center

Innovations

News

BS Sales Global

HM HMI 2019 - Marketing

LT Legal Team

MD Master Data Team / Clearing

AA Audi Account Team

HT [HQ] Technical Sales Support

General

Join or create a team



General

Posts

Files

Wiki

Employee ideas

Desk Booking App



Meet



Welcome back,
Timo

Upcoming Reservations

JUL JUL Desk 1.1
12 to 18 9:00 AM to 10:00 AM



Dashboard



My Appts



Manage
Desks



Book

Use Case: Power BI and Power Apps

From insights to action with Power Apps & Power BI

The screenshot displays a Power BI dashboard with the following components:

- Header:** Power BI logo, user profile (Contoso FastTrack), and navigation icons (Usage Metrics, View related, Subscribe).
- Top Customers by Opportunity:** A bubble chart showing qualified opportunities for various customers. The data is as follows:

Customer	Average E2E Quote Time	Qualified Opportunities
Northwind Traders	~17.5	~24
Lucern Publishing	~4.5	~20
Litware	~6.5	~17
ProseWare, Inc.	~10.5	~18
The Phone Company	~14.5	~17
Fusion Tomo	~16.5	~19
- Customer Request for Quote/Proposal Process:** A flowchart illustrating the process flow:
 - Customer Request:** Awareness through Campaign / Organic/Customer Initiated → Customer Identification → Lead Scoring → Prototype Requested (Decision).
 - If No: Send Samples → Prototyping → Qualified Opportunity.
 - If Yes: Prototyping → Qualified Opportunity.
 - Quote Response:** No (Automatic Approval Eligible) → Approval Requested (Decision).
 - If Yes: Approval Requested → Quote Generation → Contract Approval → Quote/Proposal Delivery.
 - If No: Approval Requested → Qualified Opportunity.
- Average E2E Quote Time:** A gauge chart showing a value of 10.69.
- Opportunity Funnel:** A funnel chart showing the progression of leads through the sales process:

Stage	Count	Percentage
Leads	129	100%
Qualified Opp...	84	
Quote Gener...	71	
Approved	66	51.2%
- Customer Detail Card (Fusion Tomo):**
 - Account Manager: Elisabeth Iversen
 - In FastTrack Program:
 - Sales Region: Northwest
 - Contact Sales Team: Request call with customer
 - Estimated Value: \$ 458,707
 - Submit button

Use Case: Microsoft global HR Power App (Thrive)

- Vacation Requests
- Balance Status
- Pending Approvals
- Reporting
- Vacation Request Details
- User Profile
- Local Settings
- Manage Outlook Items

Approval Information
There are currently no requests pending your approval.

News

Company News:

Dear Employees,

The vacation balance for the year 2020 has been updated !

if you have any queries about your vacation balance, please check HRweb or contact us at AskHR@microsoft.com

Your AskHR Team

Global News:

