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# Does the Paradigm Matter?

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GOTO Berlin 2015

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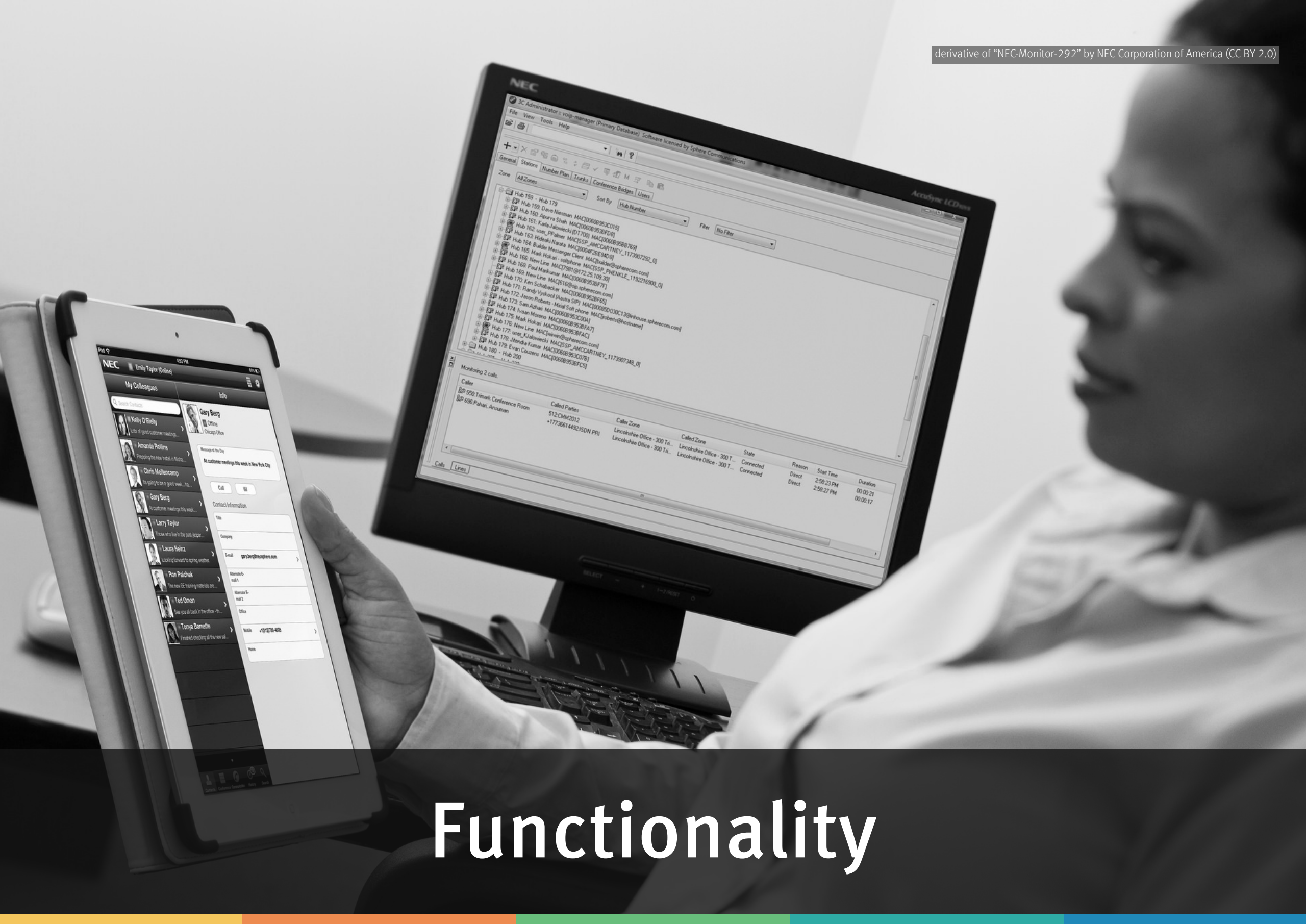
Does it matter for what?

