



UA Summit[®]

May 10 - 12, 2022 | New Orleans, LA

Sending the Right Message Improving Customer Communications

Hosted by Entergy

Agenda

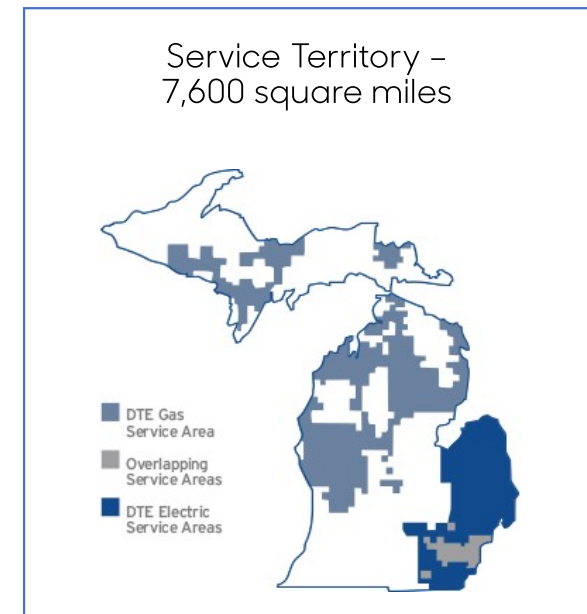
- About DTE & Neudesic
- Wake-up Call – 2021 Storm Season
- DTEs Approach for Improving Outage Notifications
- The Journey Continues



DTE Energy Overview



- Headquartered in Detroit, MI
- DTE Electric
 - Electric generation and distribution
 - 31,000 miles of overhead and 16,400 miles of underground sub-transmission and distribution lines
 - 2.3 million customers
 - 11,084 megawatt (MW) system capacity
- DTE Gas
 - Natural gas transmission, storage and distribution
 - 19,000 miles of distribution
 - 1.2 million customers
- Gas Storage & Pipelines
- Power & Industrial Projects
- Energy Trading



About Neudesic

Our Mission: Help clients get on the winning side of digital transformation.

16x Microsoft Partner of the Year

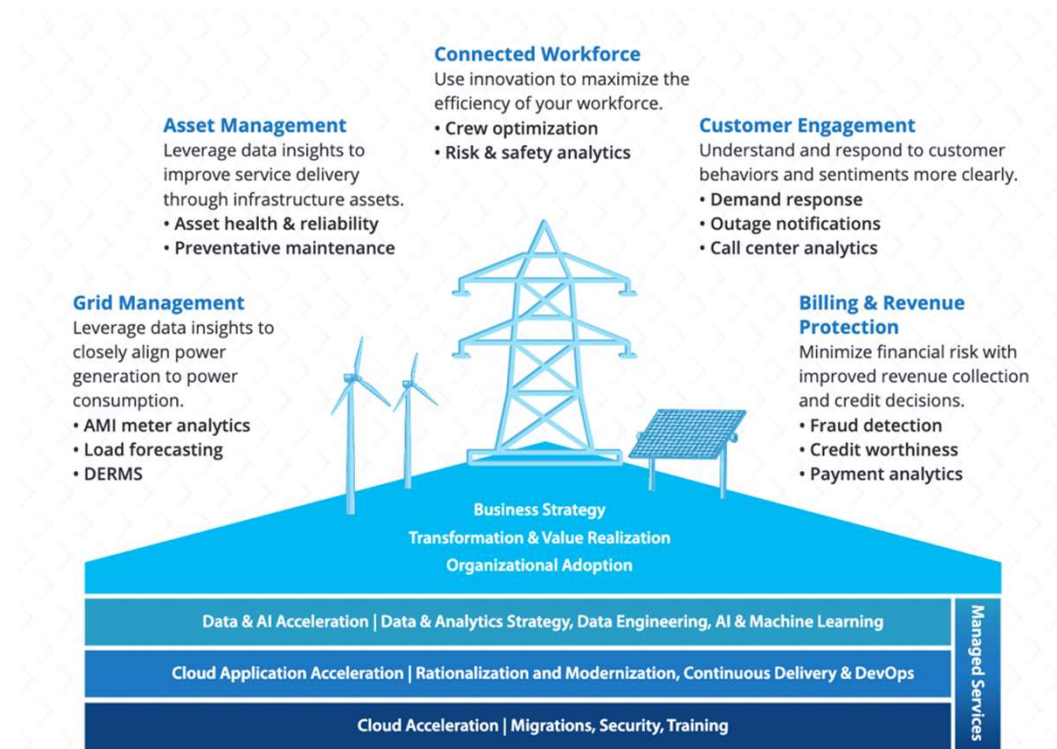
12 Microsoft Gold Competencies

Top 10 Microsoft Partner Nationally

2,000+ Successful client engagements

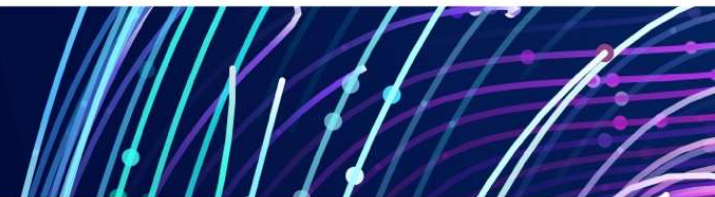
1700+ Skilled cloud & data experts

Elite Access to Microsoft Funding & Programs



Twitter: @weareuai

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Customer Satisfaction is Core to Every Utility Company's Strategy

