Introduction to PlanQK
Platform and Ecosystem for Quantum Applications

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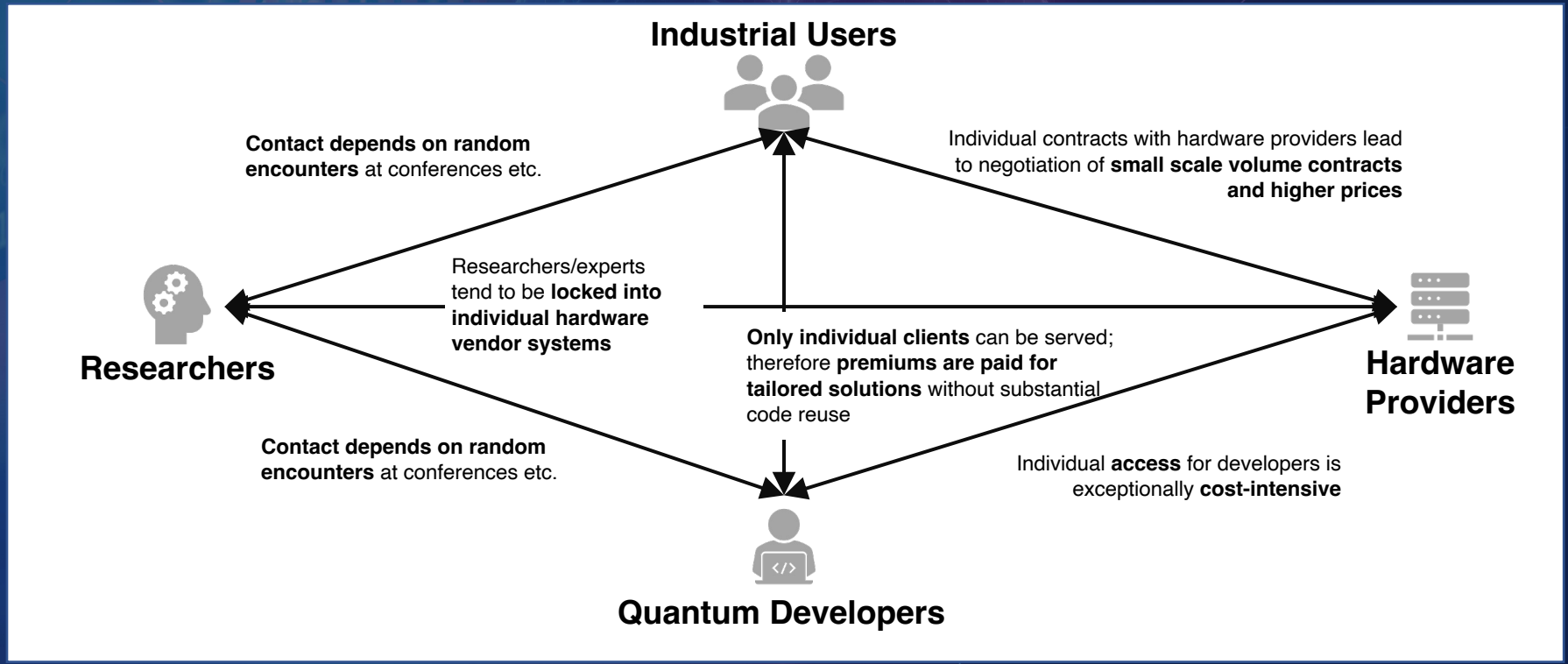
Current state of QC ecosystem

Stakeholders are largely detached and not part of one ecosystem



Vision

PlanQK – Platform and Ecosystem for Quantum Applications

Users
Through quantum computing companies of all sizes solve business problems.

Researchers
Experts in quantum algorithms collaborate to further our understanding and support projects of solution partners.

Solution partners
Solution partners (Developers & consultants) advise and implement user-specific or generally applicable solutions.

Providers
Providers of quantum computing hardware are offering their services to the large network of users and academics.

