BUILDING A FUTURE-PROOF IDENTITY LANDSCAPE FOR THE DUTCH ENERGY MARKET

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EXECUTIVE SUMMARY

In the dynamic and highly regulated Dutch energy market, EDSN plays a vital role as a central data aggregator for energy suppliers, grid operators, and other market participants. As the organization expanded its digital services, it faced increasing complexity around identity and access management (IAM). With thousands of external users across multiple organizations, EDSN saw the opportunity to streamline access through a modern identity approach that would enable sustainable growth.

Recognizing the need for a modern, scalable, and secure solution, EDSN partnered with IdentIT to overhaul its IAM landscape. The collaboration led to the design and implementation of a centralized, modern IAM platform that supports Single Sign-On (SSO), secure machine-to-machine communication, and future federation with external Identity Providers (IdPs).

A major milestone was the migration of the Centraal Aansluitregister (CAR), during which the user base was significantly streamlined, enhancing security and operational efficiency. Additional achievements include reducing operational workload through self-service onboarding and improving the user experience with single-account access across multiple organizations. The platform also strengthened EDSN's security posture and prepared for future federated identity integrations.

The use of the Identity Management Operator—an EDSN-led initiative—significantly enhanced the organization's GitOps-driven approach. It allows internal DevOps teams to define and expose identity-related resources—such as service roles and access controls—directly into the CIAM system in a structured and automated manner. For external market participants, a separate self-service portal was introduced, enabling them to independently manage user accounts and assign roles within their organization. Together, these components have reduced operational overhead, improved agility, and strengthened compliance with security standards.

Strategically, EDSN and IdentIT focused on building a solution that avoids vendor lock-in, supports a full migration to a microservices and cloud-native architecture, and aligns with regulations like ISO27001. Open communication, mutual respect, and a shared commitment to innovation underpin the partnership. IdentIT's proactive stance in challenging assumptions has also been critical to EDSN's successful digital transformation.

Together, EDSN and IdentIT have not only solved immediate operational challenges but also built a robust foundation designed to adapt and grow with future demands. This strategic partnership ensures that EDSN can continue to drive digital innovation, and meet the high standards of security, scalability, and compliance required in today's energy landscape.

About EDSN

EDSN (Energie Data Services Nederland) plays a critical role as a data aggregator within the Dutch energy market. It operates as the central hub for managing data across energy suppliers, regional grid operators, and other market participants. Among its key responsibilities are the maintenance of the Centraal Aansluitregister (Centraal Aansluitregister, CAR) — a national database containing all electricity and gas meter connections, contracts, and tariff information — and the facilitation of market processes such as allocation, reconciliation, and net balancing.