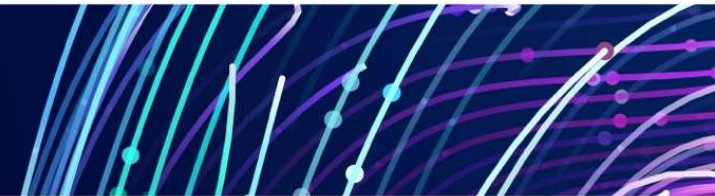
72/100

U.S. utility customers overall scoring of top utilities based on satisfaction

82%

U.S. utility customers prefer proactive communications during an outage

"An increase in outage communications was one of the main reasons for the rise in customer approval across the [utility] industry in 2021," – J.D.Powers

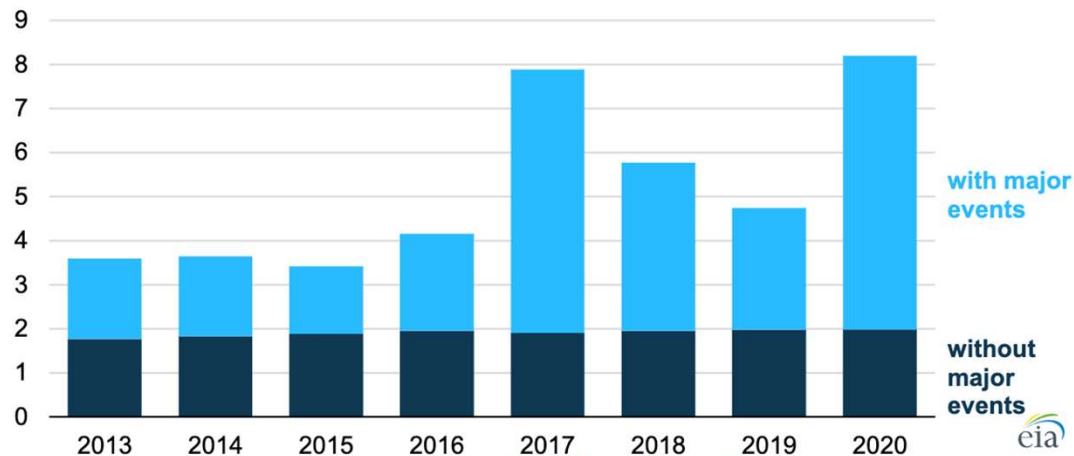


Major Events are Threatening Service

NOVEMBER 10, 2021

U.S. electricity customers experienced eight hours of power interruptions in 2020

Average duration of total annual electric power interruptions, United States (2013–2020)
hours per customer

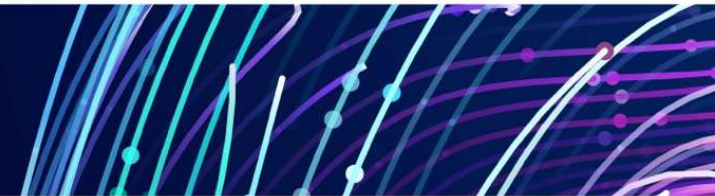


Source: U.S. Energy Information Administration, *Annual Electric Power Industry Report*