PlanQK Partners

PlanQK's partners are coming from diverse economic and academic background

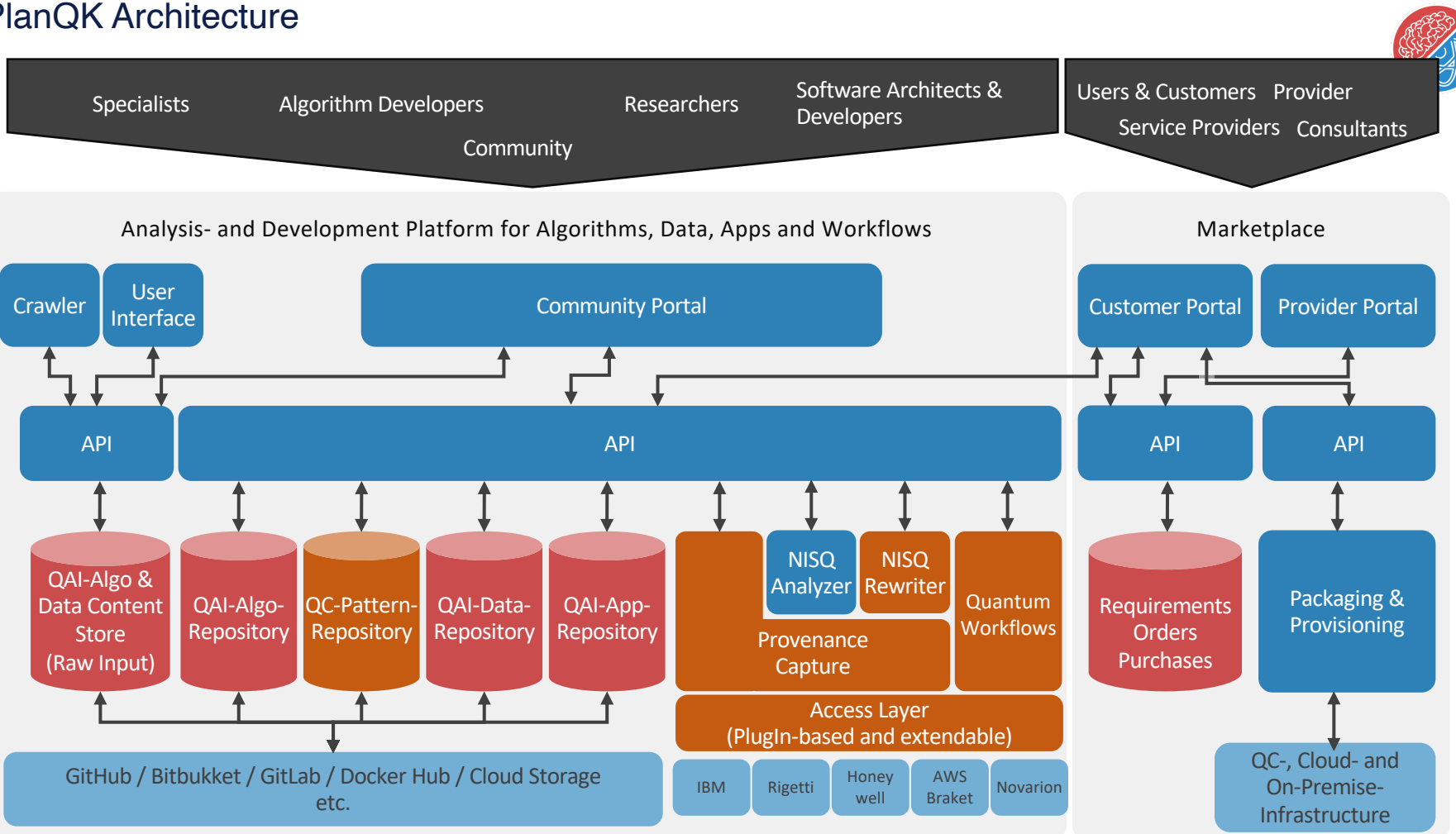
Users

Consortium Partners

Associated Partners

Developers, Researchers & Hardware providers

PlanQK Architecture



PlanQK Platform & Functions

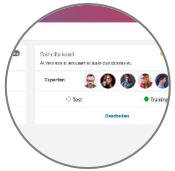
Individual features will be opened up iteratively

