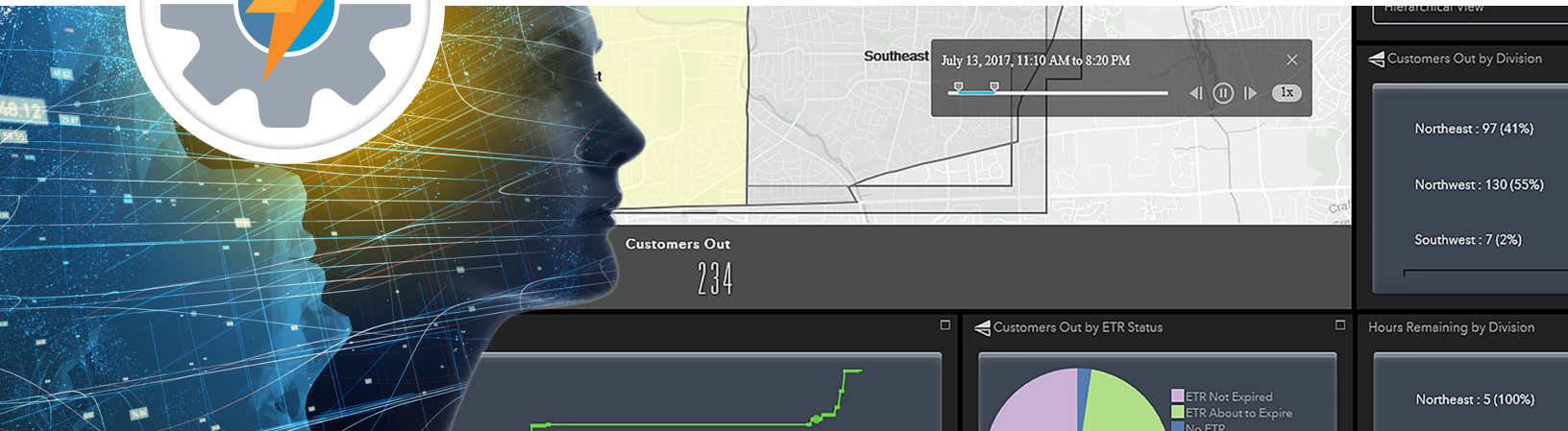




Mirror your physical network in digital detail, in real-time for greater effectiveness and operational insight.

Create a digital replica of your physical assets and their performance to provide true business intelligence using a spatially enabled, dynamic operational dashboard driven by one or many of your current operating systems.

DyAN™ is the leveraged software component for building out your Digital Twin solution for your desired electric utility systems and grid network.

Built on the Esri Enterprise, DyAN provides as-operating views of your utility network including outage, incident management, crew tracking and power operations and reliability. DyAN is set apart from other Ops dashboards by its ability to interactively display real-time data visualization and analytics. This solution includes playback of historical data events offering operational effectiveness.

The flexible nature of DyAN's widget-based design allows us to customize operations views based on your operational, analytical and reporting requirements for monitoring business processes, tracking work progress and analyzing events to gain insight, enhance performance and meet business goals.

Relying on your data to drive the application, it can work with many of your operational systems including AMI, OMS, Demand Response and SCADA Historian.

Key Features & Benefits

Provides real-time visualization of utility operational performance for maximum effectiveness

Enables analytical historic event playback, rewind, fast forward and pause

Supports predictive maintenance for targeted maintenance planning and increased reliability

Plug & Play capabilities with outage management, mobile workforce management and SCADA Historian systems

Assists in achieving true operational business intelligence for fuller grid optimization

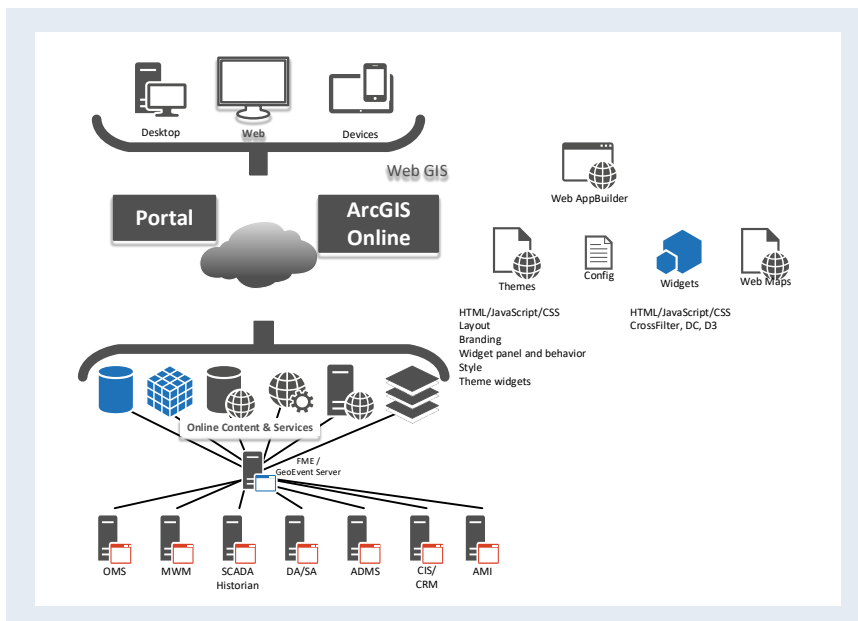
Contributes to improved business processes for increased efficiency and customer satisfaction