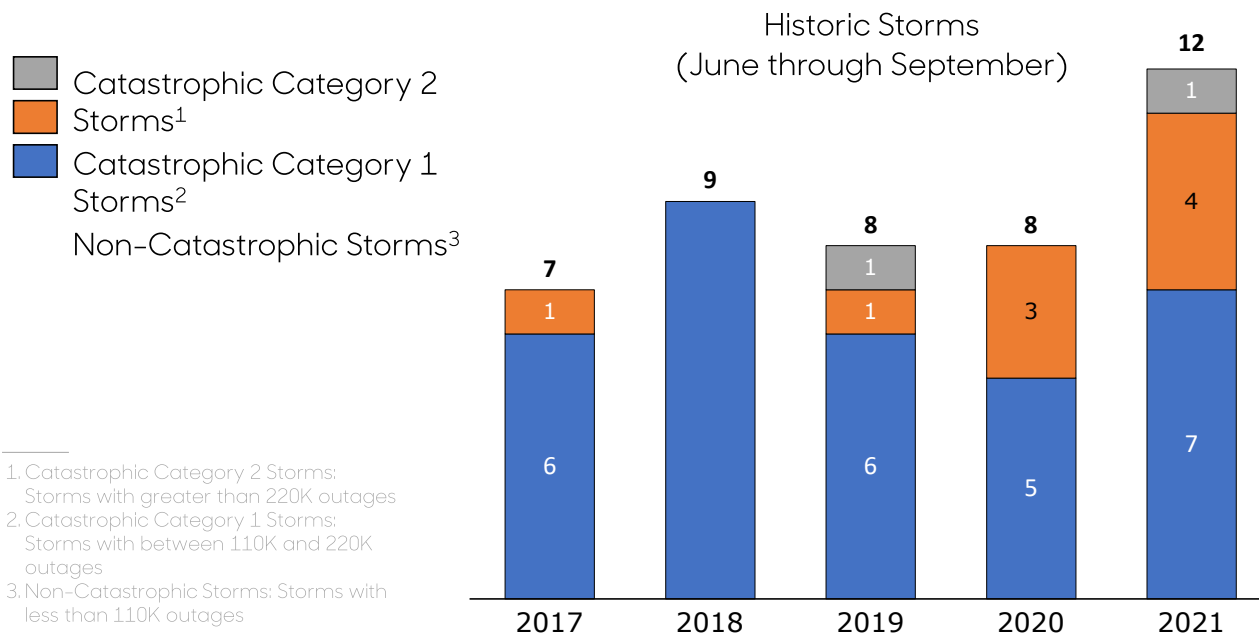


Twitter: @weareucal

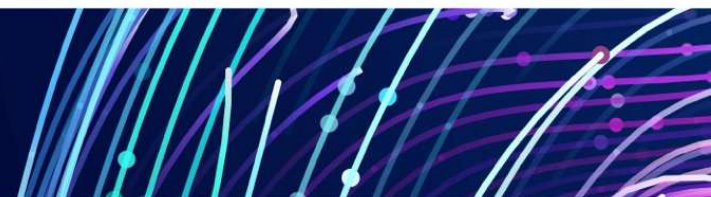
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Southeast Michigan experienced an unprecedented series of storms during the Summer of 2021, both in terms of frequency and duration



- From June through September, our customers experienced 12 storms, 9 of which were back-to-back with an average of 5 days between storms
- Compared to 2017-2020 averages:
 - 50% more customers were impacted by outages
 - Outage duration averaged approximately twice as long
- Despite the challenging weather, DTE acknowledges, we must perform better for our customers

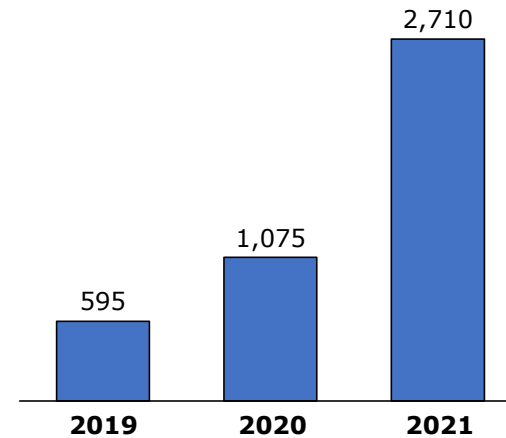


When storms occur so frequently, the system is at greater risk due to “restore before repair” industry standard