As the energy landscape becomes increasingly complex, EDSN's role expands beyond basic data aggregation. Today, EDSN also supports initiatives around network congestion management and flexible energy contracts, enabling dynamic energy consumption to balance supply and demand more effectively. With the rapid digitalization of the energy market, EDSN's platforms must operate seamlessly, reliably, and securely in a business-to-business (B2B) environment where thousands of external users interact with critical energy data.
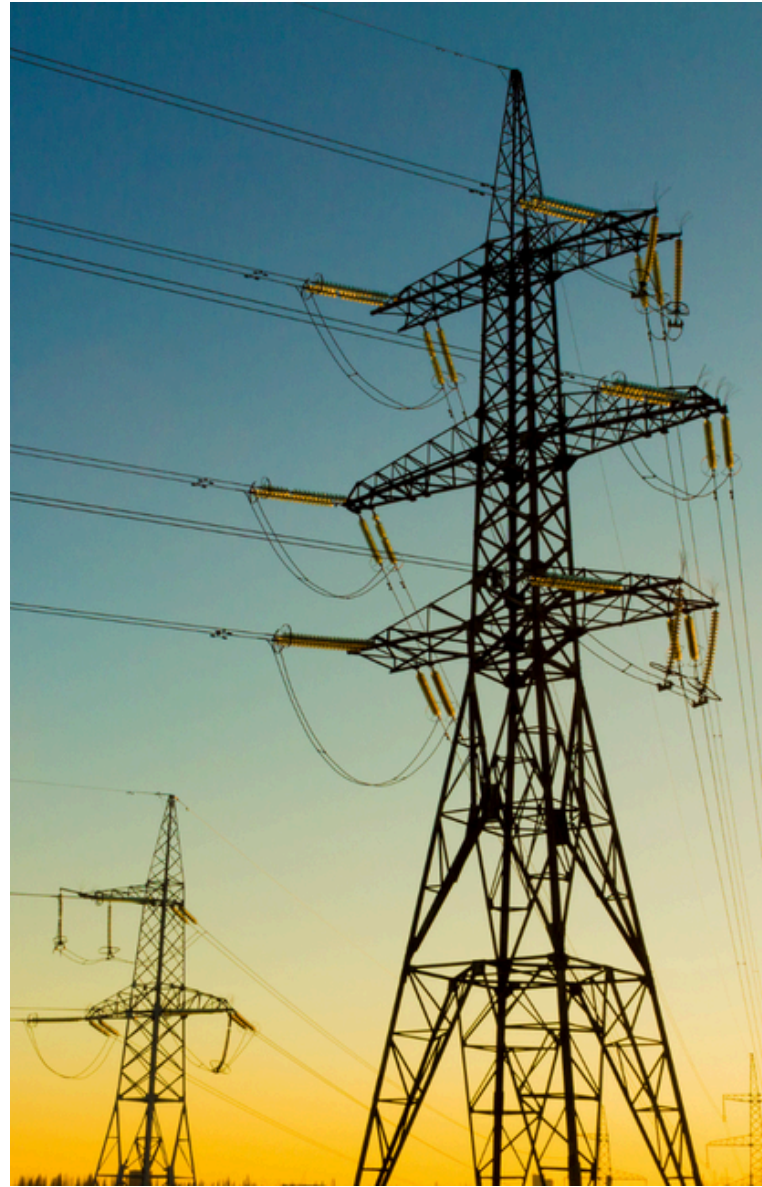
Why Identity Management is Critical for EDSN

Given EDSN's central position in the Dutch energy market, identity and access management (IAM) is not just a technical necessity — it is foundational to their mission. Effective identity management ensures that the right external users, such as employees of energy suppliers or grid operators, can securely access the appropriate systems and data. This is crucial for:

Security

Managing sensitive market and consumption data demands a zero-compromise approach to security. Strong authentication mechanisms, least privilege principles, and continuous monitoring are indispensable.

Compliance

EDSN must meet stringent regulatory requirements, including GDPR, and the (upcoming) NIS2 directive. Secure and auditable identity management processes are vital to demonstrate compliance.

Scalability and Flexibility

As EDSN integrates more applications and partners into its ecosystem, its IAM platform must scale efficiently while enabling fast and secure onboarding of new users and systems.

Operational Efficiency

Simplifying user access management through centralized systems reduces administrative burdens, minimizes support tickets, and empowers business partners to self-manage user accounts.

For EDSN, a robust, scalable, and future-proof IAM strategy is fundamental to maintaining trust across the energy market and enabling innovation in a rapidly evolving regulatory and technological landscape.

FROM CONCEPT TO PARTNERSHIP:
HOW EDSN AND IDENTIT JOINED FORCES

EDSN's Partnership with IdentIT

EDSN's collaboration with IdentIT began after a successful proof of concept with their selected IAM technology. To bring this centralized identity platform to life within a complex B2B environment, EDSN engaged implementation partners and appointed IdentIT based on their expertise and proven track record.

IdentIT became the primary partner for the Central Market Facilitation platform (Centraal Markt Faciliteringsplatform, CMF), due to the successful and timely realization of secure machine-to-machine communication and user access flows.

