

Staying on Course

Geospatial Strategy in a Changing Reality.

Annelene Kammer-Tischendorf

System Architect for Geodata and Geo-processes at Kelag





CALLBACK

“Last year I met you at the IMGIS”

...and spoke about a future where geospatial information becomes the central nervous system of our telecommunications infrastructure.



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System Architect for Geodata and Geo-processes at Kelag

THE VISION

From system of record to digital twin

A clear target architecture — simple enough to guide decisions, broad enough to survive change.



Legacy System

current operational
reality



ArcGIS Enterprise

shared geospatial
foundation



Utility Network

network intelligence
model



Integrated Digital Twin

decision-ready
infrastructure context



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12 MANUAL STEPS

Many handovers, media breaks & rework

80%
MORE
EFFICIENCY



2-3 STEPS WITH ARCGIS

Integrated, automated & validated

ArcGIS Enterprise

shared geospatial foundation

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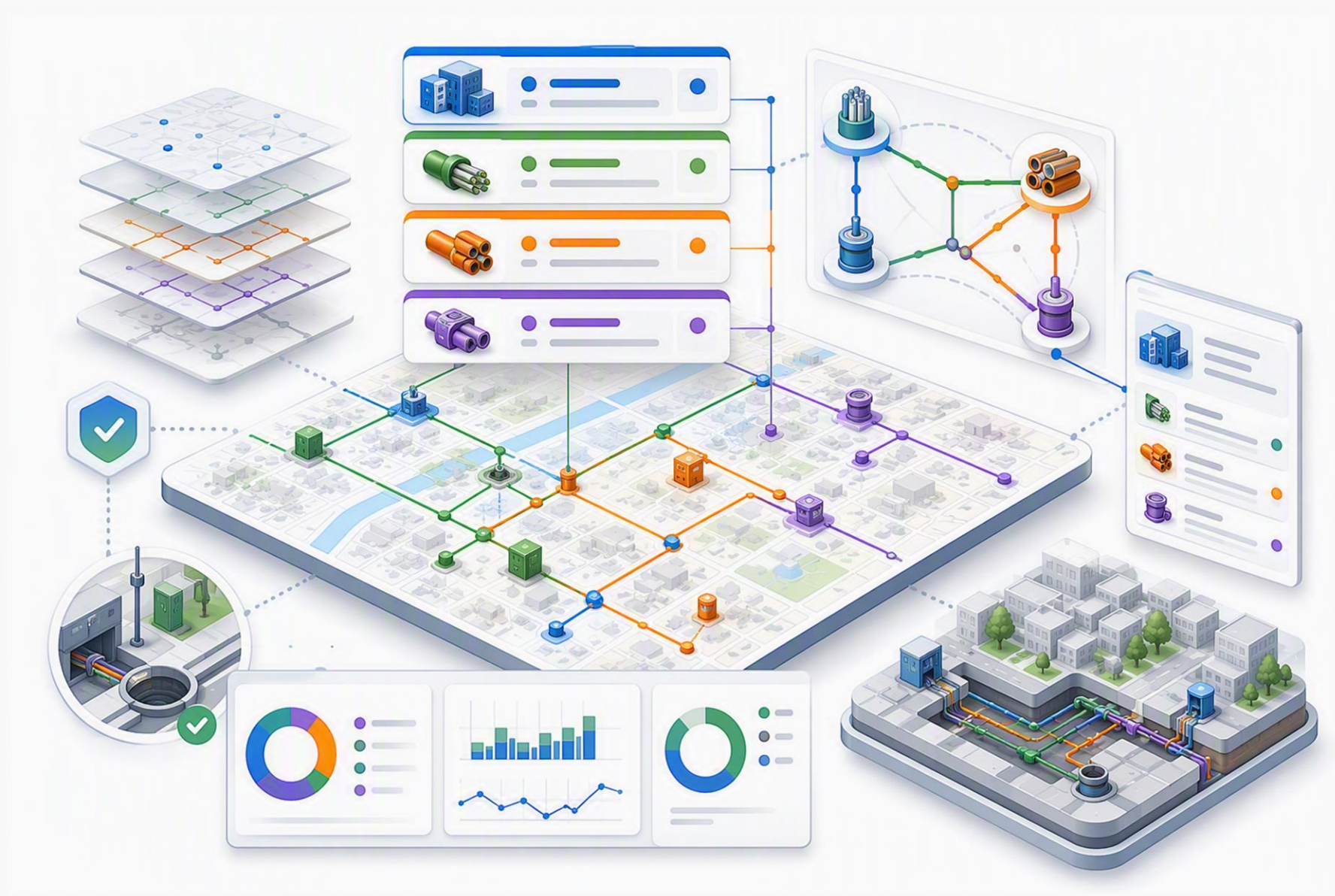
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The target did not begin with software.
It began with **direction**.