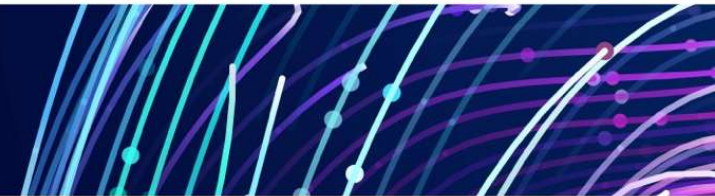


Restore before repair example

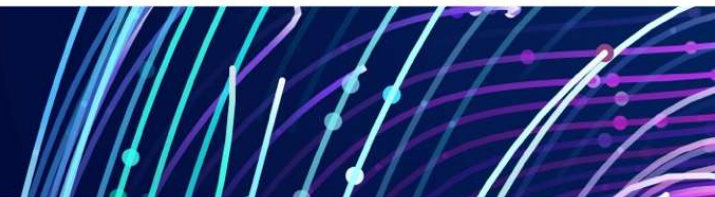
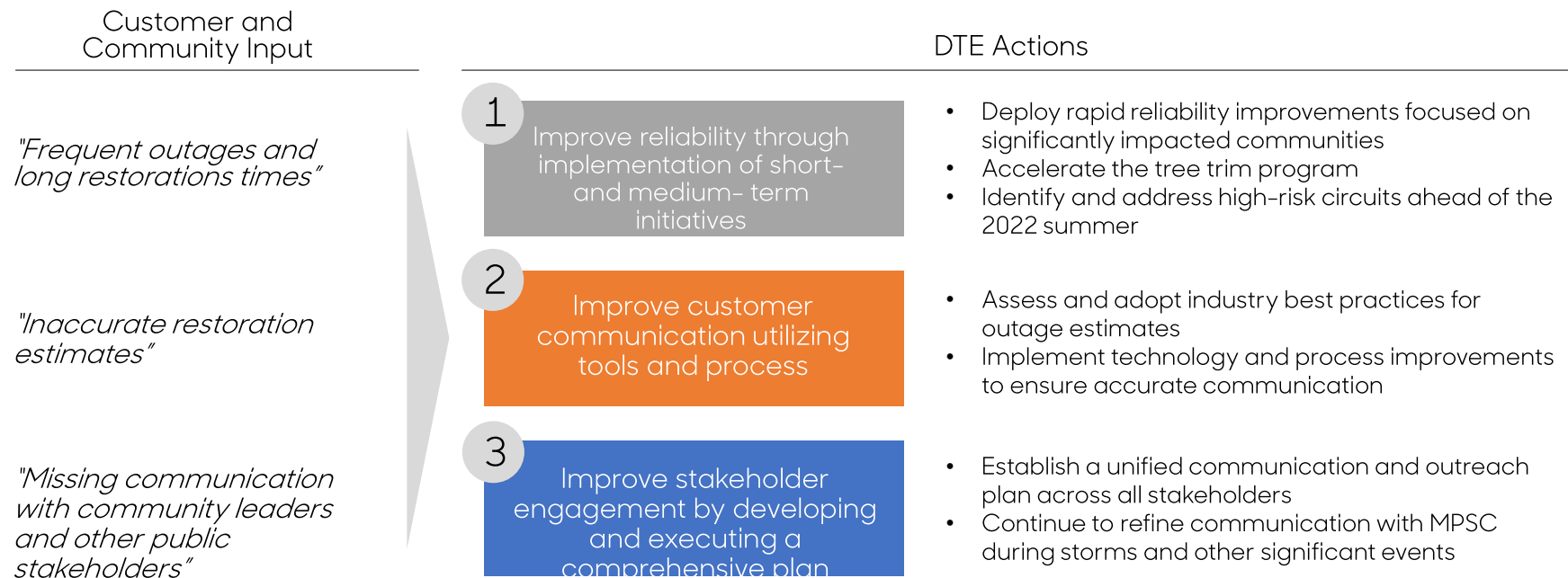
Average Number of Follow Up Jobs in the System
(July/August)



Between June – mid-September 2021 we had an average of 4.6 days between storms to perform follow up work



In October 2021, DTE stood up a Incident Command Structure (ICS) to develop and execute against a comprehensive plan to improve customer experiences



After surveying customers, we analyzed survey responses and completed customer journey maps to better understand what is driving our customer's frustration and what problem we need to focus on for outage communications and notifications



Customers want to know **when their power will be restored** so they can plan accordingly



The **initial restoration estimate** offered by DTE at the point of reporting an outage was meaningless to customers and only led to further frustration



Customers are baffled as to why they must report an outage at all considering the **AMI technology** we have

The screenshot shows a chat conversation with a utility company. It includes a timeline of restoration updates with status indicators (green for 'On', yellow for 'Outage', red for 'No Power'). Customer messages express frustration with the lack of timely information and the accuracy of the restoration estimates.

Matt Horn
 Yesterday 8 and 10 - 12 Aug
 Anyone know when power is supposed to be restored? I'm near Sheldon and Ann Arbor road. DTE website has no estimate as of 8am on 8/12.
 Posted in Ask a Neighbor in Reply

Cherise Wolfstar Lorenz
 In rural areas we can't even get a freaking estimate of when it will be restored or if a crew has been sent. Been in the dark since 5 pm. They just 'fixed' the problem yesterday. And here we are again in the dark.

Estle Towne
 Estimated Restoration:
 Wednesday, Sep 15 2021, 10:00 PM
 Off since:
 Tuesday, Sep 4 2021, 7:34 PM
 Cause: Will determine upon Crew arrival
 Last Update:
 Wednesday Sep 15, 12:45 PM

 WHAT A JOKE!!!!
 I HAD POWER UNTIL, Wed Sep 15 at about noon.
 What a bunch of made up nonsense

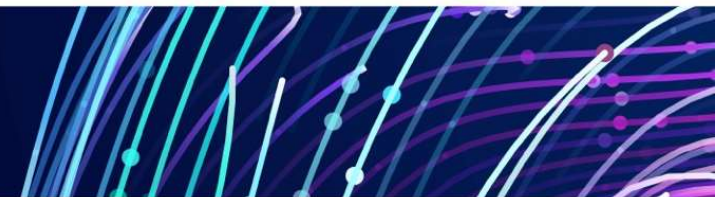
Kristin Patton
 I couldn't get through on the app or by phone last two times we've lost power...
 The app also said during that time that we had power when we didn't, and then when we didn't it said we did.