Establishing a Unified IAM Foundation

Before the introduction of the centralized IAM solution, identity processes varied across applications. The new platform introduced uniformity, streamlined operations, and laid the groundwork for scalable identity management across EDSN's ecosystem.

IdentIT, leveraging deep technical expertise and a pragmatic consulting approach, quickly became a trusted partner to help EDSN define and implement a scalable and secure identity strategy.

Building a Centralized, Scalable IAM Platform

To address the challenges EDSN faced, IdentIT designed and implemented a centralized identity and access management architecture based on a flexible and standards-based IAM solution. This solution served as the backbone for EDSN's new Central Market Facilitation (CMF) platform and the Centraal Aansluitregister (CAR).

Key elements of the solution included:

- Single Sign-On (SSO) Across Applications: Users could seamlessly access multiple EDSN applications with a single identity, significantly improving usability and reducing password fatigue.
- Centralized Authentication and Authorization: Moving from isolated silos to a centralized, secure authentication platform, ensuring consistent security policies across all applications.
- Machine-to-Machine Communication: Secure service account management was implemented for automated system interactions, crucial for data synchronization and operational efficiency.
- Federation Readiness: Preparing the IAM architecture to support future federation with external Identity Providers (IdPs), enabling true B2B collaboration with market parties.

Empowering Self-Service Through Identity Management Operator

A key enabler introduced during the project was the Identity Management Operator — a Kubernetes-native solution developed by EDSN, that IdentIT helped deploy and integrate:

- Self-Service Access Management: Through the Dienst Veilige Toegang (DVT) portal, market participants can independently manage user onboarding and role assignments within their own organization.
- Decentralized Role Management: DevOps teams at EDSN and external parties can define and manage their own service roles, minimizing central bottlenecks.
- Auditability and Compliance: All changes are transparent and traceable, supporting EDSN's compliance with stringent security standards.

This self-service approach significantly reduced the workload on EDSN's service desk and empowered external partners to move at their own pace, increasing overall agility in the energy market.

A Security-First Mindset

Security has remained a guiding principle throughout the entire project. The architecture reflects this by applying strong authentication mechanisms, strict least-privilege access controls, and robust monitoring and auditing capabilities. This security-first mindset, developed in close collaboration with EDSN's internal teams, ensures that the platform consistently meets the highest standards of resilience, transparency, and compliance.

With the centralized IAM platform successfully deployed, EDSN quickly began to see measurable improvements across operational efficiency, user experience, security, and scalability.

Reduced Operational Load

One of the most tangible outcomes of the new IAM platform was a substantial reduction in operational workload. By introducing self-service capabilities for user onboarding, password management, and role assignments, EDSN achieved a dramatic decrease in service desk tickets. For example, the number of activation-related support requests dropped to virtually zero after the implementation of automated account flows.

Improved User Experience with Single Account Strategy

Users, particularly those operating across multiple organizations, now benefit from a single identity that can be associated with multiple organizational roles. By enabling users to choose the organization context at login, EDSN drastically simplified access management while enhancing security and reducing password fatigue.

Federation Readiness for Future Growth

The new architecture fully supports federation with external Identity Providers (IdPs), setting the stage for even deeper collaboration with market parties in the future. This capability ensures that EDSN's B2B ecosystem remains scalable, secure, and compliant with emerging standards such as NIS2.

A Strategic Foundation for Innovation

With its modern IAM platform, EDSN has transformed identity management from a fragmented challenge into a strategic enabler. The solution positions EDSN to continue leading the digital transformation of the Dutch energy market, supporting future expansions, integrations, and regulatory compliance with confidence.

5 INSIGHTS GAINED:
CHALLENGES THAT SHAPED A STRONGER FUTURE

While the implemented solution delivered significant improvements, the journey also revealed important challenges and lessons that further shaped EDSN's identity strategy.