A scenic mountain landscape with a winding road and a large rockslide. The road is partially blocked by a massive pile of rocks and debris that has fallen from the steep, rocky cliffside. Several orange and white striped traffic barrels are placed along the edge of the road, indicating a construction or caution zone. The background features misty, forested mountains under a cloudy sky.

Then reality happened.

Priorities shifted. Budgets tightened. Operations still had to run.

**The vision did not change.
The timeline did.**

TURNING POINT

A different question

Instead of asking:

**Can we immediately
replace Our Legacy
System?**



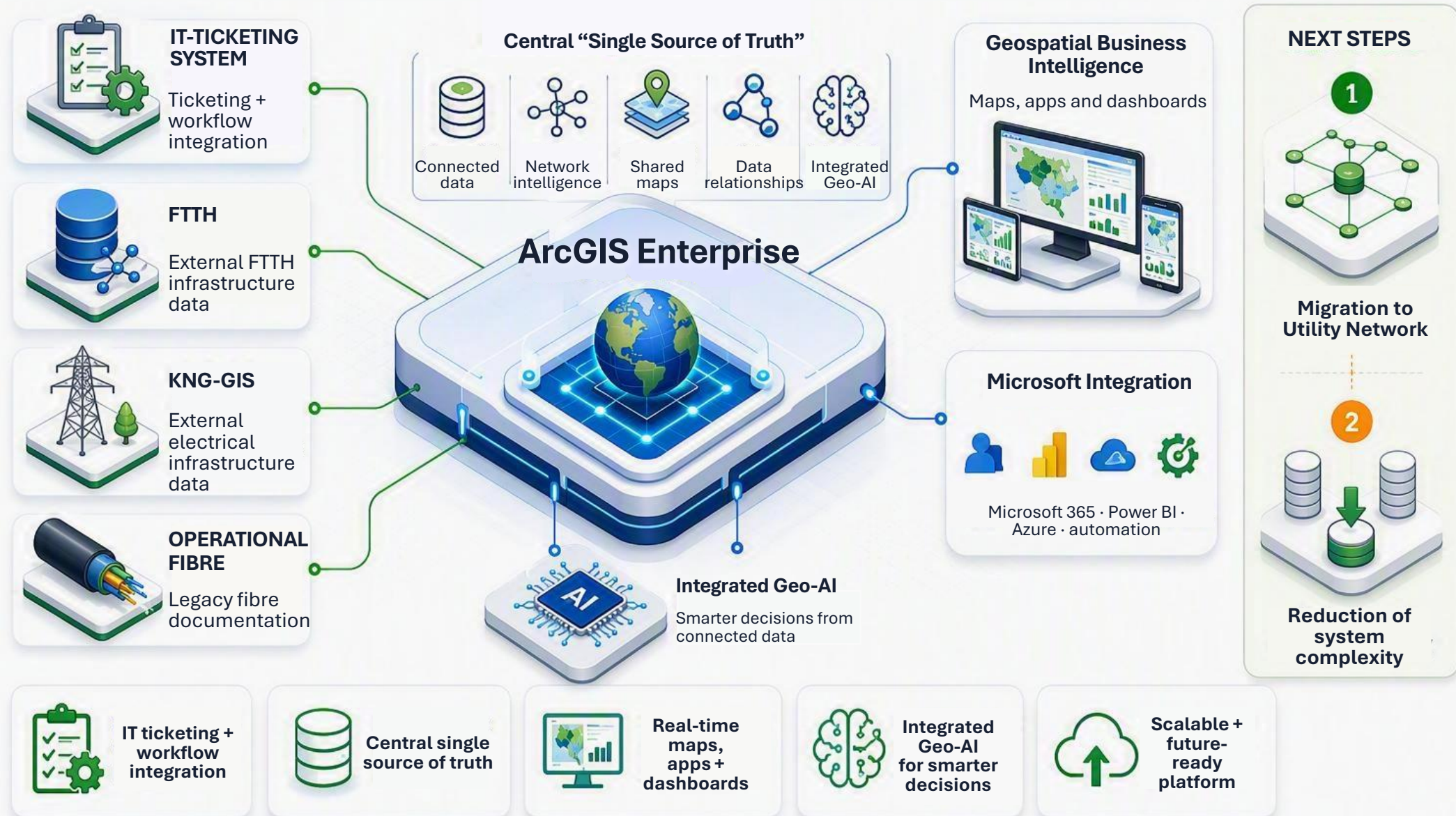
We now focus on:

**How can we prepare for the
future
while operating today's reality?**

**This reframed the focus from procurement
to momentum.**

ArcGIS Enterprise as an Geo-Integration Platform

From distributed network documentation to connected geospatial intelligence



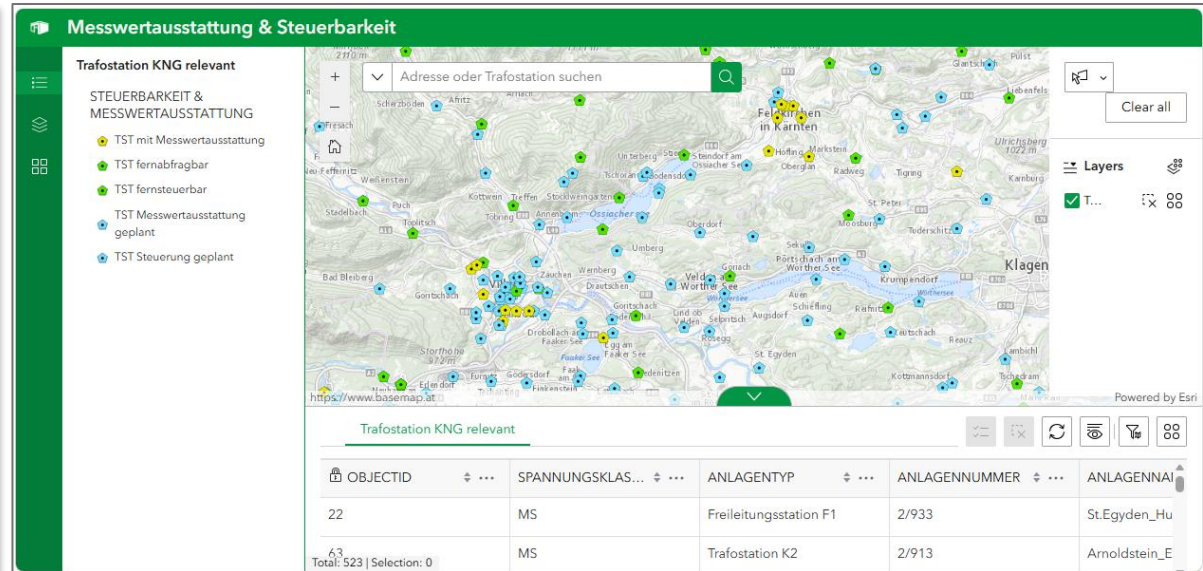
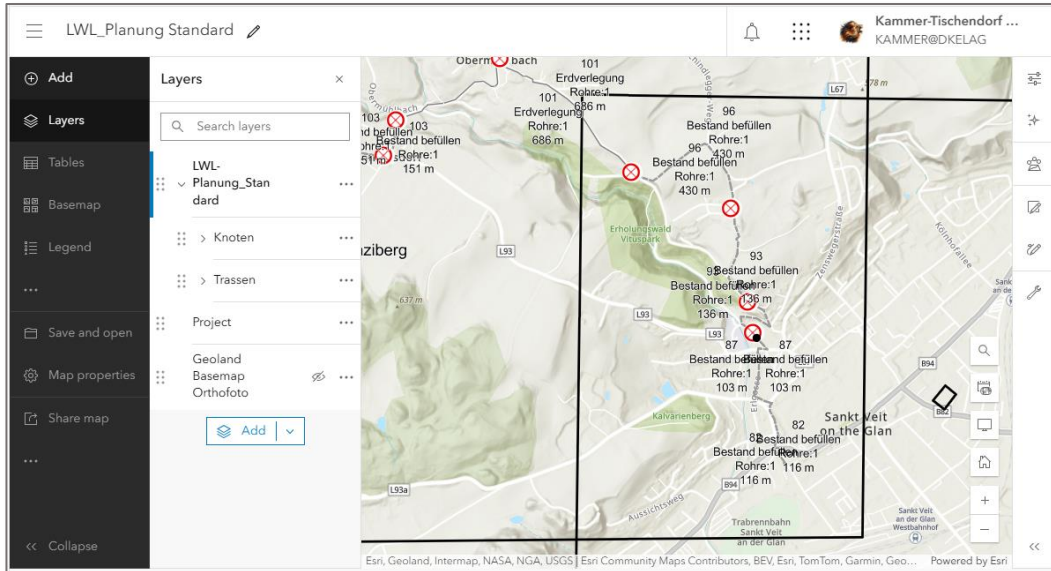
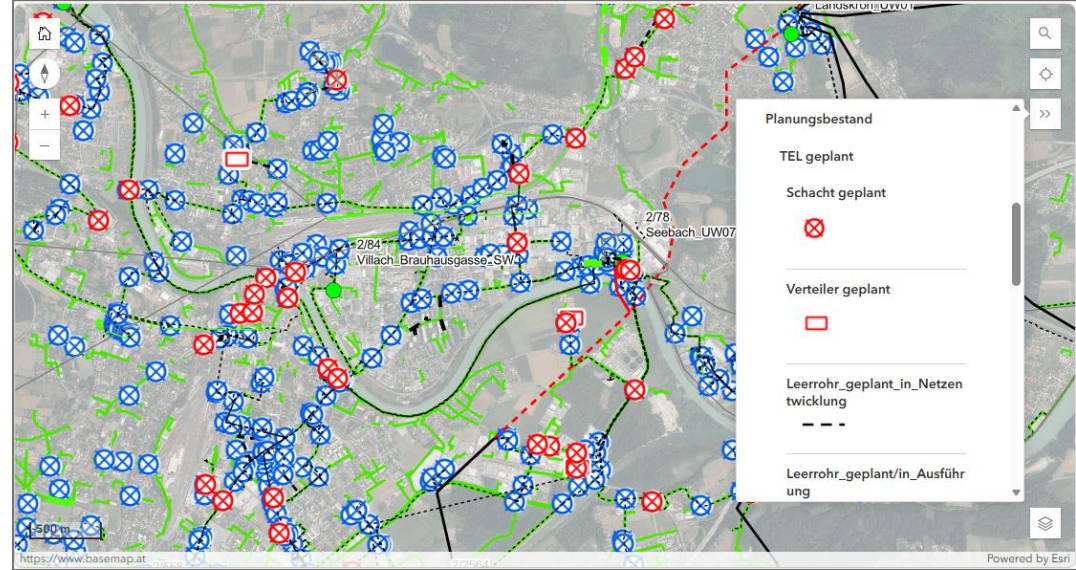
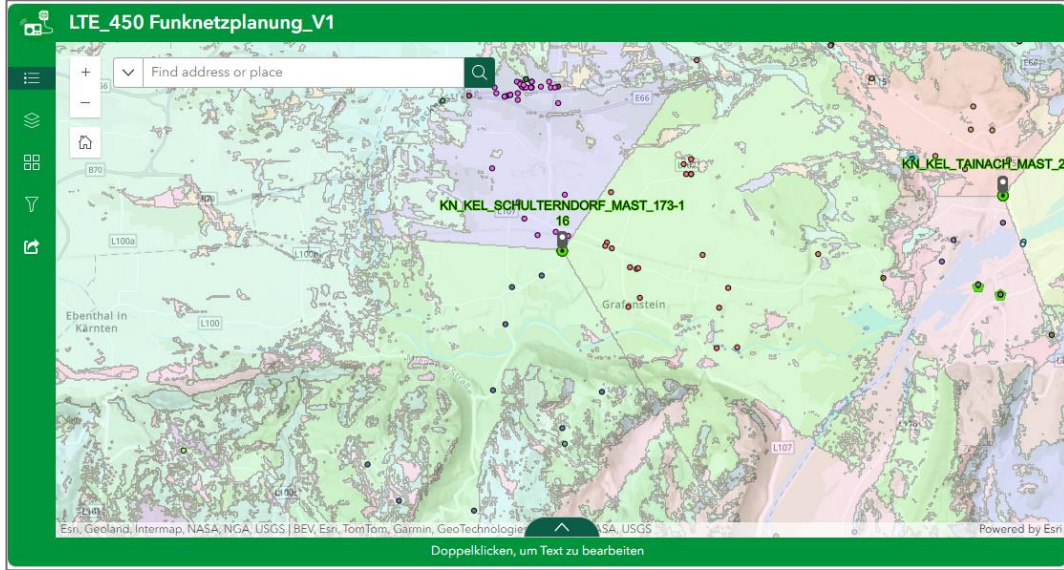
EXAMPLE 1