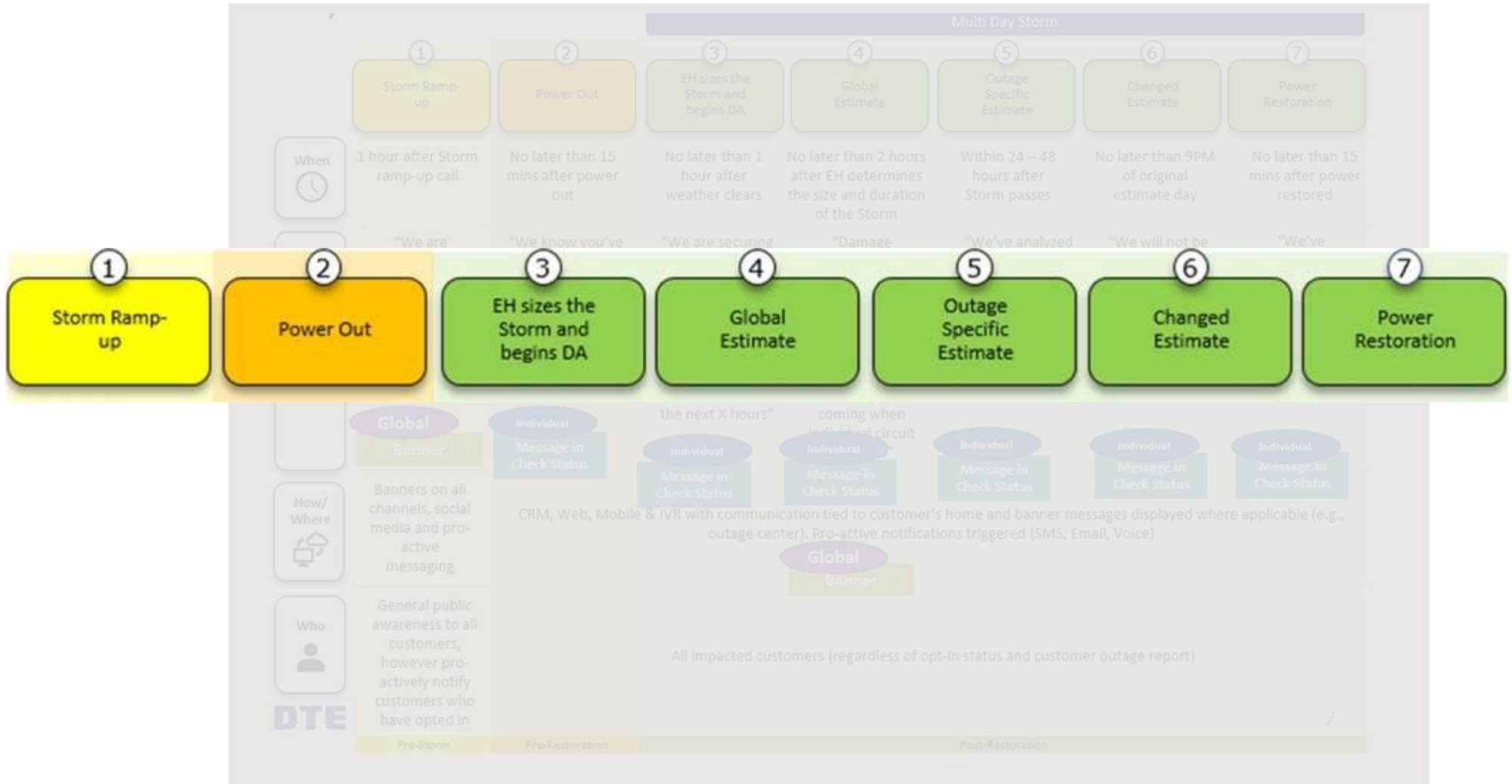
Customers are angry when we communicate **inaccurate power status (on/off)**



Customers want information **timely**. Automated restoration calls and texts are often received well past the point when power has come back on



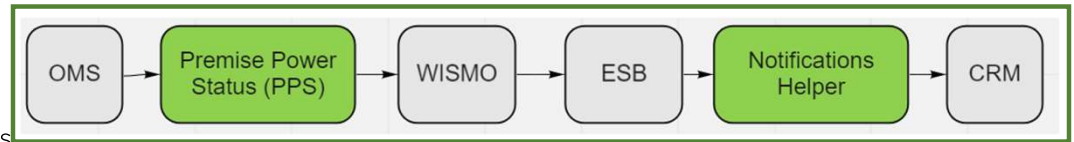
The Moment of Truth



Error Free Communications (EFC)

DTE Business Problem

Declining Customer Satisfaction (CSAT) scores resulting from inaccurate notifications to customers regarding storm related power outages. Legacy outage management notification systems were not leveraging newer data assets to improve critical outage related notifications.