Managing Multi-Organization User Complexity

A major challenge was supporting users who act on behalf of multiple organizations within the B2B environment. Traditional IAM models often assume one user per organization, but EDSN needed a more flexible approach. This complexity was addressed through the dynamic organization selection during login, ensuring users could seamlessly and securely act on behalf of different entities, as introduced with the centralized IAM platform.

Service Roles versus Organization Roles

As EDSN's identity ecosystem matured, the need arose to clearly differentiate between service-specific permissions and broader organization-wide responsibilities. Standard IAM tooling provided limited support for this distinction. IdentIT contributed to the design of a flexible role-mapping mechanism, enabling organizational and service roles to be managed independently while ensuring secure and efficient access provisioning.

Enabling Decentralized Self-Service

Reducing operational dependency and empowering DevOps teams and market participants to manage access autonomously was a critical objective. The Identity Management Operator, already detailed earlier, proved instrumental in achieving this goal. It enabled decentralized role and user management, removing bottlenecks, increasing agility, and enhancing scalability across EDSN's identity landscape.

By overcoming these challenges together, EDSN and IdentIT forged a collaboration built on trust, innovation, and shared ownership — a partnership that continues to drive progress.

Strong Partnership

The collaboration between EDSN and IdentIT is characterized by open and transparent communication. Feedback is taken seriously, and tangible actions are consistently undertaken to address identified issues. IdentIT not only executes tasks but actively challenges EDSN where necessary, ensuring that strategic and technical decisions are always critically assessed and optimized.

Furthermore, EDSN appreciates IdentIT's proactive role in fostering innovation. There is genuine room to introduce new technologies and approaches, which has significantly contributed to the modernization and flexibility of EDSN's IT landscape. As one EDSN representative puts it:

> "IdentIT does not simply deliver what is asked; they think alongside us, challenge our assumptions, and help us build a stronger, future-ready organization."

Beyond technical contributions, IdentIT has embedded itself into EDSN's way of working, becoming a true extension of the internal team — approachable, dependable, and continuously striving for excellence.

Future Outlook

With the establishment of IdentIT Nederland, the collaboration is poised to become even stronger. Physical proximity will facilitate more frequent in-person interactions, enhancing communication and fostering even deeper cooperation.

Strategically, EDSN and IdentIT are committed to expanding the federation capabilities, further refining organizational role management, and ensuring full compliance with evolving regulations such as NIS2. Together, they continue to shape a resilient and adaptable identity landscape that enables EDSN to remain a leader in the dynamic Dutch energy market.

Strategic Ambitions

Looking ahead, EDSN is determined to further strengthen its digital foundation through a number of key strategic initiatives:

- Avoiding Vendor Lock-In: EDSN continues to prioritize flexibility by minimizing dependency on single vendors. The IAM platform has been architected with modularity and open standards in mind, ensuring that EDSN can adapt and evolve its ecosystem as new technologies emerge.
- Expanding Self-Service Capabilities: Building on the success of the Identity Management Operator, EDSN plans to extend self-service functionalities even further. This will empower both internal teams and external market participants to manage identities and roles independently, promoting greater agility and efficiency.
- Full Migration to Microservices and Cloud: EDSN's long-term IT strategy focuses on completing the transition to a cloud-native, microservices-based architecture. This approach enhances scalability, resilience, and security, aligning with best practices and ensuring readiness for future market and regulatory demands.

These strategic pillars position EDSN to continue leading the way in the Dutch energy sector's digital transformation.

CONCLUSION: A RESILIENT IDENTITY PLATFORM FOR A DYNAMIC MARKET

The partnership between EDSN and IdentIT has proven to be a catalyst for profound and lasting change. Together, they have successfully tackled complex identity management challenges, modernized critical systems, and laid a secure, scalable foundation for the future.

Through open collaboration, innovation, and a shared commitment to excellence, EDSN has not only enhanced its current operations but also ensured that it is well-equipped to meet the evolving demands of the energy market. With IdentIT as a trusted partner, EDSN looks forward to continuing its journey of digital transformation, driving forward with resilience, agility, and vision.

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