



**Why SRE is the best
way to improve
efficiency in crises
time?**

**Conf42 2023 – SRE
Fabio Alves do Nascimento**

Age of Digital Transformation

- Virtualization
- Cloud Computing
- Waterfall → Agile
- DevOps
- Mobile
- Covid 19
- Quiet Quitting
- Devs with 2, 3 jobs simultaneously
- Web 3.0, MetaVerse, NFT



Age of Digital Efficiency

- Global economy recession
- Inflation
- Budget cuts
- Lay-offs
- Chat-GPT



Lay-offs





2023 is the year of
efficiency

But what does it mean, in the end ?

- Cutting investment
- Search for savings on operations
- And some companies taking this moment to eliminate some people that was not performing well...



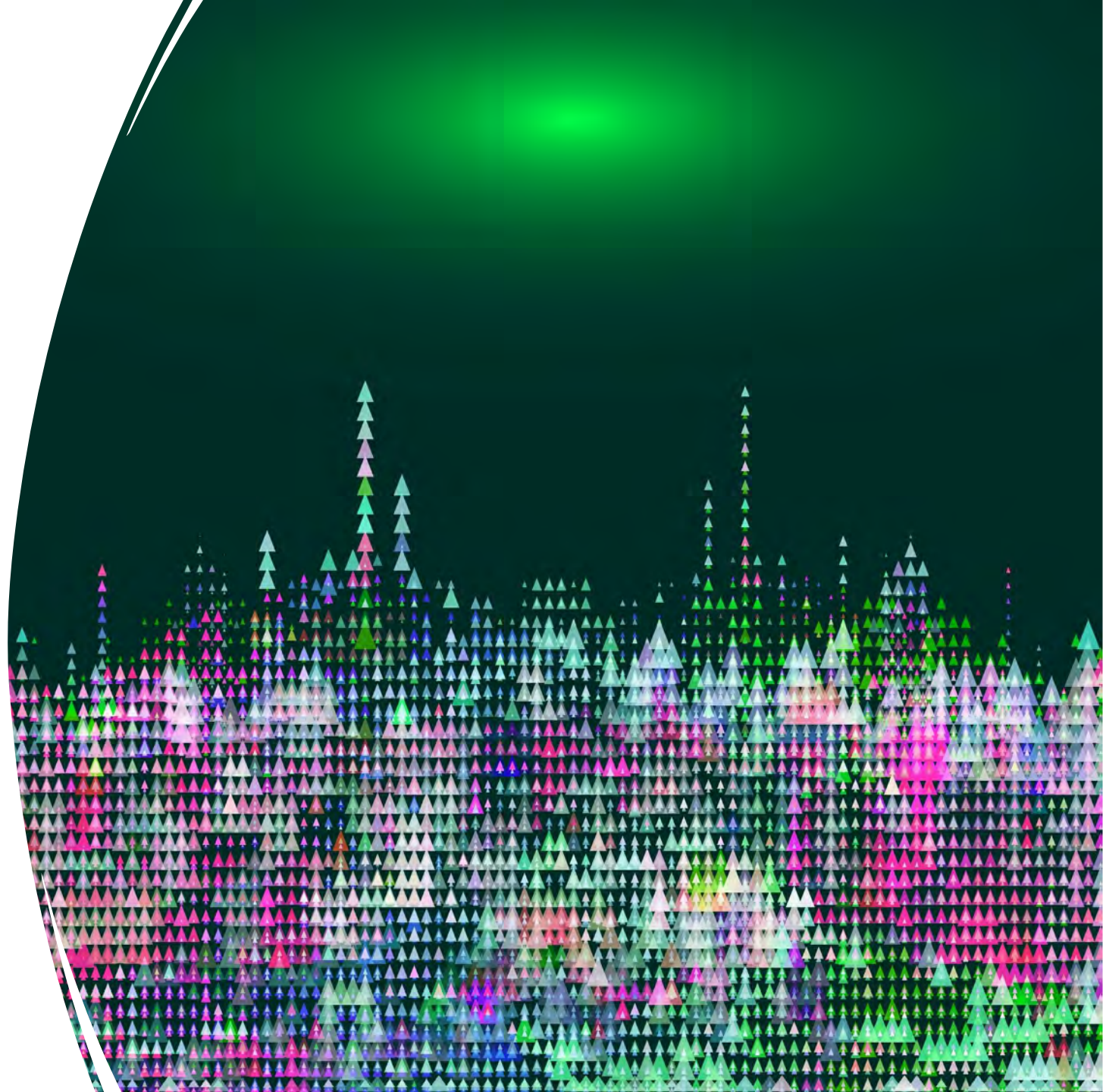
What is on the table for us?