Vacation Year
1 Jan 2020 to 31 Dec 2020

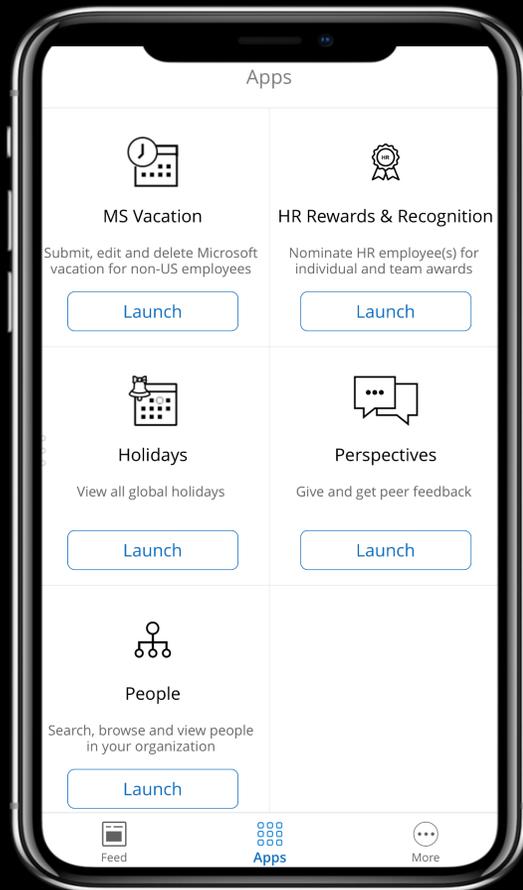
Balance Status

Name	Days Left
Deductible Vacation Types	6.00

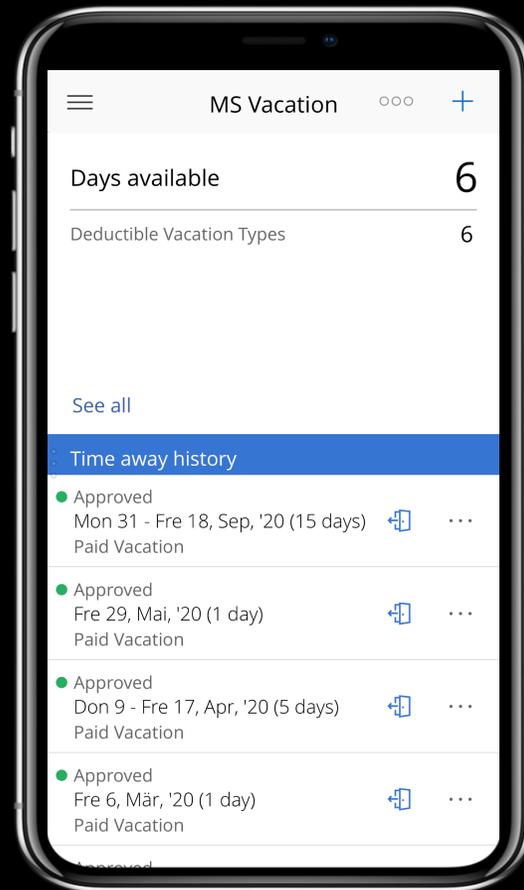
Public Holidays

1 Jan 2020	Neujahr (New Year's Day)
10 Apr 2020	Karfreitag (Good Friday)
13 Apr 2020	Ostermontag (Easter Monday)
1 May 2020	Maifeiertag (Labor Day - May Day)
21 May 2020	Ascension Day
1 Jun 2020	Whit Monday
3 Oct 2020	Tag der dt. Einheit (day of German unification)
31 Oct 2020	Reformationstag (Reformation Day)
24 Dec 2020	Heilig Abend (Christmas Eve)
25 Dec 2020	1. Weihnachtstag (Christmas Day)
26 Dec 2020	2.Weihnachtstag (Boxing Day)
31 Dec 2020	Silvester