# Successful enterprise projects



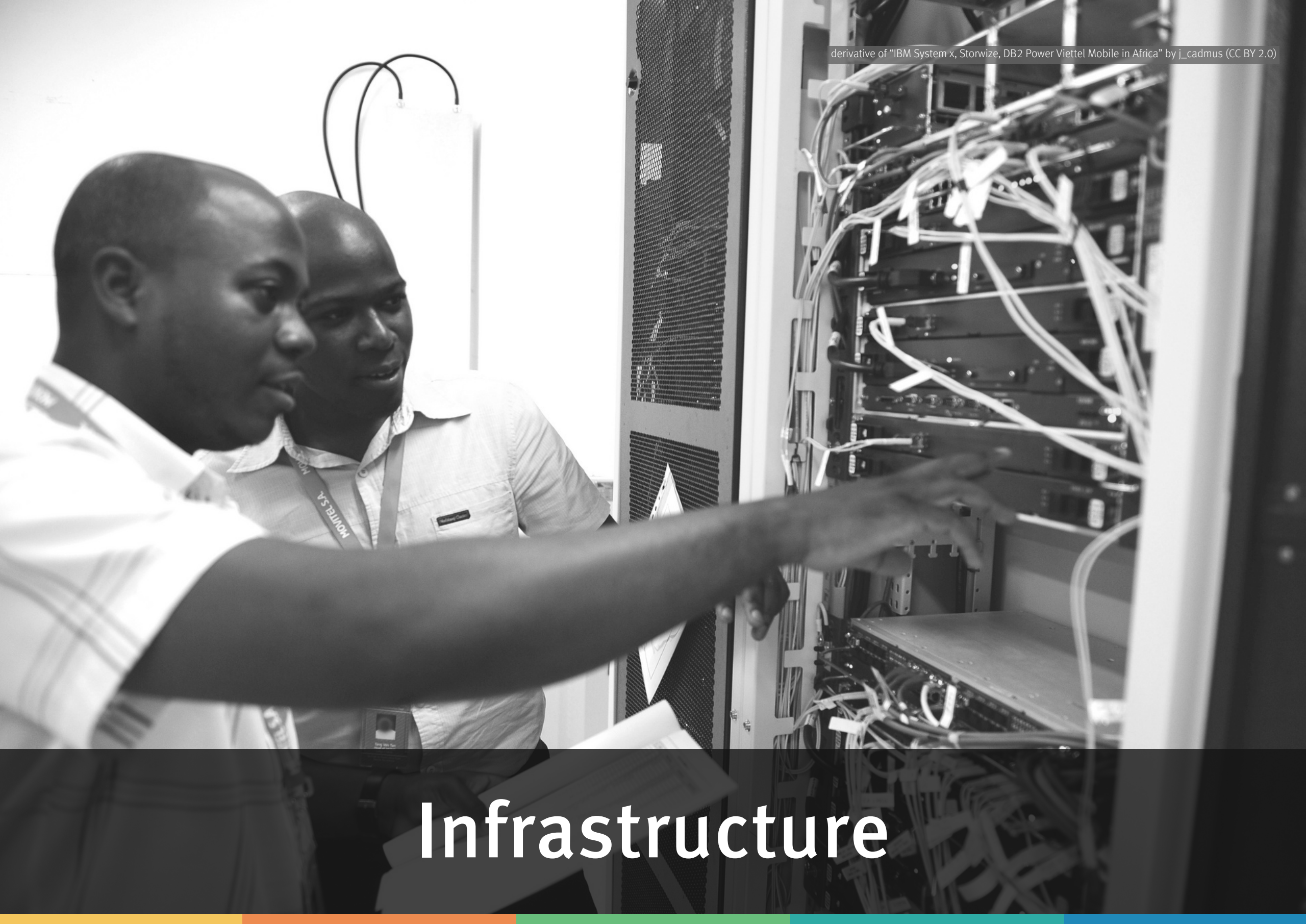
Successful = ?

# Challenges



# Functionality





# Infrastructure





# Productivity





# Sustainability

# Sustainability

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Evolvability

Maintainability

Adaptability

Testability

Scalability



# Factors of influence



# Technology

# Paradigm, Language, Ecosystem



# Example enterprise project

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Web application

Exposing data and processes

Made available through HTTP interface



# Data-centric approach

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Model the **data**

Fetch the **data**

Do some operations on the **data**

Send the **data** to the client



It's all about data



Object-orientation  
a perfect match?





**If all you have is a hammer,  
everything looks like a nail.**

So let's try a  
different point of view.

# Another approach

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Reading the data

Aggregating and transforming the data

Serializing the data



How does the approaches  
influence the project?



# Typical OO implementation

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Static controllers

Services with static methods

Singletons

Some magical request context



# Advantages of OO

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Well-known (from education)

Many developers feel comfortable

We know how to modularize

Large ecosystem



# Disadvantages of OO

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Framework magic and complexity

Frameworks hard to adapt

Stateful & side effects vs. concurrency

Building a DSL or similar is hard





# Influence on project

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Functionality

Infrastructure

Productivity

Sustainability

# A web application

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... is an object that reads a request, builds an object graph, deserializes it and sends a response.

or

... is a function that transforms a request into a response.

That's the switch  
that needs to be performed.



# People — the other factor

Goal:  
Good and satisfied team

# Good developer \*

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Can apply different approaches to a problem

Open-minded

Puts solutions over technology

Keeps it as simple as possible

Has large vocabulary from different areas

\* an incomplete and strongly opinionated list



# Wishes of the team

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Mastering a language

Learning something new (every day)

Aiming for simple solutions

Being careful or conservative

Focusing on the domain or user



# Problems in heterogenous teams





# Different knowledge



# Disagreement on ...

How to start?

Choose another language for  
the next big project?  
Probably not!



Just changing the language  
will not work



Narrow the knowledge gap

Start with small tool, PoC or  
any other non-production code.

Do not change everything!



Which language?

# Pairing, Reviews, Guidelines & Conventions



We live in a polyglot world





# People & Technology

derivative of derivative of "My first punched card" by Marcin Wichary & "ITU Study Groups - World Café" by ITU Pictures (CC BY 2.0)

Functionality

Infrastructure

Productivity

Sustainability

Technology

People



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Maybe the people telling you  
that functional programming is  
the better paradigm are right.  
Maybe they are not.



But is it the better one  
for you and your project?



# Thank you! Questions?

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*Please*

**Remember to  
rate session**

*Thank you!*

