



From Tooling to Architecture: Observability in a DNB

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DNB

Uniquely positioned in an attractive environment

A strong Norwegian market leader with an attractive international platform

No. 1 financial services group in Norway

Global presence with platform well positioned for growth



Market leader in

Personal customers

SMEs

Large corporates

Savings and pensions

Investment banking

✓ Strong brand

✓ Proven track record of execution



Industries with global scope

Shipping

Ocean services

Seafood

Renewables

Industries with selective global scope

Oil and gas

Healthcare

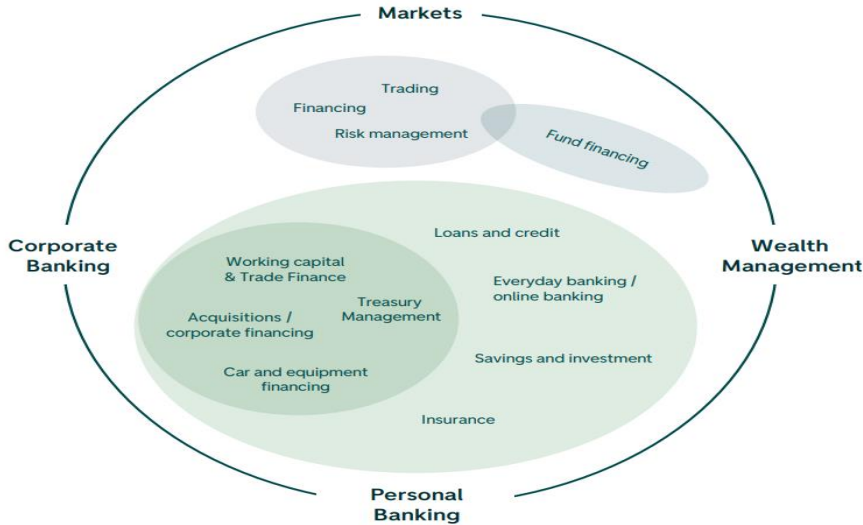
TMT¹

Business services

1 Technology, Media & Telecom.



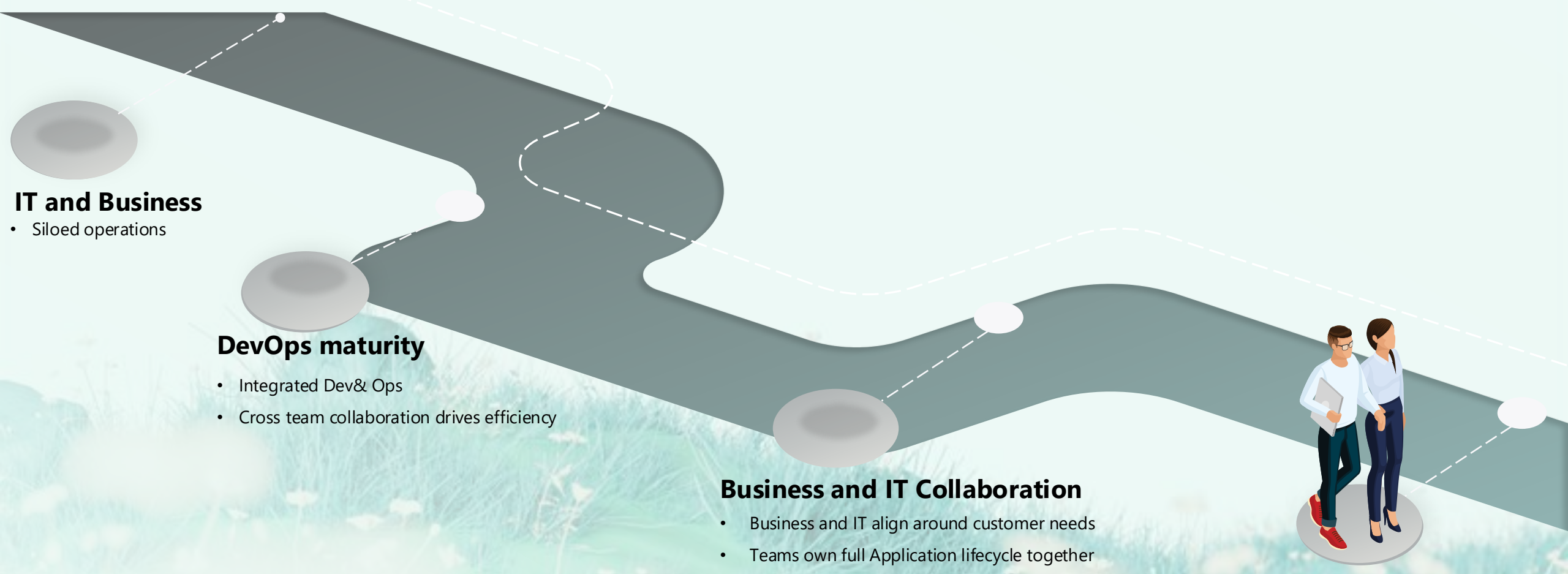
Broad product portfolio offered to all customers, and extensive cooperation across customer units



