

TECHNICAL DAYS

DIGITAL TRANSFORMATION & INDUSTRIAL CYBERSECURITY IN THE OIL&GAS INDUSTRY

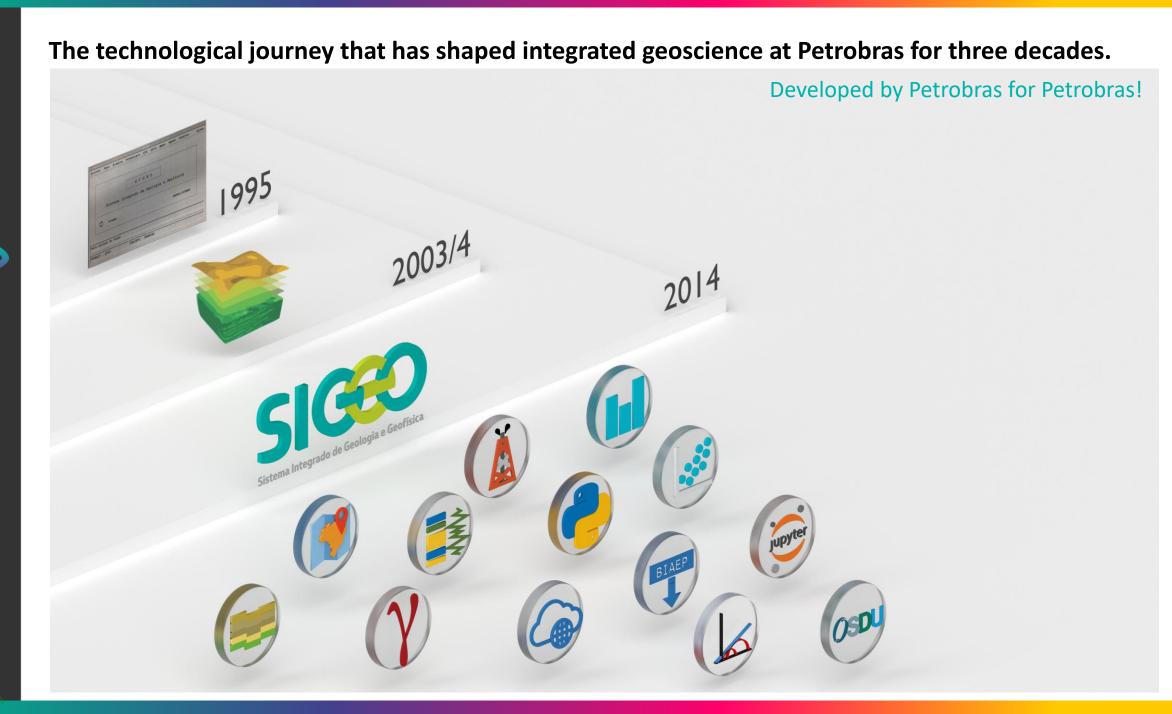


JUNE, 24 & 25 Rio de Janeiro, Brazil

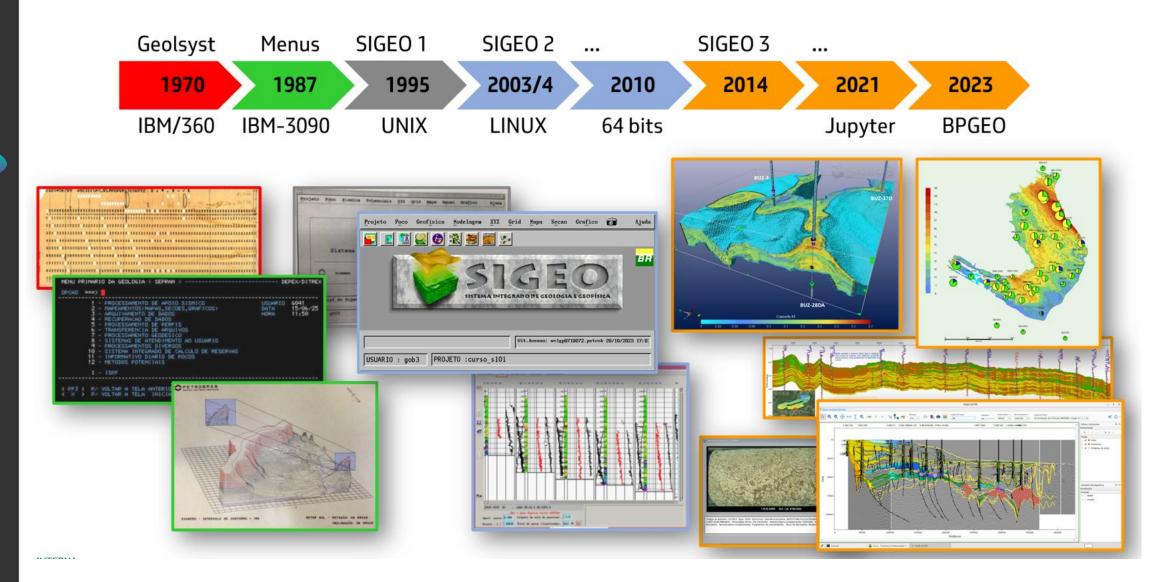
SIGEO: 30 years supporting and transforming the work of geoscientists at Petrobras

Fábio Martins Heuseler

Geological Technology Manager



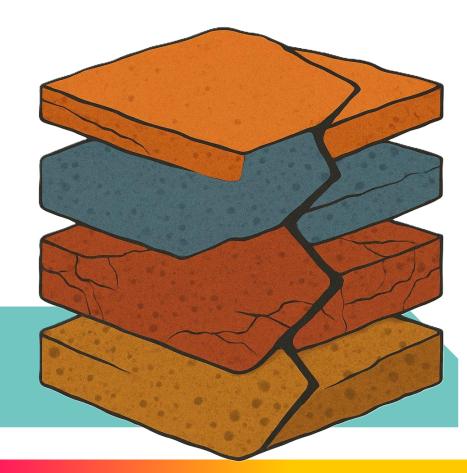
But in fact, the journey begins much earlier...



SIGEO is the main software used in the most diverse stages of the exploratory interpretation process, such as:

- □ Stratigraphic Well Correlation
- □ Stratigraphic Framework Interpretation
- □ Core-log-seismic Integration
- Geological Modeling Interpretation
