Keynote: Architectural Modularity

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architectural modularity
why all the excitement?
architectural modularity
architectural modularity
architectural modularity

agility  testability  deployability
architectural modularity

agility  testability  deployability  scalability
architectural modularity

agility  testability  deployability  scalability  availability
architectural modularity

agility  testability  deployability  scalability  availability
...executives worry that they won’t keep up with this quickening world.”
Rapid Technological Change Is The Biggest Threat To Global Business

Nick Morrison, CONTRIBUTOR

FULL BIO

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It may seem as though the world is in meltdown, but it’s
Agility Essential as Businesses Face Rapid Pace of Change

MEGAN POTRZEBA  |  APRIL 13, 2016  |  SHARE

Speed is one of the few constants in an increasingly digital business world. Consumers change their preferred apps and services quickly. They look for better ways to interact with the businesses they depend on all the time. They expect companies to respond at a rapid pace when they provide feedback or interact with customer service teams. In response, businesses must change with the same quickness, creating a sense of urgency that legacy operational models cannot handle.
architectural modularity
architectural modularity

agility  deployment  testability  performance  scalability  simplicity  reliability
The Move Towards Modularity
modular architectures

- modular architecture
  - monolithic
    - pipeline architecture
    - microkernel architecture
  - distributed
    - microservices architecture
    - service-based architecture
    - event-driven architecture

modular monolith
modular architectures

microservices architecture
modular architectures

microservices architecture

client requests → api layer → childcare assistance, emergency cash, utility assistance, healthy kids program, foster care assistance

...
modular architectures

microservices architecture

data warehouse
modular architectures

microservices architecture
modular architectures

- modular architecture
  - monolithic
    - pipeline architecture
  - distributed
    - microservices architecture
    - service-based architecture
    - event-driven architecture
modular architectures

service-based architecture
modular architectures

kiosk
- quote service
- item status service

public ui
- receiving service

receiving ui
- assessment service

recycling ui
- recycling service
- accounting service
- reporting service

modules
modular architectures
modular architectures
modular architectures

service-based architecture
modular architectures

- modular architecture
  - monolithic
    - pipeline architecture
  - distributed
    - microkernel architecture
    - microservices architecture
    - service-based architecture
    - modular monolith
    - event-driven architecture
the move towards modularity
the move towards modularity

- **Client requests**
  - Admin: 40 operations, 1 user
  - Service component: multiple modules
  - Customer: 200 operations, 2000 users

- **User interface layer**
the move towards modularity
the move towards modularity
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