This scale and diversity allow DNB to rapidly pilot and scale innovations that benefit millions of customers.

Our size means every incident impacts thousands—inspiring our journey to Stability and Reliability of the services delivered to our Users

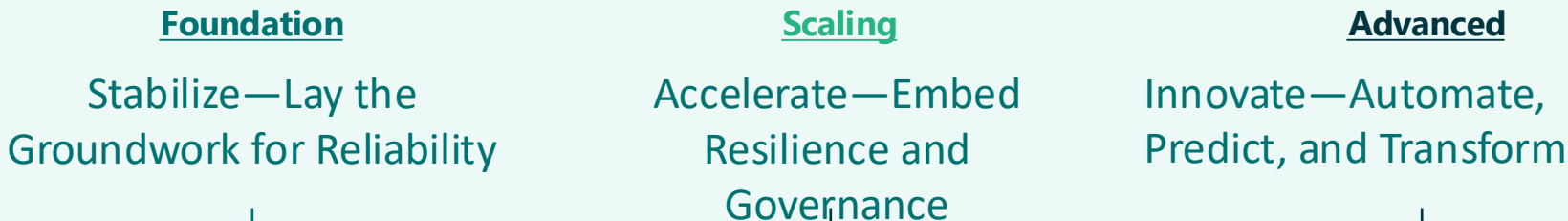
Our Journey: From Monitoring to Observability



Silos to Collaboration – IT& Business Transformation

- SRE gives real business-impact measurements
- Fast feedback loops boost engineering quality
- Customer experience improvements are embedded
- AI adoption accelerates business value