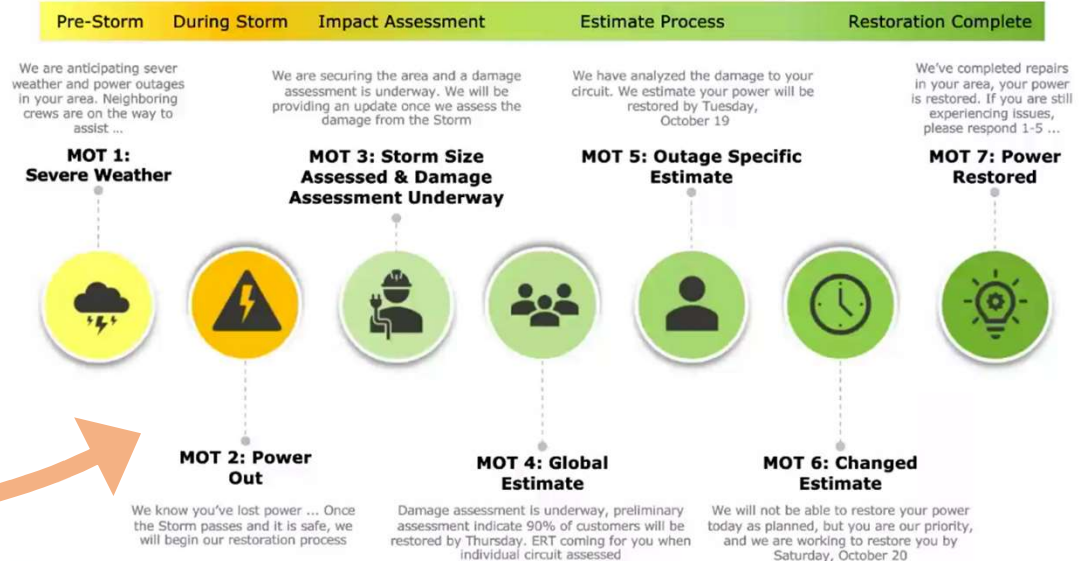


DTE Business Opportunity

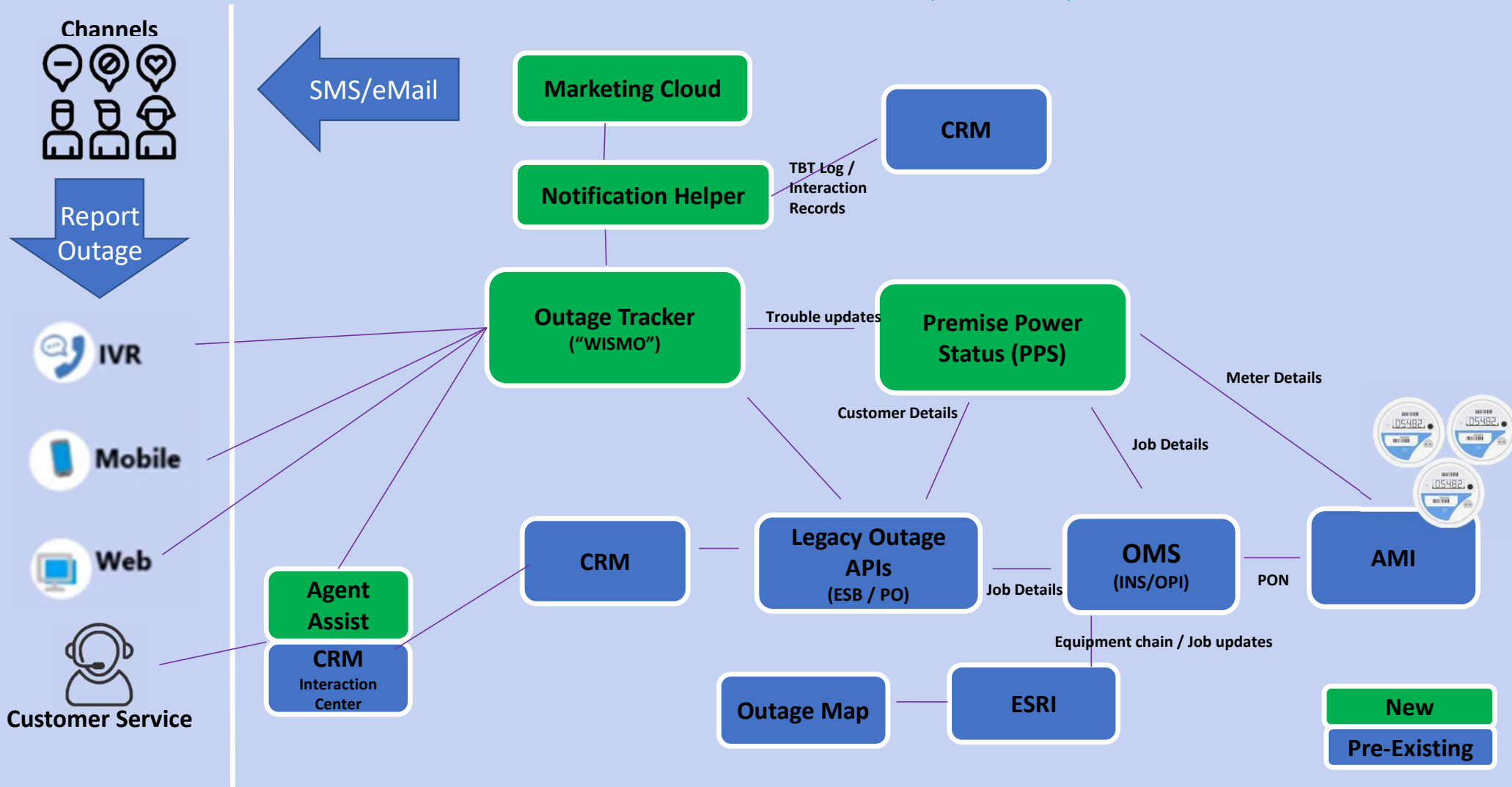
In alignment with our guiding principles, we must strategically deliver our new EFC infrastructure and experience to enable us to learn and improve quickly