Primary Capabilities

Capabilities	DyAN™ Dashboard
Dynamic auto updating of map and widgets to display real-time data and provide a complete, consistent view of the current state	✓
Interactive User capabilities for all dashboard information panes	✓
Graphic Historic Playback of multiple systems and performance with time slider for rewind, fast forward and pause capabilities	✓
Graphic crew visibility and tracking	✓
Dynamically auto updates and displays total outages, active outages, customers out and restored	✓
Graphically displays outage boundaries including by township, zip code, neighborhoods and city	✓
Reports estimated time to restore per outage event	✓
Ability to name and manage storm events vs. individual native outages	✓
Provides capabilities for field workers view/access to outage status and feeder status	✓
Provides multiple widget configurations and display options for robust analytic capabilities	✓

Esri Technology

Architecture & Technical Requirements



CLIENT BROWSER / APPLICATION SERVER

- ArcGIS Pro 1.4
- ArcGIS Enterprise 10.6
- ArcGIS GeoEvent Server 10.6
- ArcGIS Data Store 10.6
- Web AppBuilder for ArcGIS 2.4

PERSISTENCE LAYER

- SQL Server 2014 Database Engine
- SQL Server 2014 Reporting Service
- Windows Server

Potential Interfaces

Digital Utility® - DyAN™ allows your utility to easily correlate, visualize and bring together the information from your desired systems for analytics including the following:

- Outage Management Systems
- SCADA Historian
- Mobile Workforce Management
- Demand Response Management Systems
- Advanced Distribution Management Systems
- Advance Metering Infrastructure / Meter Data Management Systems
- SCADA

Dashboard Applications

Opportunities to leverage your operational systems and data

- Enhanced Outage Management for Utilities
- Feeder Management
- Emergency Preparedness Planning
- Customer Outage Communications
- Crew Availability
- Work Order Status

High Level Business Functionality

DyAN digital twin dashboards can be made to support numerous functions within your utility with various views, tools and reporting metrics.

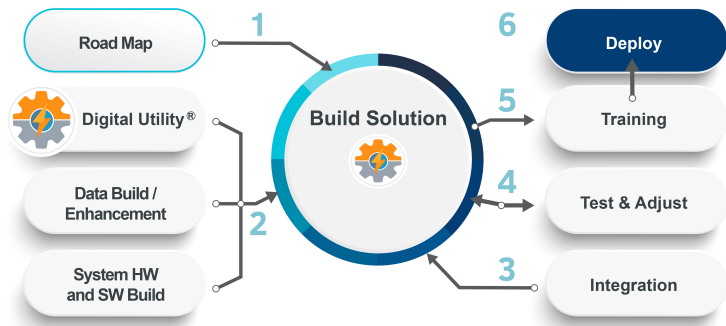
<i>Operational Awareness Views</i> <i>Location of all work</i> <i>Crew Locations</i>	<i>Total Resource Availability</i> <i>Crew Productivity</i> <i>Named Storm Event Management</i>	<i>Municipality Views</i> <i>Media Views</i> <i>C&I Views</i> <i>Residential Customer Views</i>	<i>Predictive Maintenance Tools</i> <i>Supply Chain Metrics</i> <i>Asset Management Tools</i>	<i>EPP Planning</i> <i>Reliability Analysis</i> <i>Compliance Reporting Metrics</i>
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Scope of Work

Digital Twin Solution Implementation

The Digital Twin solution is flexible and adaptable to include your desired systems and meet your needs.

The first step in implementation is based on mutually preparing an initial Road Map of what the solution will look like for your utility as well as a detailed plan and budget. Once your Road Map has been created, we move together with you through the remaining steps including any components or interfaces identified in your Road Map.



Licensing and Support

Digital Utility® - DyAN™ is provided to UDC clients in conjunction with a software license agreement. Cost of licensing is based on implementation and integration services. Once installed, it remains with your organization under a perpetual license for the software.

UDC will support the application and can support the development of any desired system interfaces.

The DyAN license comes with initial services and training as well as year-one support. Additional support levels are available – *options noted at right.*

LEVEL 1
DyAN updates and phone support
LEVEL 2
Support - Includes troubleshooting in addition to Level 1
LEVEL 3
Level 2 support services plus patches out of cycle or other individual support

Next Steps

Take the next step towards obtaining true business intelligence that supports your day to day operations.

We invite you to contact us to talk about your outage and asset management programs and to schedule a functional walk-through of the DyAN base application dashboard.

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