- Geological Predictions Reports
- Geomechanical Modeling
- U Wellsite Geology
- □ Electrofacies Modeling
- □ Facies Analysis
- Geological data management.
- ...

The system is used by many users, with different profiles, from different areas!



Some Big Numbers...

- □ More than **1800** registered **users**;
- □ Monthly average of 600 users;

17 thousand hours of monthly use:

- ✓ geological interpretation,
- ✓ well monitoring,
- ✓ data management,
- ✓ geomechanical and geostatistical modeling...

□ Profiles:

- ✓ Geoscientists
- ✓ Reservouir engineers
- ✓ Well engineer
- ✓ Researchers (from R&D center)
- ✓ ...

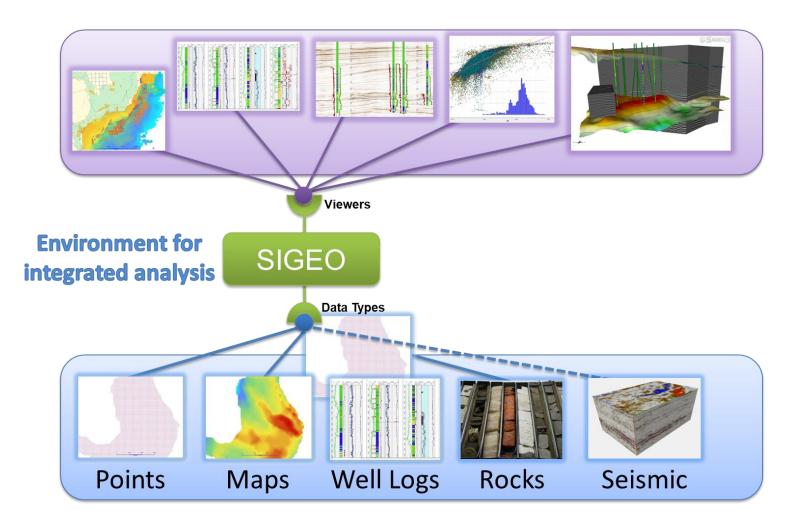
this brings us some big challenges...