We will communicate information that is accurate, timely and consistent across all channels	We will communicate valuable information specific to the customer's experience	We will have one experience for all our customers
We will never tell our customers something we are not 100% confident is true and will be transparent in our confidence levels to them	We will always trust what the customer tells us	We will continuously obtain customer feedback to test, measure and improve their experience
We will prioritize quality over quantity and scale back communications to ensure accuracy		

Accurate, Consistent and Timely Communication Across All Channels

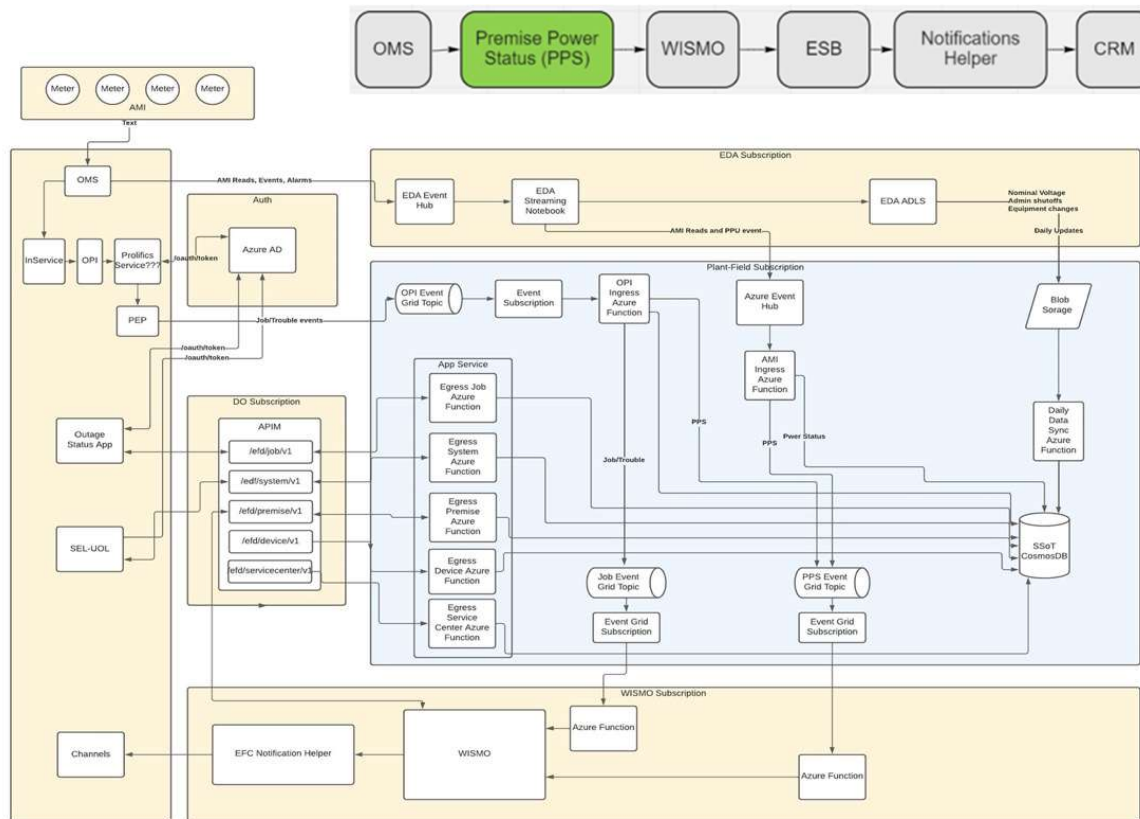


Error Free Communications (EFC)



Error Free Communications (EFC)

Premise Power Status (PPS)



What it does??