- Efficiency
- Adopting AI – everybody talking about Chat GPT disrupting the world.



Why should companies invest on SRE ?

- Improved system reliability
- Faster incident resolution
- Increased agility
- Better collaboration
- Improved customer satisfaction





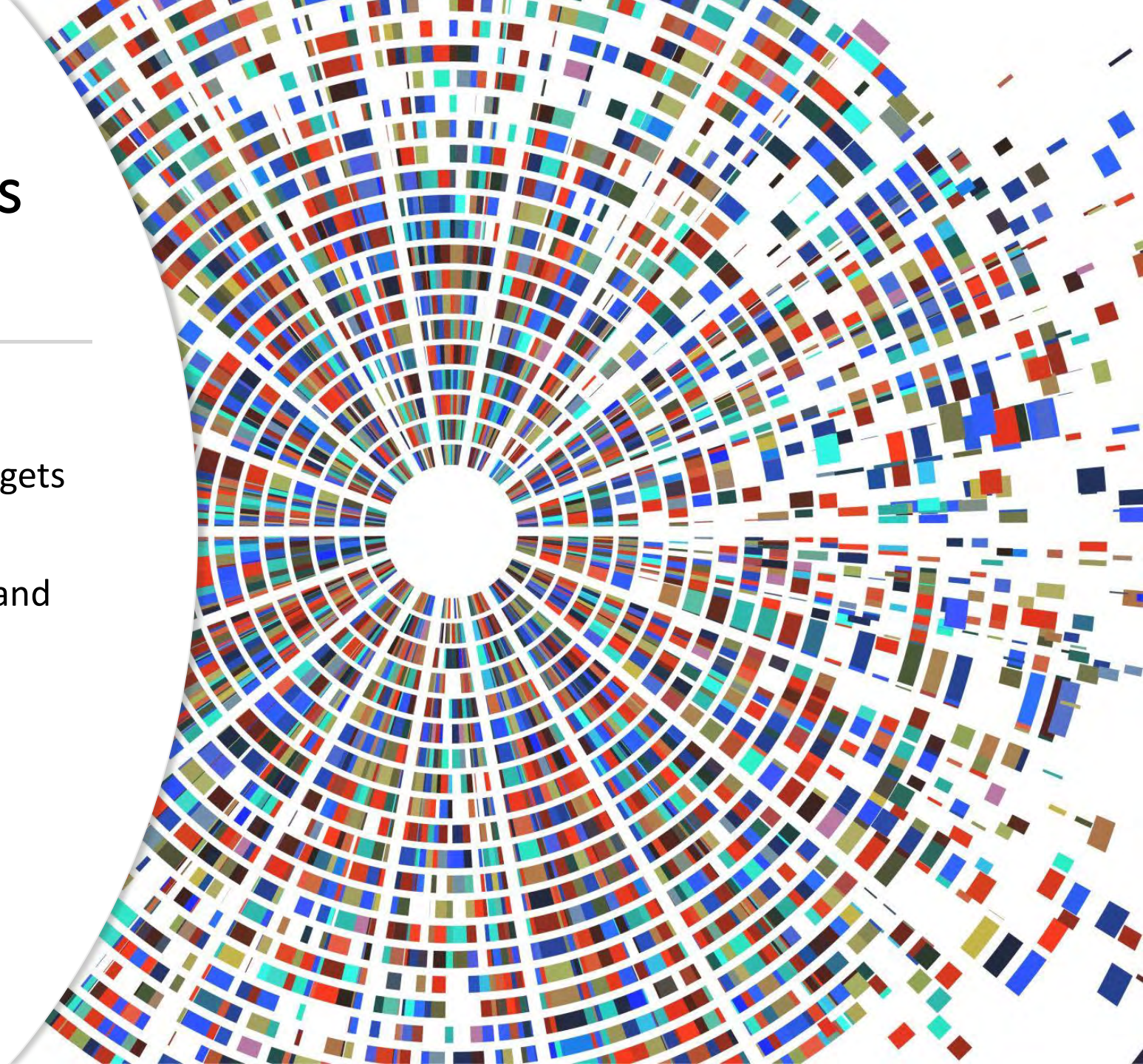
Why should companies invest on SRE ?

Adopting SRE can lead to several financial benefits for a company, including:

- Reduced downtime costs
- Increased efficiency
- Better resource allocation
- Improved scalability
- Reduced maintenance costs

Why even consulting firms should invest on SRE ?