Build skills and processes first

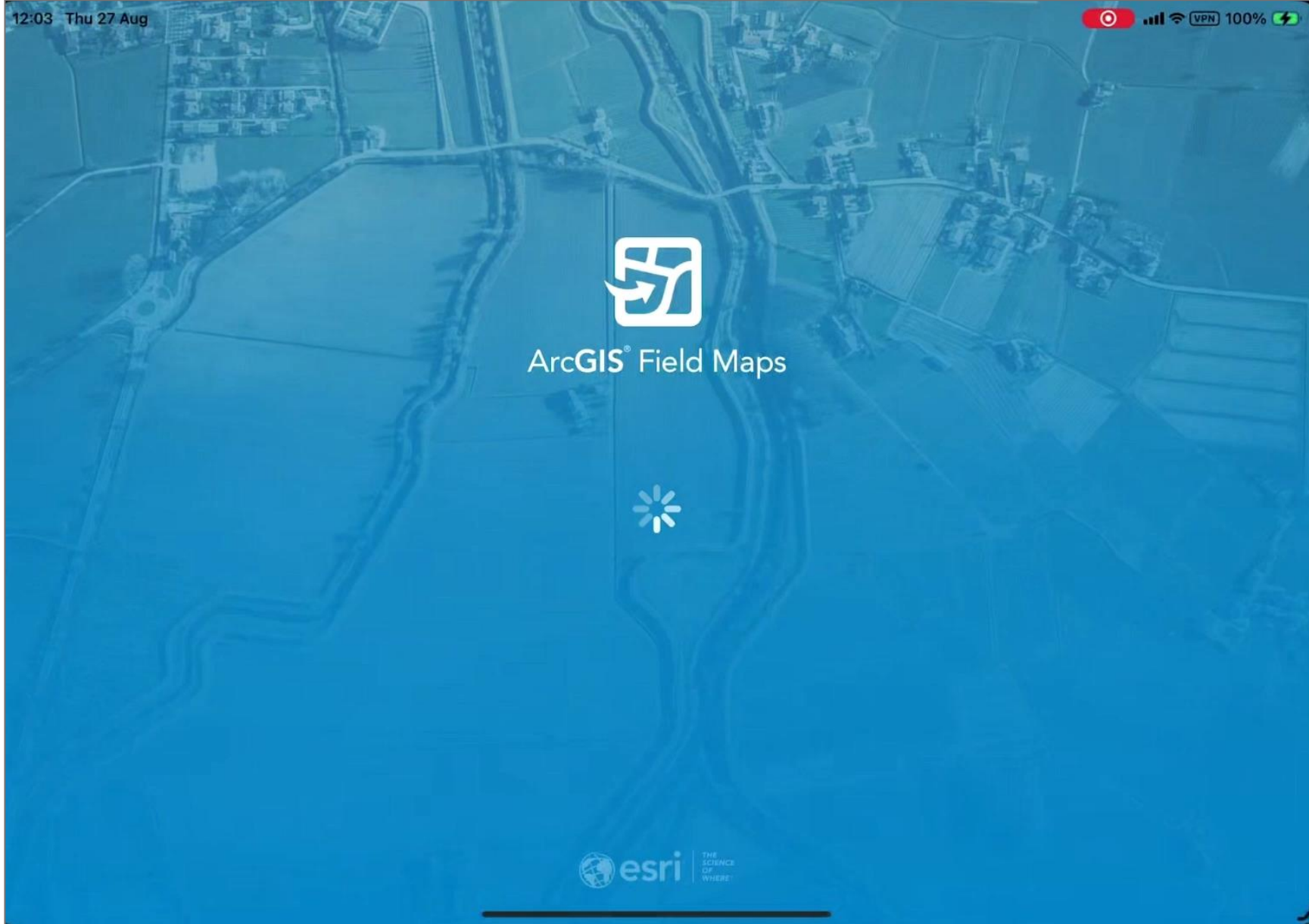
Challenge → Action → Benefit

- **CHALLENGE** Technology alone does not transform an organization.
- **ACTION** Use today's work to practice new workflows, roles and collaboration.