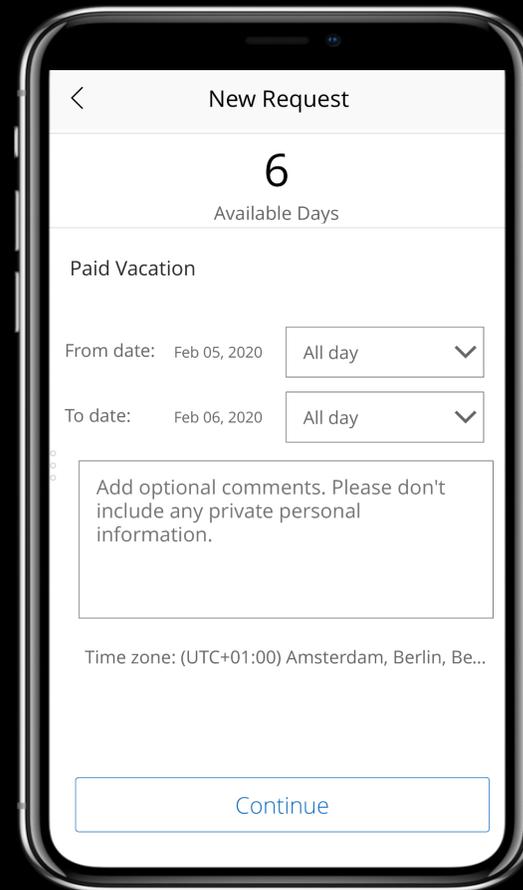
MICROSOFT THRIVE HUB



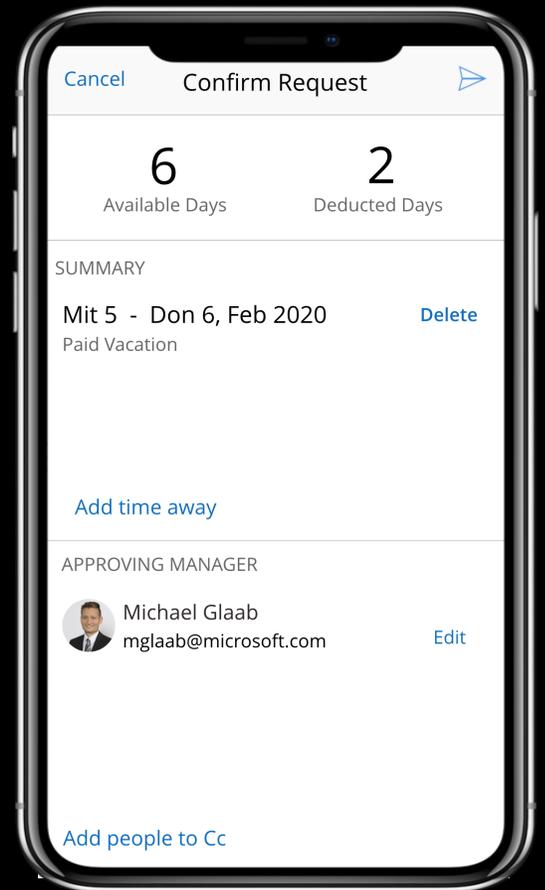
VACATION OVERVIEW



VACATION REQUEST



VACATION SUBMISSION



Use Case: Document Automation

Sales Order

VENDOR

Fabrikam, Inc.
345 North St
NY 98052
PHONE: 555-0145

SHIP TO

Contoso, Ltd.
4567 Main St Buffalo
NY 98052

BILL TO

Contoso, Ltd.
4567 Main St Buffalo
NY 98052

Purchase Order

PURCHASE ORDER NO.	REVISION	PAGE
4502680610		1
		of 4

This Purchase Order Number must appear on all Invoices.
Packing List, Customs and Correspondence related to this order

DATE OF ORDER BUYER
07/15/2021 Silverman, S

DATE OF REVISION BUYER
07/15/2021

CUSTOMER ACCT NO.	VENDOR NO.	PAYMENT TERMS	FREIGHT TERMS	F.O.B.	SHIP VIA
	9775	Net Due 30 Days From Invoice	FOB Ship Point FRT.	Collect	<input checked="" type="checkbox"/>

CONFIRM TO/TELEPHONE	REQUESTOR/DELIVER TO
	/

LINE	PART NUMBER/REV/DESCRIPTION	DELIVERY DATE	QUANTITY	UNIT	UNIT PRICE	EXTENSIONS
01	415000745 Rev:C FRIT, .082 DIA., 0.2 uM GRADE, TITANIUM	08/27/2021	2,000	EA	1.89 EA	3,780.00
02	415000745 Rev:C FRIT, .082 DIA., 0.2 uM GRADE, TITANIUM	09/02/2021	2,000	EA	1.89 EA	3,780.00
03	415000745 Rev:C FRIT, .082 DIA., 0.2 uM GRADE, TITANIUM	09/16/2021	2,000	EA	1.89 EA	3,780.00

First Article Inspection Reports (FAIR) for all materials fabricated to Contoso drawings are to be provided by the supplier the first time a part is manufactured. For repeating parts where the drawing revision has changed the FAIR should only include the revised features. The FAIR is to be performed on one piece and needs to include actual readings for all dimensions and notes listed on the Contoso drawing. The inspected piece must be identified/marketed #FAIR#.

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Power Platform can cover new & evolving scenarios with new developer economics