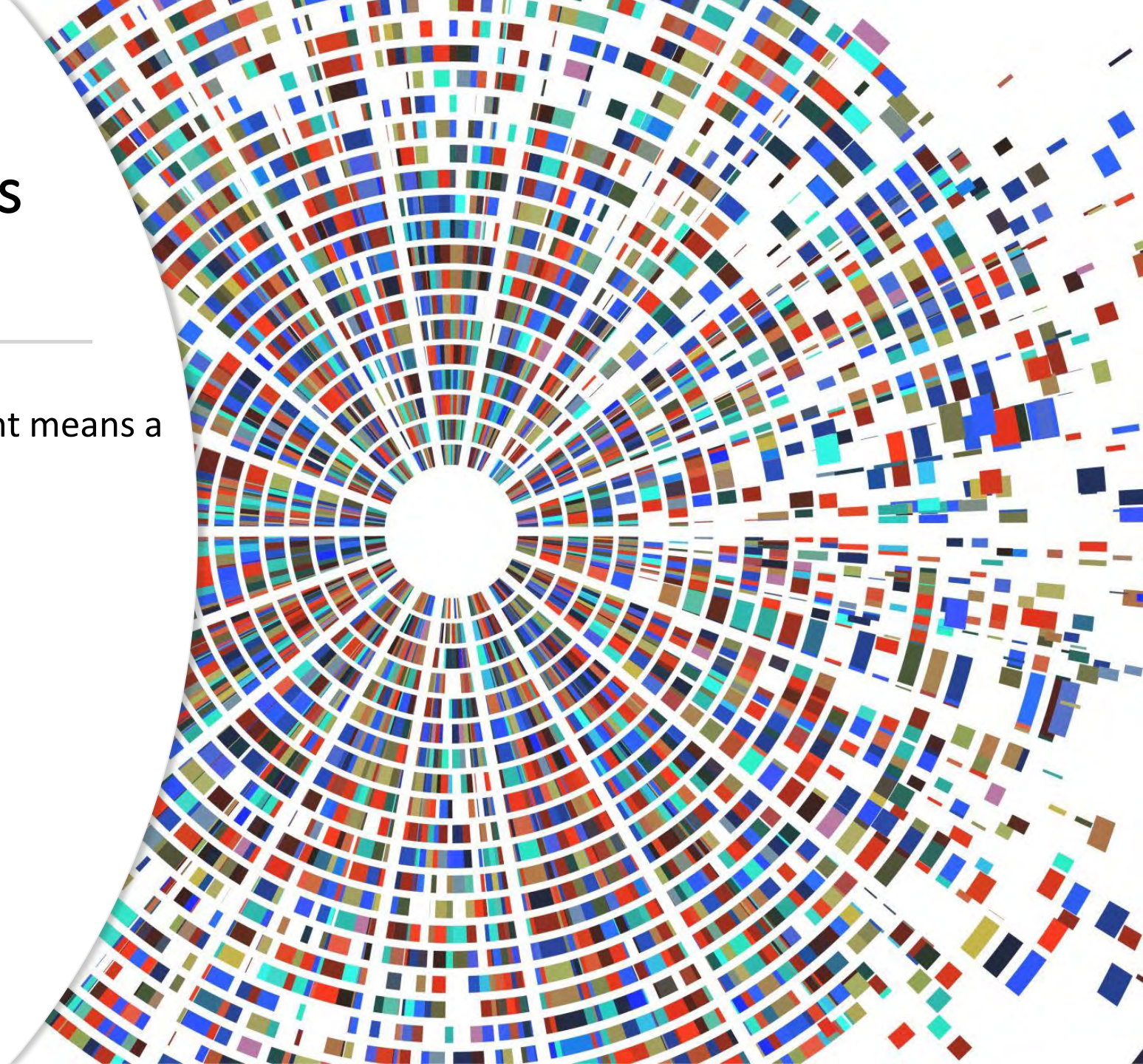
Clients cancelling projects and cutting budgets
mean directly impact on Consulting firms and
professional departments.



Why even consulting firms should invest on SRE ?