Our SRE Journey: From Foundations to AI-Driven Reliability



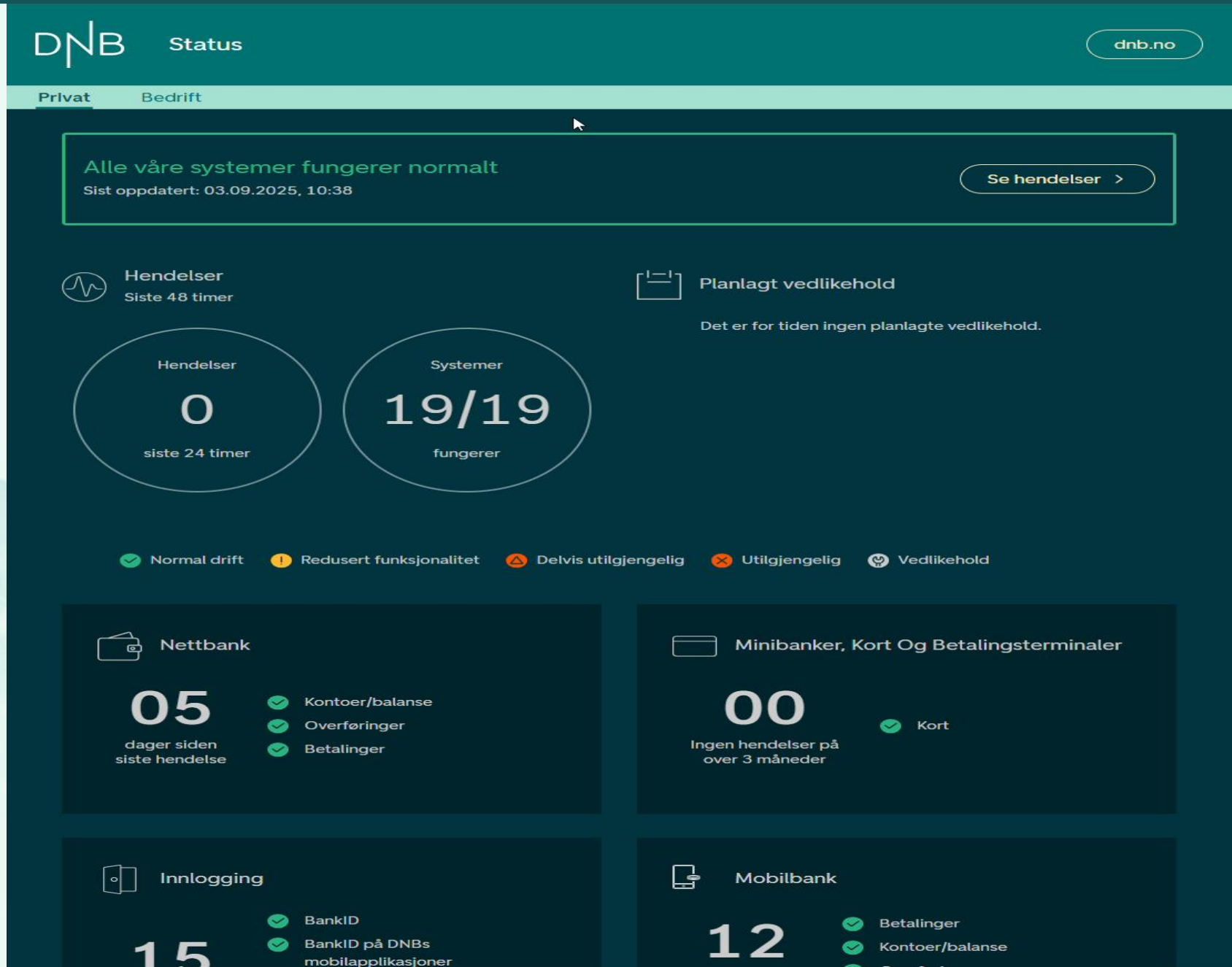
- Establish SLOs & Error Budgets
- Automate Incident Triage
- Build Observability as a Practice
- Introduce FinOps for Cost Optimization

- Expand Resilience Automation
- Enable Self-Healing capabilities
- Adopt Cloud-Native Observability
- Apply AI for FinOps optimization

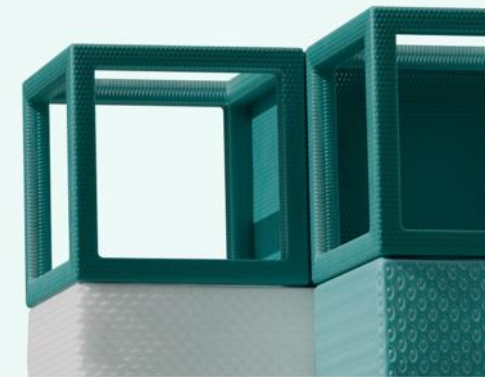
- Drive Predictive and proactive reliability
- Enable Autonomous Optimization
- Strengthen Reliability Culture
- Improve Developer experience productivity and Finops Visibility

From laying the foundations with observability and SLOs, to scaling automation and now advancing towards AI-driven reliability — our SRE journey is all about delivering business impact with confidence

Driving Business Confidence Through Observability



Visibility
builds trust
internally
and with
customers



The Road Ahead

Scaling Customer-First Reliability

Proactive Reliability



- SLIs/SLOs & Business Metrics
- AI Anomaly detection
- Transparency to the customers (Statuspage)

Predictive Insights



- Forecasting performance & Incidents
- Finops & Cost efficiency
- Developer Autonomy with Guardrails

Agentic AI & Automation



- Generative AI
- Intelligent Recommendations
- Toil reduction

Customer-First Reliability



- Trust & confidence at Scale
- Business + IT Collaboration

DNB



Observability Blueprint

Vision

A unified, open and cost-efficient observability platform for DNB, built on OpenTelemetry and industry standards, that delivers end-to-end visibility across value chains, applications and infrastructure in every environment. It empowers autonomous teams to own reliability and business outcomes with AI-driven insights and automated remediation, preventing issues before they impact customers.

