



Case Study: Attribute Based Access Control Implementation at Petrobras using NextLabs Zero Trust Data-Centric Security Solution

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Las Vegas

2024

SAPinsider



In This Session



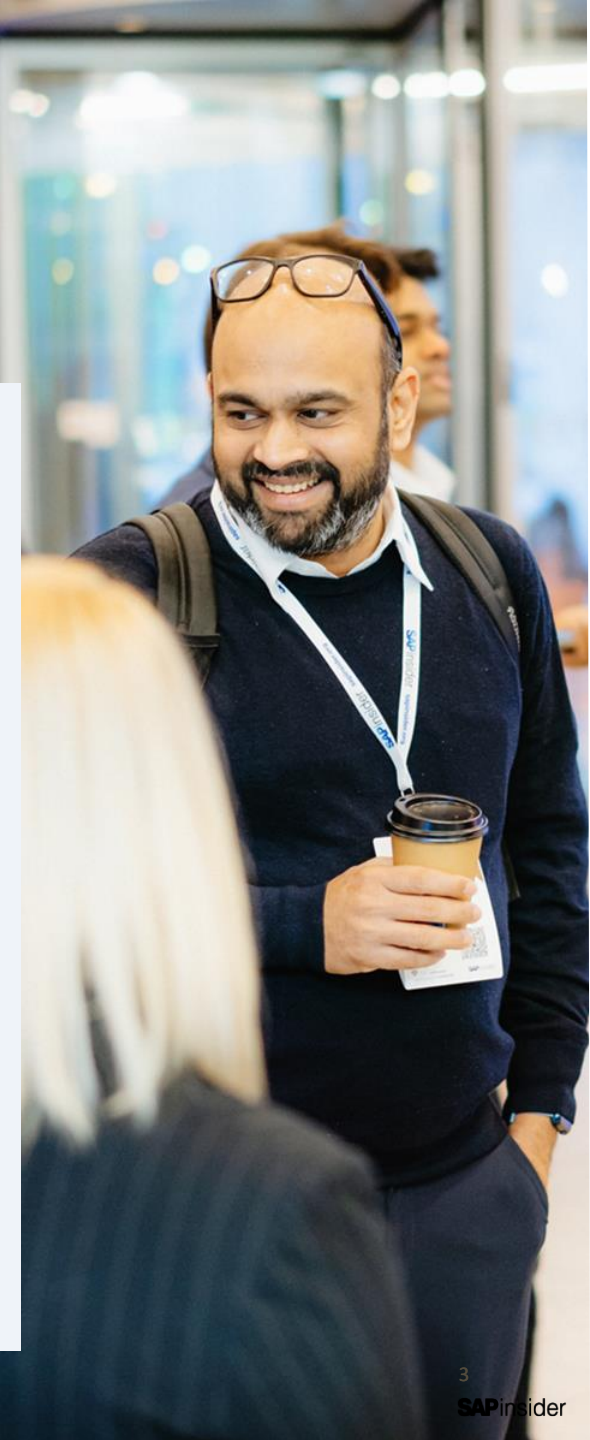
How Petrobras successfully generated value for the business and improved security through the implementation of Attribute-Based Access Control (ABAC) in its SAP environment



Journey of Petrobras' implementation of NextLabs Zero Trust Data Security solution (including challenges, issues, and risks)

What We'll Cover

- The Value of Zero Trust Data Security for SAP | How it can add value to the business
- SAP DAM (Dynamic Authorization Management) solution architecture
- Petrobras' implementation journey of the Zero Trust Solution & main milestones achieved, challenges, risks & problems encountered
- Quick Solution Demo | Presentation of the solution in operation
- Questions & Answers
- Wrap-Up



About the Speakers



Marcelo Rosenthal



Marcelo Rosenthal is responsible for SAP Security and Authorizations and has over 20 years of experience in the subject. In 2022, he participated in the implementation of the S/4HANA project at Petrobras, leading the Security team. In recent years, he has been particularly interested in innovation related to access management.