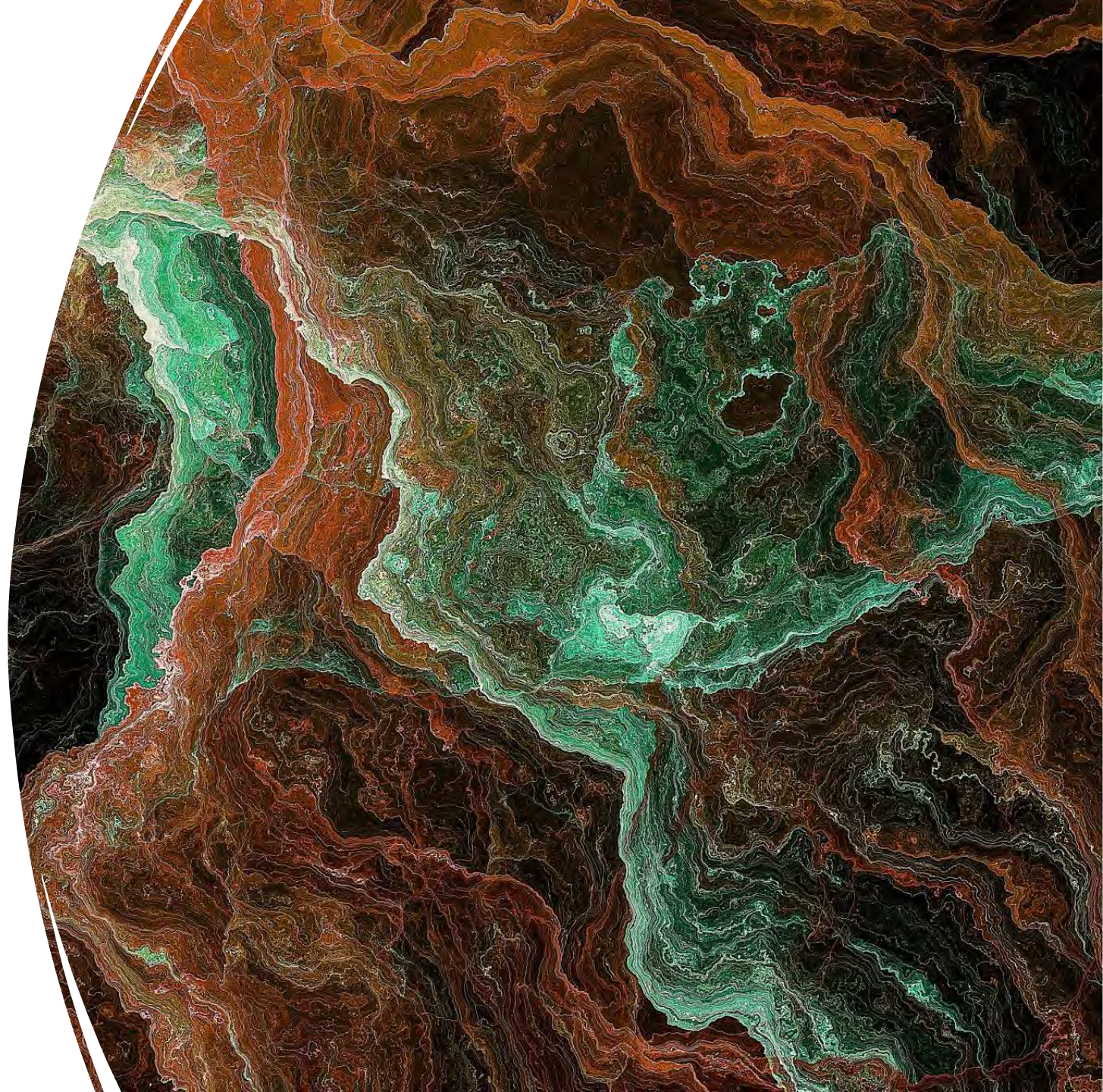
Adopting SRE practices in app development means a significant differentiation:

- Reducing MTTR
- Security improvement
- More reliable architecture



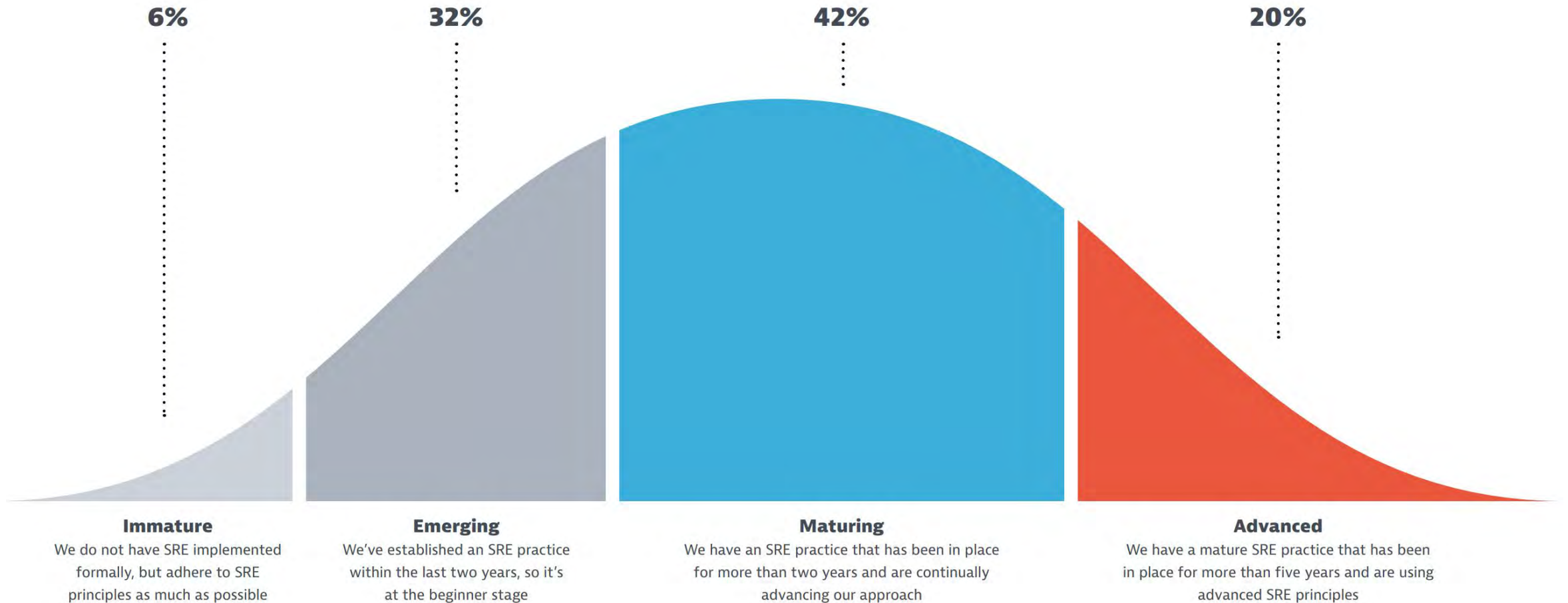
Quantitative results of adopting SRE

- Google
- LinkedIn
- Netflix
- Dropbox



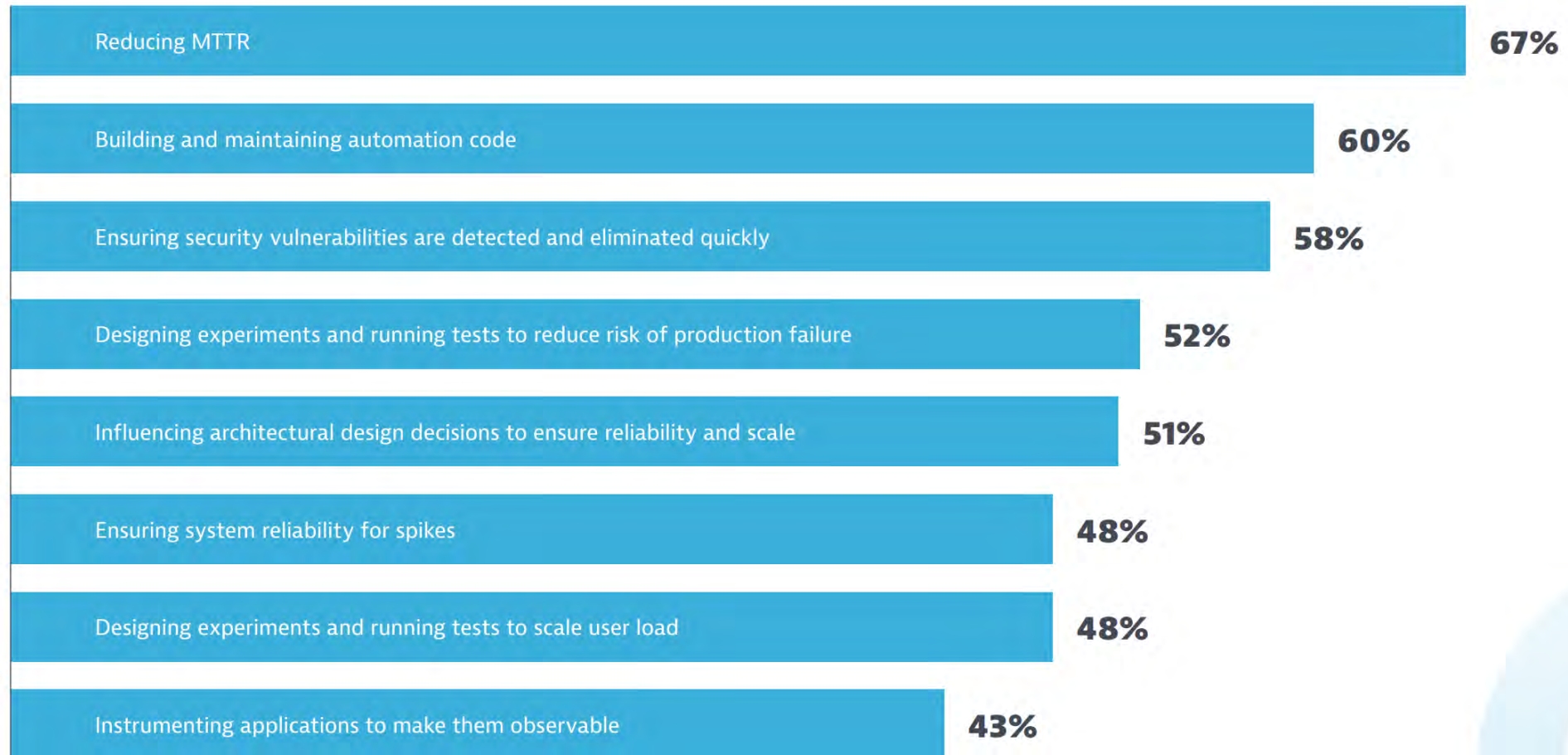
Why do we have so many opportunities here ?