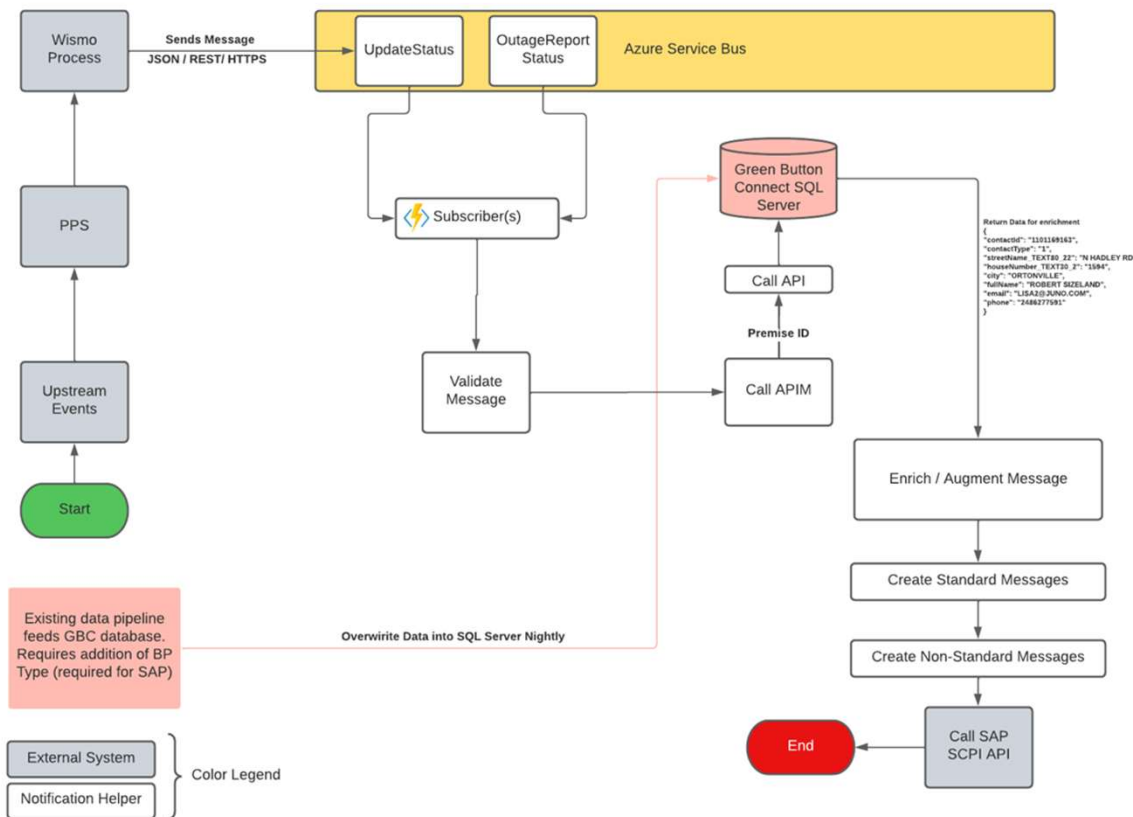
- Solves the problem of maintaining accurate, real-time power status for customers.
- Triggers events, that are sent to other systems, as PPS becomes aware of a change to power status.
- Delivers real-time aggregated outage counts around specific data points.

How it's built

- Uses the power of Azure messaging resources to elastically scale to consume data that affects power status.
- Processes that data streams with scalable Azure Functions
- Stores the current power status data in an Azure Cosmos DB to create ultra-fast queries.

Error Free Communications (EFC)

Notification Helper



What it does??

- Validates messages and other errant data conditions
- Enriches outage event data with current Customer data for accurate and customized messaging
- Transforms incoming messages into a format that can be pushed to DTE's SAP MC system for final delivery

How it's built

- Azure Functions
- Azure Durable Functions
- Azure API Management
- Azure Storage (Table)
- Azure Application Insights
- Azure Dev Ops - Automated Build/Deployments
- Infrastructure as code
- C# .Net Core



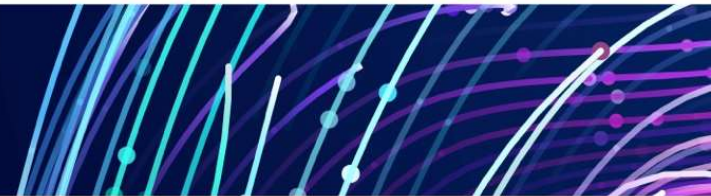
The Journey Continues

Results so far

- 7 moments of truth compared to only 3 before are in place, more customer communication and engagement
- Notifications are being sent based on premise power status, rather than job level statuses
- All customers with an outage are opted in

Example from a recent storm

- 5,000 individual premises effected
- 27 feeder level outage jobs
- 32,000 outage status update events
- 39,000 customer notifications sent across multiple channels based on customer preferences



Lessons Learned

- PPS Latency
- OMS rolling up/down
- Having a single source of truth for customer contact information is critical
- Risk of over-communicating, important that people feel in control of their preferences
- Customer outage notification improvement justifies its own program effort
- Outage notification approach needs to be considered as part of a holistic customer experience/journey



THANKS FOR ATTENDING

Please fill out an evaluation form and drop it in the collection basket located at the back of the room.

DTE



*To learn about membership in the Utility Analytics Institute,
please visit www.utilityanalytics.com*



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