Technological challenge



- ✓ Optimize user work;
- ✓ Performance;
- ✓ Allow integrated studies;
- ✓ Facilitate maintenance;
- ✓ Integrate with third-party tools.



 \bigcirc constant evolution of architecture...

"People challenge"







the people dimension is always the most important...

8

Our users go above and beyond...



Python calculator

	l Variável principal:
MD a	MD ·
	Resultado:
	✦ Perfil
	Nome da variável de saída:
	resultado
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	 Atribuir nulo ao resultado.
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Python environment

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	30 import numpy as np 31 import pandas as pd							
Grupos d •	32 from sklearn.model selection import train test split							
Marcado	<pre>33 from sklearn.model selection import GridSearchCV</pre>							
Cota 4 0 34 from sklearn.metrics import confusion matrix > MD 4 0 35 from sklearn.metrics import classification_report								
	36							
Soterram 9 37 # Configurando parâmetros de entrada								
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SIGEO Jupyter

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"People challenge"







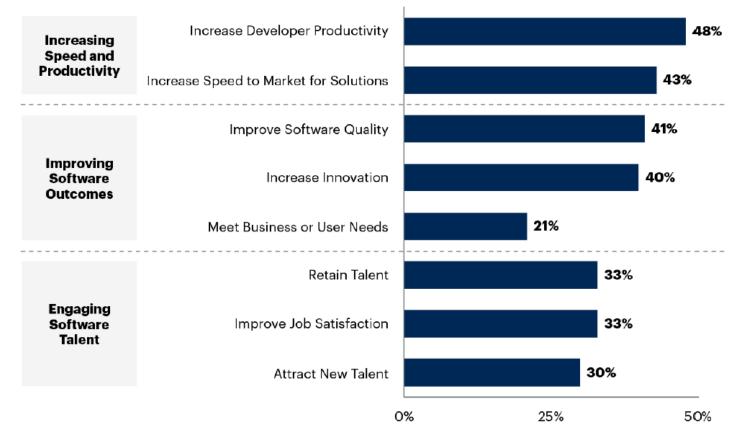
the people dimension is always the most important...

How to give our developers the best tools, environment



and culture

Software Engineering Leaders' Top Goals for Developer Experience Initiatives Percentage of Respondents Selecting Each Goal



n = 135 Software engineering leaders whose organizations have or plan to have some approach to managing the developer experience

Source: 2022-2024 Gartner Technology Adoption Roadmap for IT Leaders Survey 783885_C



"People challenge"







the people dimension is always the most important...

How to Deal with the world we are living?



- 2. Our users are also our biggest contributors to the evolution of the system.
- Bow do you keep everyone up to date with the latest?

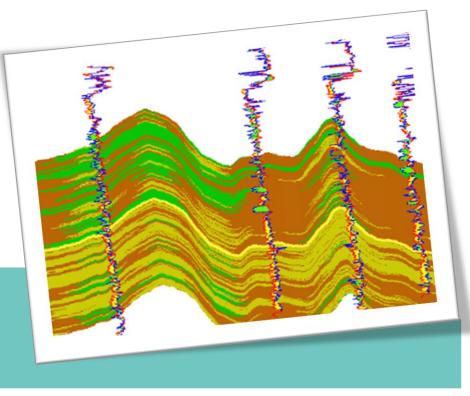


How to convince our users to use what's new?



- Culture must be observed and respected, but we need to foster innovation.
- Partnership with Petrobras' Digital Transformation area to build and execute a change management plan.

this is perhaps our biggest challenge today...



Thank You

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