At what stage in the site reliability engineering (SRE) journey
is your organization currently?



Some important information regarding SRE adoption

Which of the following tasks do SREs in your organization dedicate the largest amount of their time to in an average week? (All responses)



Some important information regarding SRE adoption

Rising expectations and demands on SREs stretches
their time increasingly thinly

Which of the following tasks do SREs in your organization dedicate the largest amount
of their time to in an average week?

23%

Reducing MTTR

12%

Influencing architectural design decisions
to ensure reliability and scale

12%

Building and maintaining
automation code

11%

Designing experiments and running
tests to reduce risk of production failure

11%

Ensuring security vulnerabilities are
detected and eliminated quickly

10%

Designing experiments and
running tests to scale user load

10%

Ensuring system reliability
for spikes

9%

Instrumenting applications
to make them observable

Some important information regarding SRE adoption

How does your organization evaluate service levels for its applications and infrastructure?

81% We set **objectives and key results (OKRs) and key performance indicators (KPIs)**

75% We set **service level objectives (SLOs)**

65% We use **service level agreements (SLAs)** from service providers

58% We use **DevOps Research and Assessment (DORA) metrics**
(e.g., time to recovery and deployment frequency)

38% We use **simple monitoring tools** that are available

Some important information regarding SRE adoption

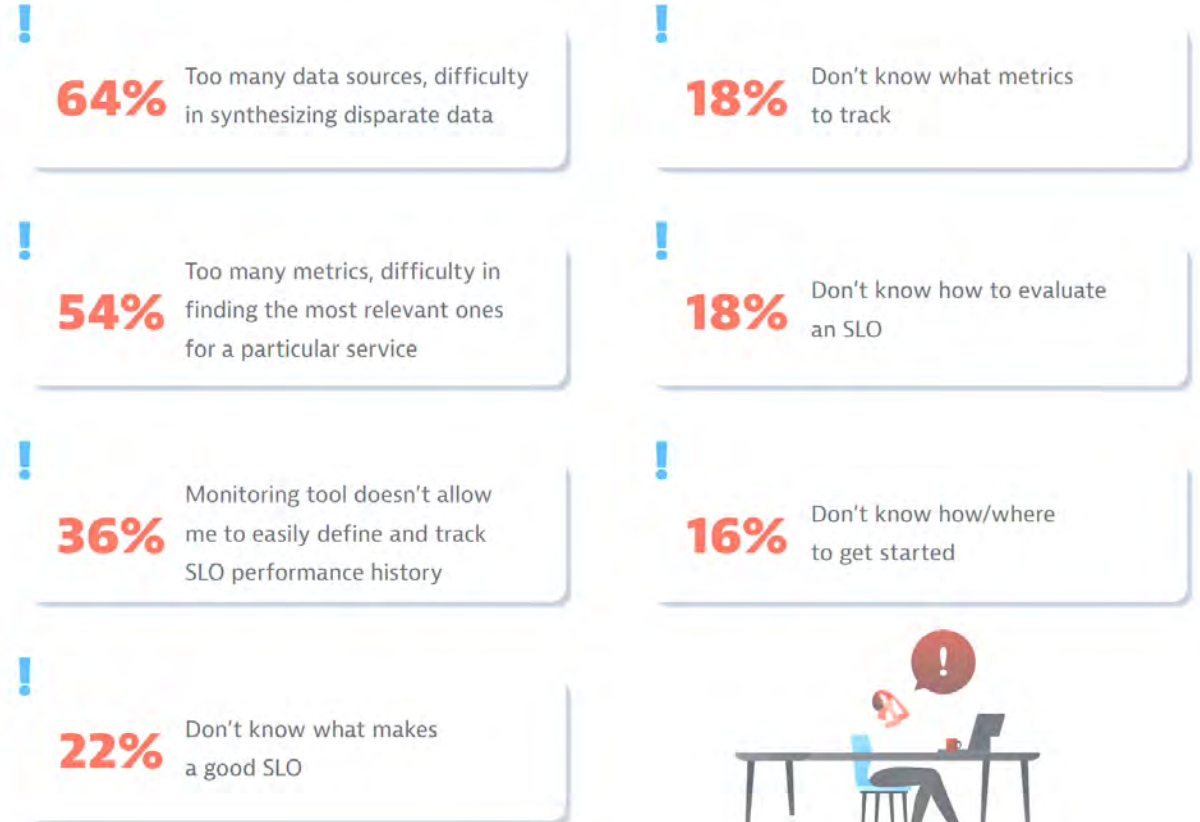
Data overload stands in the way of setting SLOs