Mauro Honda



Mauro Honda is a Partner at Deloitte Cyber Brazil with more than 20 years of professional experience, including over 18 years working as a consultant mainly on projects related to the development and improvement of Cyber Security (IAM & Access Control), IT Risk Management and Internal Controls.

About Petrobras

Petrobras is a Brazilian company recognized worldwide as one of **the largest oil and gas producers in the world**, operating mainly in the exploration and production, refining, generation and commercialization of energy.

It currently has more than **50,000 employees**, committed to generating more value for our shareholders and society, with a focus on oil and gas, with safety and respect for people and the environment.

Petrobras has expertise in deepwater and **ultra-deepwater exploration and production** as a result of almost 50 years in the development of Brazilian offshore basins, making us a world leader in this segment.



Zero Trust Data Security for SAP



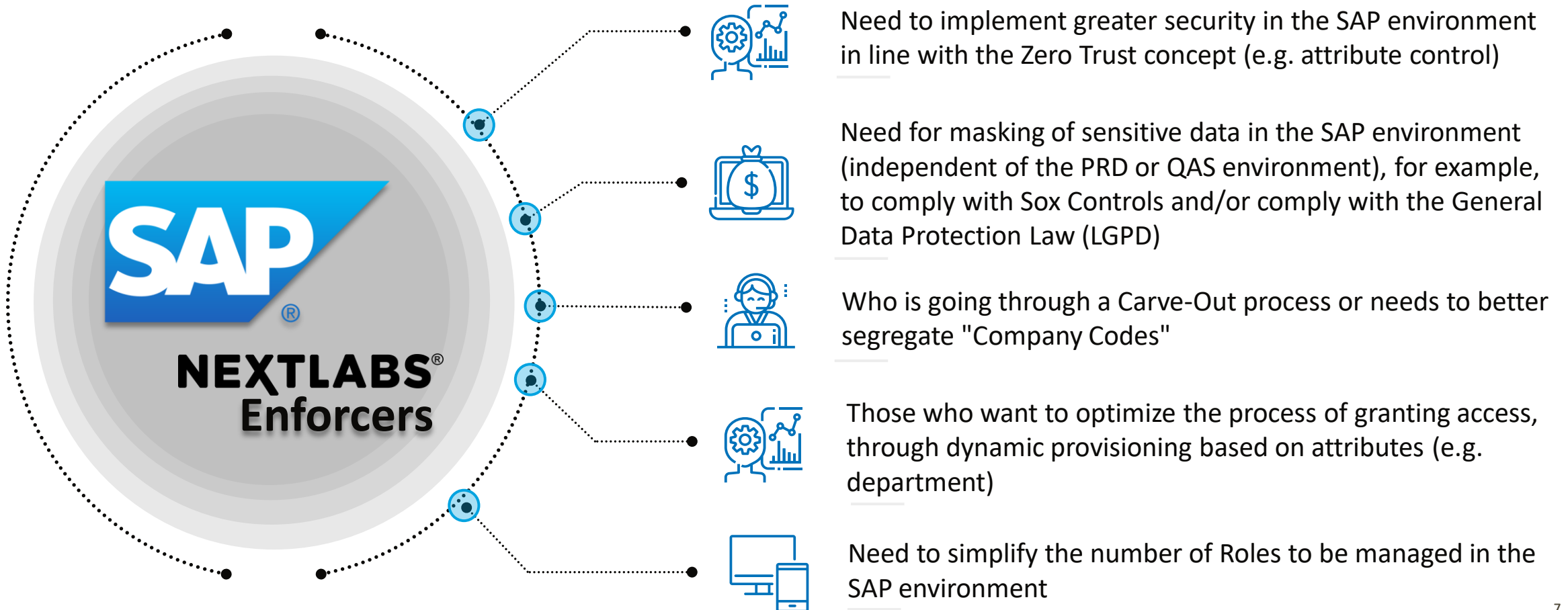
Zero Trust Architecture Powered by
Dynamic Authorization