High-level requirements

- *Provide deep visibility into the internal state of IT systems, infrastructure and system value chains by collecting, analyzing, and correlating telemetry data (such as logs, metrics, and traces)*
- *Ensure proactive detection, rapid troubleshooting, and continuous optimization of system performance and reliability*
- *Ensure end-to-end observability with full visibility across critical business value chains*
- *Ensure cost efficiency; optimize licenses, ingestion, storage, retention and specialized consultants' usage*
- *Standardized way of working: common tools, processes, formats, and OpenTelemetry standard*
- *Minimize operational overhead; time-efficient for engineers, operations and incident management*
- *Easy to take in use, develop and operate*
- *Instrumentation and collection of logs, traces and metrics is based on open standards*
- *Security & compliance by design: secure handling of telemetry data, with adherence to regulatory requirements*
- *Scalability & resilience: platform must support growth and resilient operations under high load*

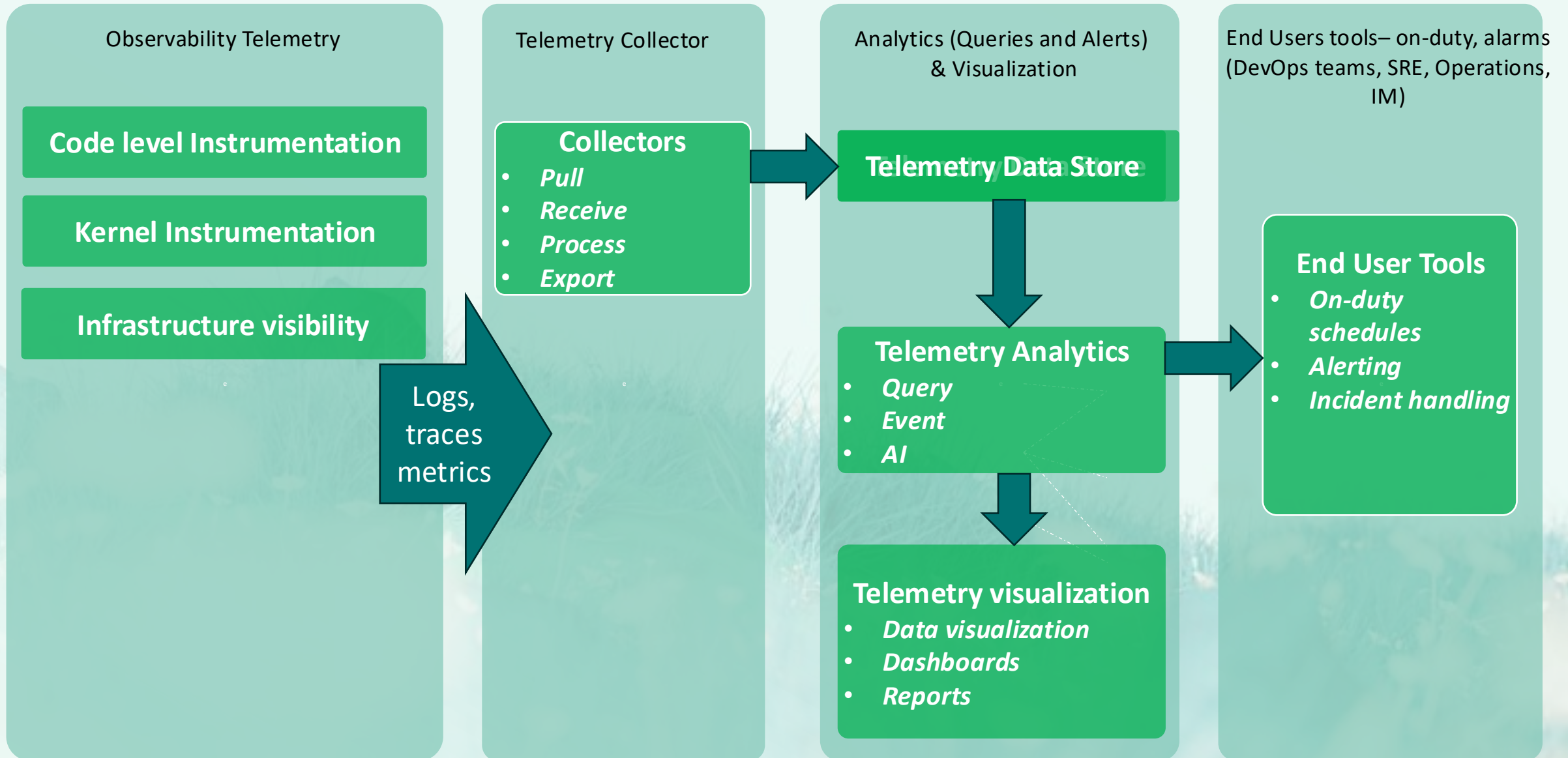
Trends

- *OpenTelemetry (OTel) is the "de facto standard" for cloud-native observability across services and platforms.*
- *AI-powered observability: AI/ML supports anomaly detection, noise reduction, proactive prevention, automated root cause analysis, and intelligent remediation of issues*
- *Traces as the foundation: traces are the entry point for debugging; logs and metrics are correlated to spans.*
- *Logging less, logging smarter. logs are reduced through correlation, intelligent sampling, structured formats, and retention policies. Adaptive logging is evolving.*
- *Developer-first, platform-enabled observability is integrated into dev workflows and internal platforms as self-service/automation.*
- *Instrumentation and telemetry validation earlier in the SDLC, not just in production.*
- *From dashboards to SLOs: static dashboards are replaced with outcome-driven observability tied to customer experience.*
- *Cost governance by design: teams monitor and optimize observability spend with usage insights and controls.*
- *Business-aligned observability: Extends from infrastructure monitoring to value-chain visibility and customer journey health.*

Technology Drivers

- *Need to trace requests across microservices, APIs and distributed systems (in value chains end-to-end), identify bottlenecks and understand failures in complex workflows*
- *Need to trace workloads in both on-prem and cloud environments that are dynamic and auto-scaled*
- *DevOps & SRE practices need real-time feedback loops to detect, diagnose and recover from failures. Need to support SLIs/SLOs, incident response and reliability engineering*
- *Need to observe the behavior of code in production immediately after deployment, especially in rapid deployment cycles/continuous delivery*