Despite the growing use of SLOs 99% of SREs say there are challenges to defining and creating them. However, these challenges are mostly tactical, and therefore are relatively easy to solve with the right solutions in place.

For their more strategic challenges, SREs should invest time in keeping up to date with industry best practices through sources such as Google's [SRE Handbook](#). Continually reviewing what competitors and peers are using as their benchmarks can help to develop a deeper understanding of SLOs.

99% of SREs say they encounter challenges when defining and creating SLOs.

What are the biggest challenges your teams experience to **define and create SLOs**?



Some important information regarding SRE adoption

Common SLOs to consider

Business SLOs (End User Centric)



Availability

Is the service available for users?



Engagement

How engaged are the users?



Conversion

What is the rate of users reaching my business goals?



User Satisfaction (ApDex)

What is the satisfaction level on the performance of my app from 0 - 1

Performance SLOs



Utilization

Average time resources are busy servicing work



Success Rate

Ratio of success vs total requests



Response Time

Time it takes to service a request



Saturation

Resources that are most constrained



Traffic

Measure of how much demand is being placed on your system

Recommended SLOs for mobile apps

Let's look at an example for getting started with SLOs for mobile apps. SREs should combine a mix of business and performance SLOs to ensure they get the balance right and are measuring the things that matter most to the success of their app and its outcomes for the business.



App Adoption

Ratio of daily users vs total users



Availability

Rate of requests with a valid response



App Rating

Ratings based on Android or iOS Store



Response Time

Rate of login requests faster than 100ms



Crashes

Crash rate on officially supported devices



Success Rate

Rate of successful requests with HTTP 500

Some important information regarding SRE adoption

How do you identify the targets for each of your SLOs?

26% We estimated what felt like the right target **based on end user experience**

24% Our solution guides us toward smart SLO thresholds **based on historical data and industry standards**