How it Adds Value for Enterprises

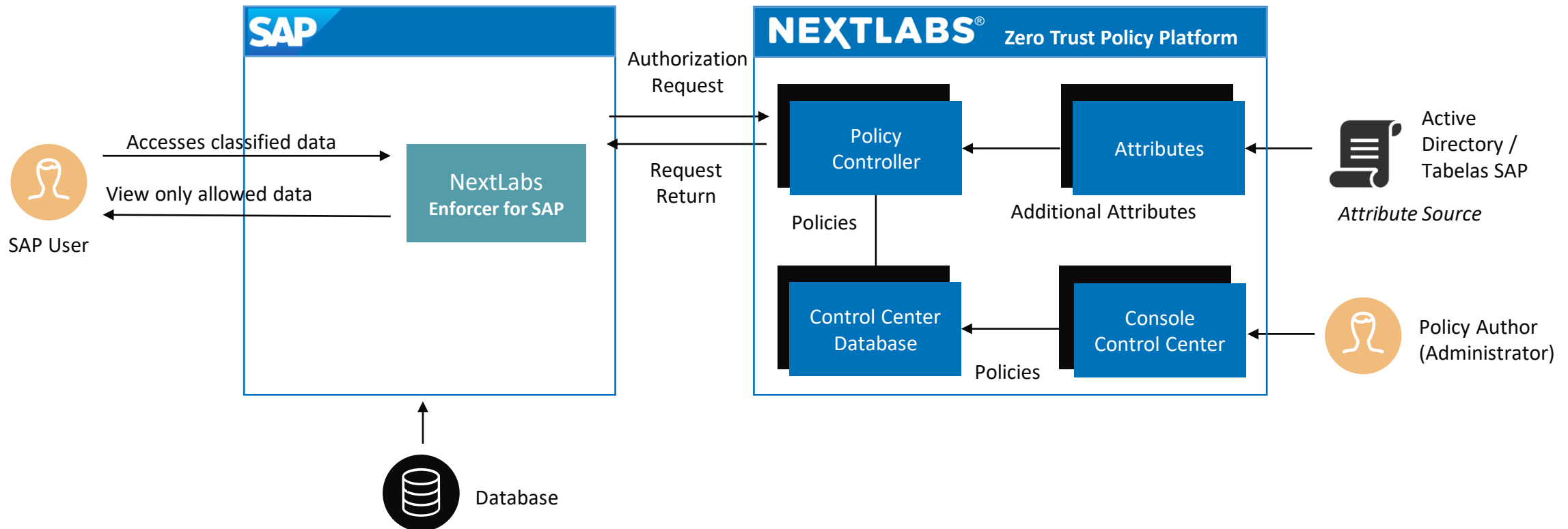
The Value of Zero Trust Data Security for SAP

For who will this solution be a good alternative and how does it add value?



Zero Trust Architecture Powered by Dynamic Authorization

NextLabs' Zero Trust policy platform and its suite of enforcers allows you to dynamically manage access through Enterprise Policies that grant or restrict access in SAP.



Petrobras' Implementation Journey



Main Milestones Achieved



Challenges, Risks and Problems
Encountered

Petrobras' Zero Trust Solution Implementation Journey



0. Business Case

May 2021

- Business Scenario Assessment
- Assessment of return on investment
- POC like NextLabs
- Software acquisition



About the Business Case

Survey of the most requested roles via GRC-AC in the period of 1 year (2019) – "Top 40"

249,000 access requests for "Top 40" roles in 2019

67% of the total requests were through GRC-AC

Average time taken to request

06 minutes

*

249,000 requests

=

24,900 hours

Average time taken on approval

03 minutes

*

249,000 requests

=

12,450 hours

Total = 37,350 hours

In 2019 alone, the 40 most requested roles (**249,000 requests**) required the allocation of 37,350 hours (requests/approvals). With this it was possible to calculate the total cost by multiplying by a reference tariff.