- *AI can be trained to process large telemetry streams for anomaly detection, forecasting and intelligent alerting*

Reference architecture for Observability



Key issues [1/2]

Inefficient & costly

- Using logs instead of metrics → higher cost and inefficiency.
- Tech team has limited insight to costs
- Alerting is not fully standardized, causing noise and alert fatigue.
- **Impact:** High observability spend and wasted effort in incident response.

Fragmentation of tools

- Multiple tools in use (Dynatrace, Splunk, Grafana, Prometheus, cloud-native) with limited unified view.
- Logs, metrics, and traces are not correlated, making troubleshooting complex.
- **Impact:** high license costs, and poor developer experience.

Observability thinking in designing new applications

Design with observability in mind

- Design for tracing, support open tel, focus on SLI, SLO, Incorporate Business Events, Faster System recovery principles
- **Impact:** cost effective value driven observability

Key issues [2/2]

Skills & enablement gaps

- Engineers not using observability tools effectively.
- Observability needs to be embedded in all CI/CD pipelines
- **Impact:** Tools underutilized, poor adoption, and higher operational toil.

Lack of standards & governance

- Limited adoption and no operationalization of OpenTelemetry.
- Limited governance of telemetry data: ownership, retention, duplication, GDPR compliance.
- Need for standardization of what to observe (SLIs/SLOs, dashboards).
- **Impact:** Low data quality, compliance risk, and inability to scale observability consistently.

Limited business & value-chain observability

- Limited business-level telemetry and DORA/SDLC metrics.
- **Impact:** Weak alignment between observability, business outcomes, and delivery performance.



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Technology Standards

DNB Technology Standards

What does this cover?	Why are we doing this?	Who is doing this?	How will they be realised?
<p>What standard technologies should we use in DNB to develop, operate run and secure our IT Systems</p> <p>What requirements are on me, or my providers, when using these technologies</p>	<p>To reduce uncertainty (and effort) to establish which underlying tech to use and how to adopt it</p> <p>To improve effectiveness through more standardised approaches across teams (including with in Platforms)</p>	<p>The standards will be created by a local expert owner appointed by TMB</p> <p>The owners work with expert/senior users as a virtual team to develop and maintain the Tech Standards</p> <p>Group Architecture and Security will facilitate the model and governance</p>	<p>Though gradual convergence over time</p> <p>The vast majority of our legacy technology will be tolerated (i.e not set to migrate)</p> <p>However, when adopting new solutions or performing major upgrades it is expected teams will adopt Invest technologies</p>

Establishing DNB Technology Standards, not mass Standardisation

DNB