- **BENEFIT** The organization becomes ready before the software arrives.

ArcGIS in Action: Real Solutions for Field Operations



ArcGIS in Action: Real Solutions for Daily Operations



EXAMPLE 2

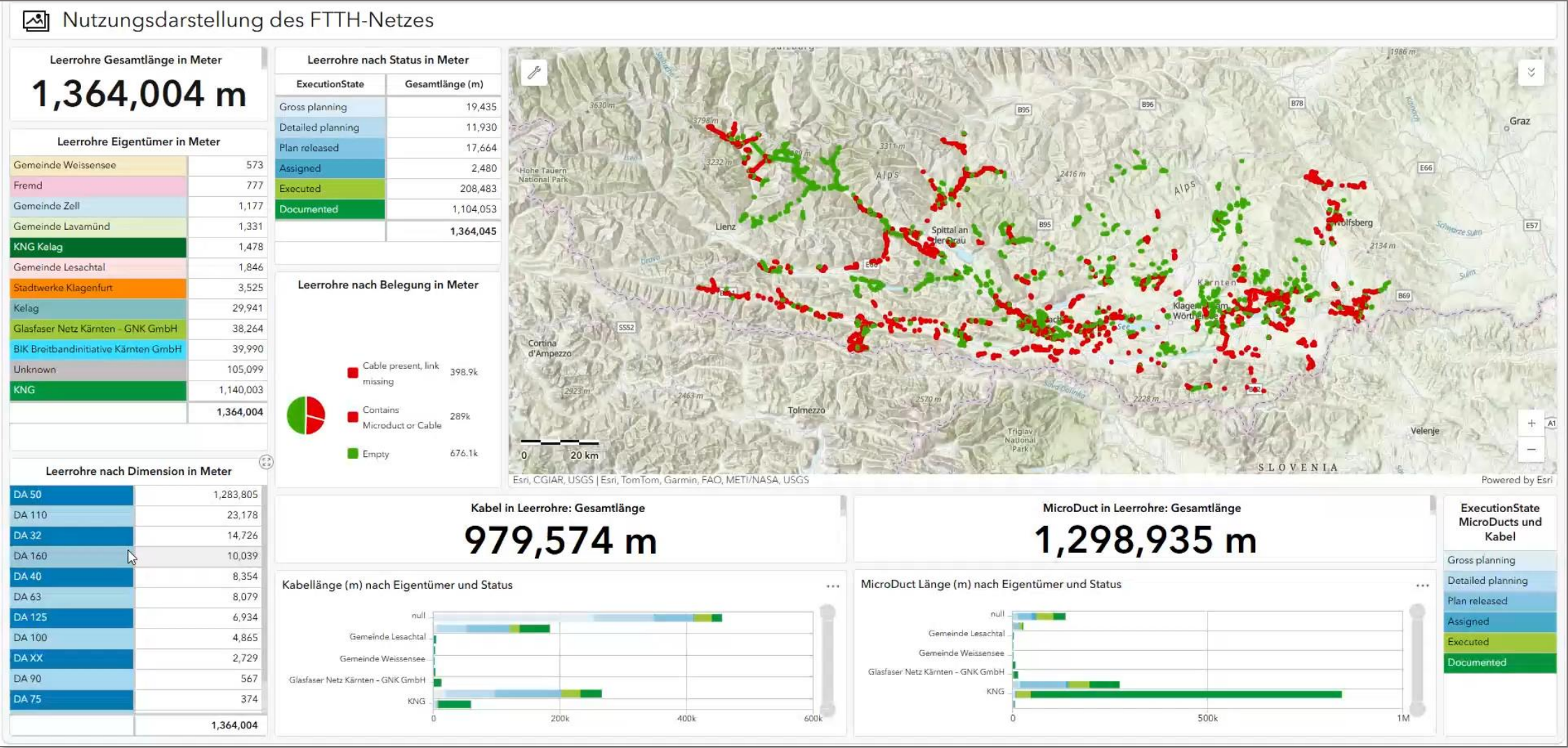
Build interfaces instead of replacing systems