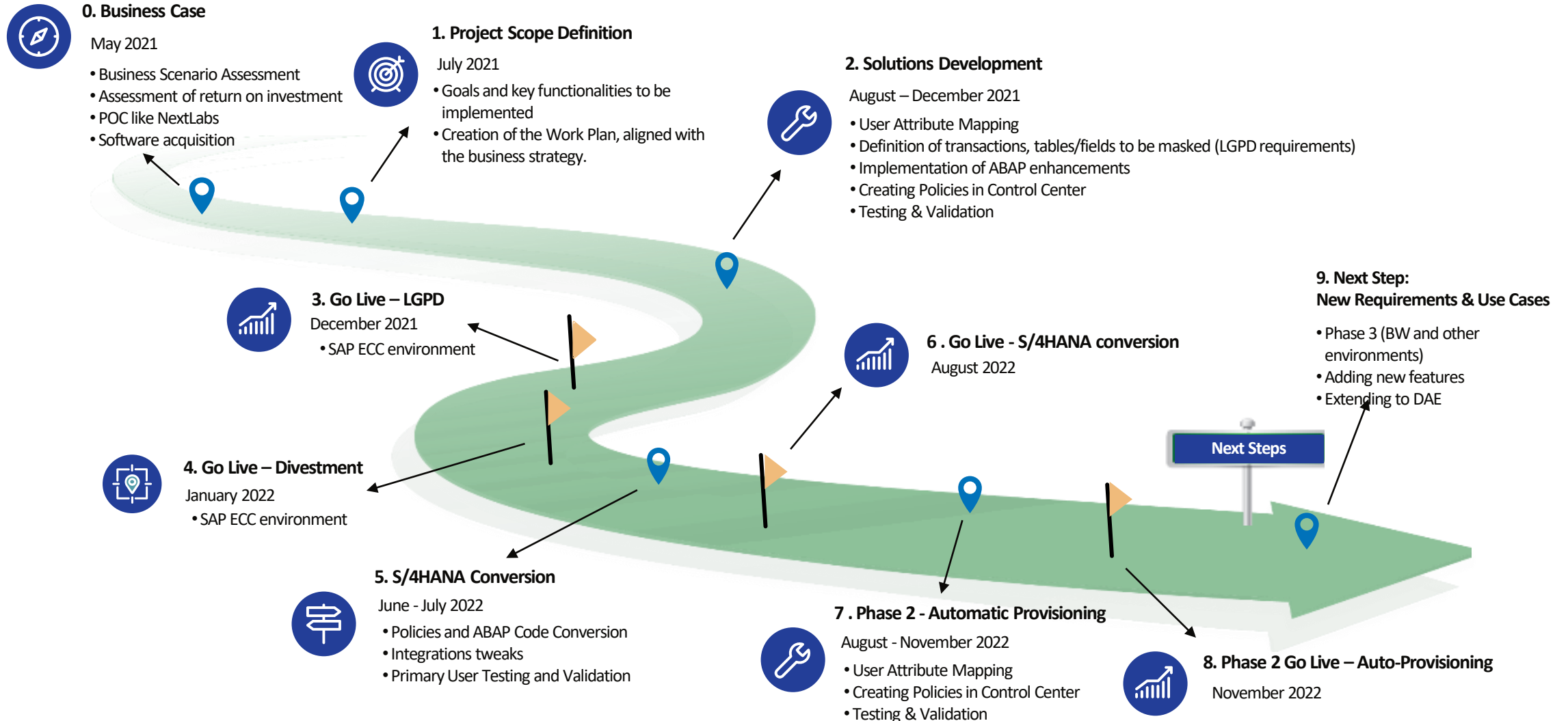
Value Proposition:

Implementing role granting automation using SAP DAM

Zero access requests required in SAP GRC Access Control

- Roles automatically provisioned based on users' attributes.
- Only 1 time the effort of configuration, attribute mapping, and policy setting.
- Transparent to the end user
- Roles are also automatically revoked when users no longer have the appropriate attributes.