20% We base them on **whatever our system is doing today**

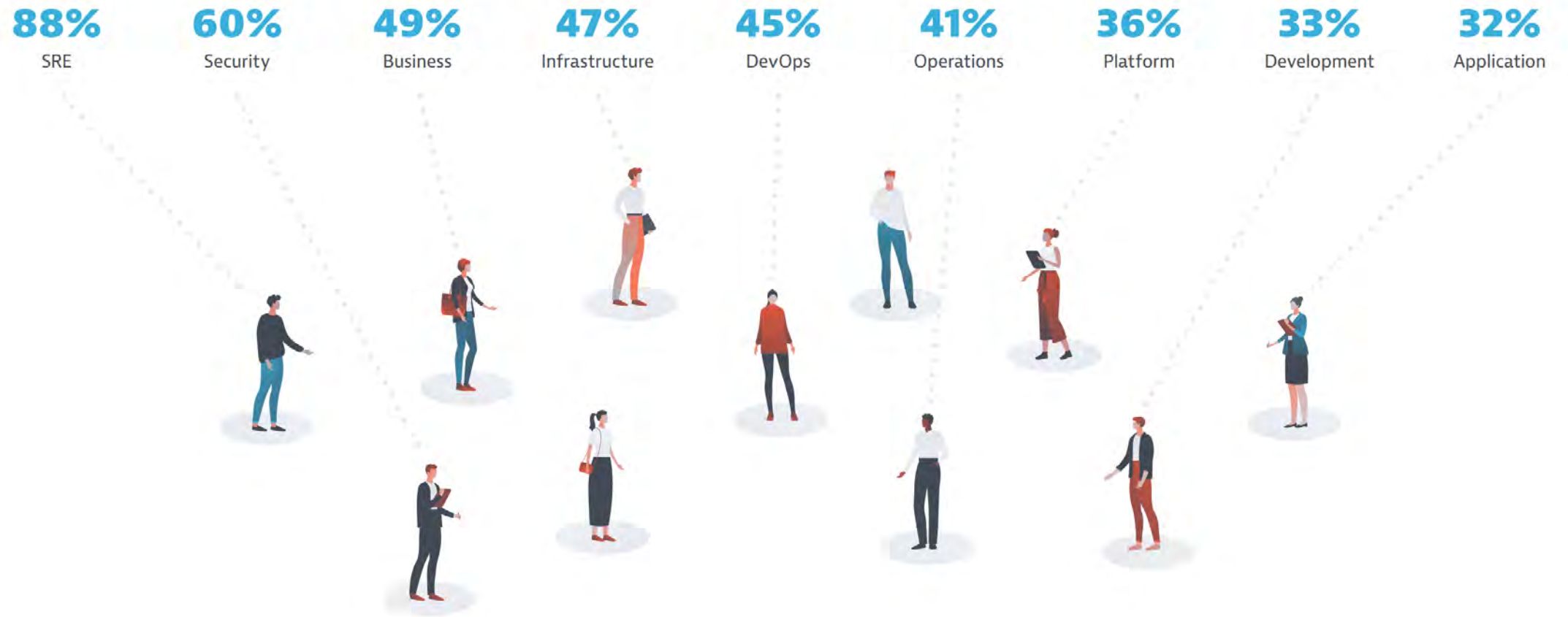
18% They are **dictated by a senior manager** in the IT department

11% We estimated what felt like the right target to be aiming for **based on gut feel**

1% **We don't know** where the targets came from, we just need to adhere to them

Some important information regarding SRE adoption

Which team/s take responsibility for driving SLO adoption and managing SLOs across your organization?

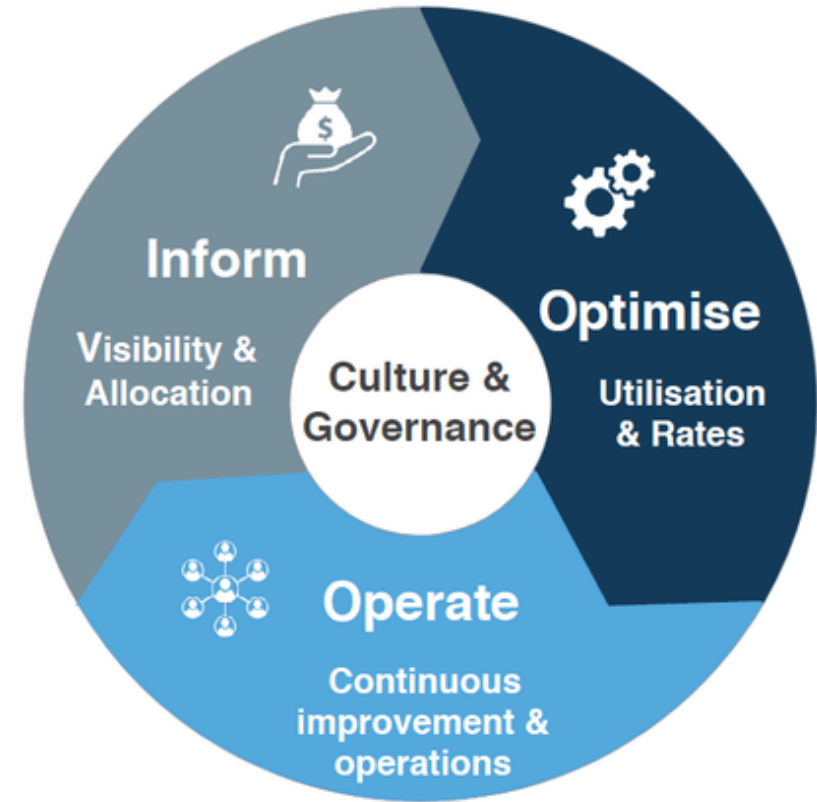


Other opportunities

AIOps



FinOps



Key takeaways

- SRE increase commitment and morale of the team
- Beside the obvious qualitative benefits, SRE generates quantitative returns
- Increase agility
- For Consulting firms, it is a differentiation
- Define and work for achieving SLOs should be the main objective in adoption