Challenge → Action → Benefit

- **CHALLENGE** The legacy system remains the operational backbone (for now).
- **ACTION** Create integrations and data flows aligned with the future architecture.
- **BENEFITS** Each integration makes ArcGIS Enterprise a more indispensable part of our daily operations.

Each integration builds knowledge that will shape the future architecture.

Management Question: “What can we Invoice?”



EXAMPLE 3

Understand your data before you migrate it

Challenge → Action → Benefit

- **CHALLENGE** Decades of network knowledge were stored in a legacy documentation system.
- **ACTION** Extract, analyze and contextualize network information in ArcGIS Enterprise.
- **BENEFITS**
The future architecture is shaped by knowledge, not assumptions.

Migration readiness becomes a continuous discipline, not a one-time project.

From Legacy Operational Fiber Data to Utility Network Readiness

Validated pilot data model for ArcGIS Enterprise and Telecom Domain Utility Network

01

Legacy System



Historical network documentation source.

- Database
- Cable records
- Conduits
- Site locations

02

Data Extraction



Pilot extraction of telecom network data.

- ETL process
- Validation checks
- Import workflow

03

Core Network Objects



Simplified and validated pilot data model.

- Assets
- Cables
- Conduits
- Microducts

04

Relationship Discovery



Connectivity and occupancy become visible.

- Start locations
- End locations
- Cable occupancy
- Conduit occupancy

05

GIS Intelligence

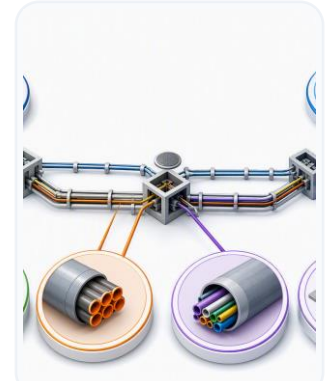


Raw records become linked GIS information.

- Spatial validation
- Traceable assets
- Data quality

06

Utility Network Readiness



Foundation for future Telecom Utility Network.

- Asset relationships
- Connectivity
- Topology
- Decision support

GDi Ensemble Telecom Domain Utility Network evaluation

kelag

Staying on Course

A GPS does not abandon the destination when a road is closed.

It recalculates.

This is what geospatial strategy requires as well.



LESSONS LEARNED

What the detour taught us

- **Vision is direction, not schedule.**
- **Long-Term success may require short-term flexibility.**
- **Every step should move you closer to the target architecture.**



The background of the slide is a full-page photograph of a mountainous landscape. A paved road with white dashed lines in the center and solid lines on the sides winds through a rocky, mountainous terrain. In the distance, there are snow-capped mountain peaks under a sky with soft, wispy clouds. To the right, a small lake is visible, and the sun is setting behind a mountain ridge, creating a warm, golden glow. The overall scene is serene and majestic.

**Technologies change.
Budgets change.
Priorities change.**

**A clear geospatial vision provides direction
through all of them.**

Thank you.