Roadmap | Improve the Security of Critical Data, Simplify Access Management, and Enable Automatic Provisioning



Milestones | Improve the Security of Critical Data, Simplify Access Management, and Enable Automatic Provisioning



0. Business Case

May 2021

Milestone 01: + Security & Control

• Assessment of return on investment

1. Definition of the Project Scope

• Goals and key functionalities to be

2. Development of solutions

August – December 2021

+29,524 Confidential access to user data **DENIED** related to the **General Data Protection Law (LGPD)** in the last 3 months for **+5,508** users in the ERP



Milestone 02: + Access Restriction

Sensitive Petrobras data displayed in matchcode was hidden (data filter) for users of the divested refineries.

9. Next Step:

New Requirements & Use Cases 2023

- Phase 3 (BW and other environments)
- Adding new features
- Extending to DAE



4. Go Live – Divestment

January 2022

Milestone 03: + Efficiency & Production

+32,235 new automatic provisioning with SAP DAM, **avoiding the opening of new requests**

• Primary User Testing and Validation

• User Attribute Mapping

• Creating Policies in Control Center

• Testing & Validation

8. Phase 2 Go Live – Auto-Provisioning

November 2022

Project Conclusion- Challenges, Issues, and Risks



Challenges

- Pioneering project in Brazil.
- Technical knowledge in the solution.
- Run the project during an S/4HANA migration

Risks

- Impact of data masking on shared tables (e.g. BP Transaction)
- Provisioning unnecessary permissions with automatic solution.



Problems

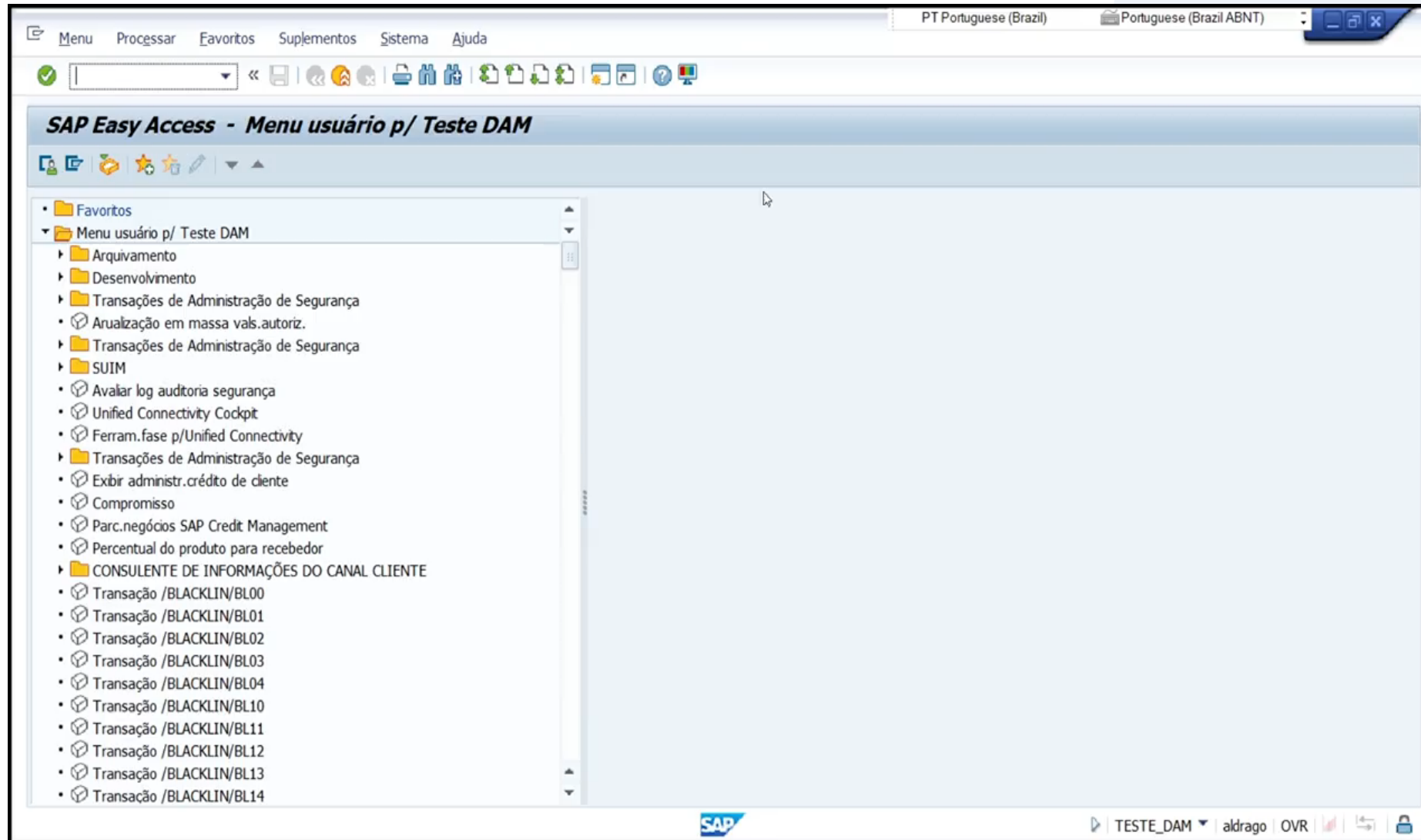
- Low Business Availability due to S/4HANA Project
- Need to perform two Go Lives of the solution due to the LGPD schedule

Solution Demo



Masking & Access Control

Masking in SAP



[Watch the Masking in SAP demo video](#)

Wrap Up



Petrobras has successfully implemented NextLabs Zero Trust Data Security, introducing an ABAC approach to SAP ERP access control processes.



Project benefits include:

- Value generation
- Increased security
- Simplified compliance with LGPD/GDPR
- Enhanced user experience

Key Points to Take Home

- ABAC adds flexibility and enhances access control in SAP environments (also, may coexist with RBAC)
- Using Zero Trust Data-Centric Security LGPD/GDPR compliance is simplified and improved
- Dynamic role provisioning is enabled with the use of Zero Trust Data-Centric Security
- The business case is the most important step of the journey
- The engagement of business areas is a key success factor

Questions?

Meet with Rosenthal at NextLabs' booth (#1065) after this session to ask additional questions.



Where to Find More Information

Petrobras Case Study: How to Improve the Security of Personal & Confidential Data Using ABAC

<https://www.nextlabs.com/wp-content/uploads/Petrobras-Customer-Case-Study-final.pdf>

- Case study on Petrobras' implementation of Zero Trust Data-Centric Security

Zero Trust Data-Centric Security for SAP

<https://www.nextlabs.com/solutions/zero-trust-security-for-sap-2/>

- Further information on the solutions used in Petrobras' implementation

NIST Special Publications

<https://www.nextlabs.com/solutions/business-challenges/nist/>

- Navigate down the page to find information on NIST SP 800-162 and NIST SP 800-207

Zero Trust Policy Engine: An In-Depth Analysis

https://www.nextlabs.com/wp-content/uploads/WP-Zero-Trust-Policy-Engine_NextLabs.pdf

- White paper on what is a Zero Trust Policy Engine and its value for enterprises

Thank you!

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THANK

YOU



For **additional demo videos** related to Petrobras' journey, please [fill out the form](#).

Featured demo videos include:

- **Master Data Management:** Dynamically mask/protect sensitive customer/vendor/business partner data
- **Procurement:** Protect ITAR/classified materials access in P2P process flow with dynamic data filtering policies
- **Securing SAP BW Analytics/Reporting:** Control access to data in real-time by segregating data in SAP BW reporting
- **Bill of Materials:** Secure sensitive BOM components in ECC, S4/HANA, and PLM
- **Anonymization of Test Data:** Obfuscate sensitive data using Format Preserving Encryption (FPE)

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