Knowledge platform

- **Overview** of algorithms and implementations including author identification
- Iterative **development of knowledge artifacts** alone or through open collaboration

Marketplace

- **Matching** between users and solution partners through individual search options
- **Booking** of available QAI applications with different payment models



Data rooms

- Complete **data sovereignty**
- While **collaborating with solution partners**, the availability of data can be individually regulated at any time

NISQ Analyzer

- **Evaluation of code** to identify optimal quantum backend
- **Compatibility of applications** with different quantum backends

PlanQK Platform & Functions

Individual features will be opened up iteratively

Workflows

- **Orchestration** of hybrid quantum applications
- **Modelling** of hybrid quantum applications

Provenance

- **Information** about accessible quantum computers

Patterns

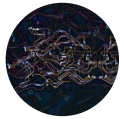
- **Proven solutions for recurring problems** of quantum software design problems
- Access to pattern repository with **pattern language** for quantum software design

Quantum Application Packages

- **Modeling** of the topology of hybrid quantum applications
- **Deployment** of hybrid quantum applications

PlanQK Use Cases

As part of PlanQK >30 use cases are being investigated and tested



Modelling of enery infrastructure

Scheduling and optimization

Recognition of anomalies and fraud in finance transactions

Security building blocks of digital ecosystems

Defect identification of streets

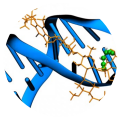
Capacity and circulation optimization

Water anomaly detection in public buildings

Communal register AI

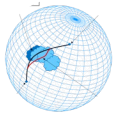
Initial registration geocadastre

Linking and controlling industrial components



Prediction of material and process attributes

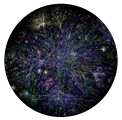
Industrial production lines



Aircraft navigation

Route planning

Data-driven CRM



Anomaly detection in network communication

Service technician allocation

10+ more

API-fication of Quantum Algorithms

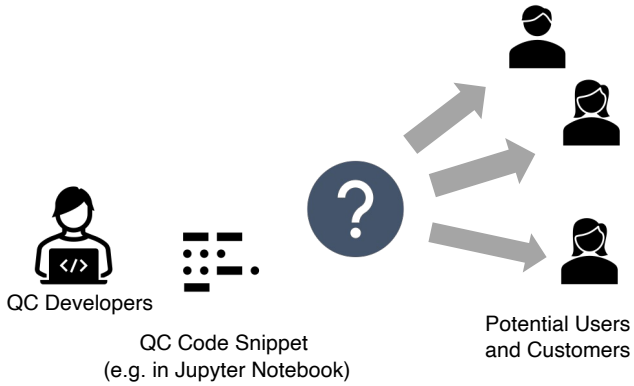
From today's QC code snippets to monetizable products

Today

Current status of QC developers & services

Quantum code primarily resides in Jupyter notebooks and other code snippets

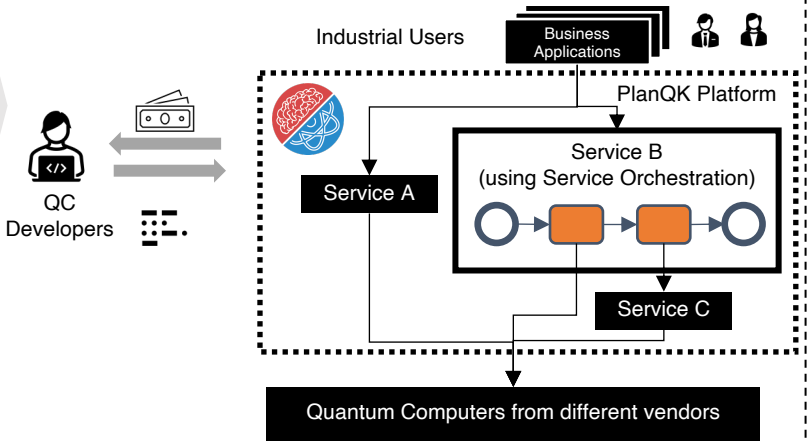
- Monetarization requires pre-/post-processing steps AND integration into enterprise architectures
- Code snippets have to be raised to products that can in turn interact with other products



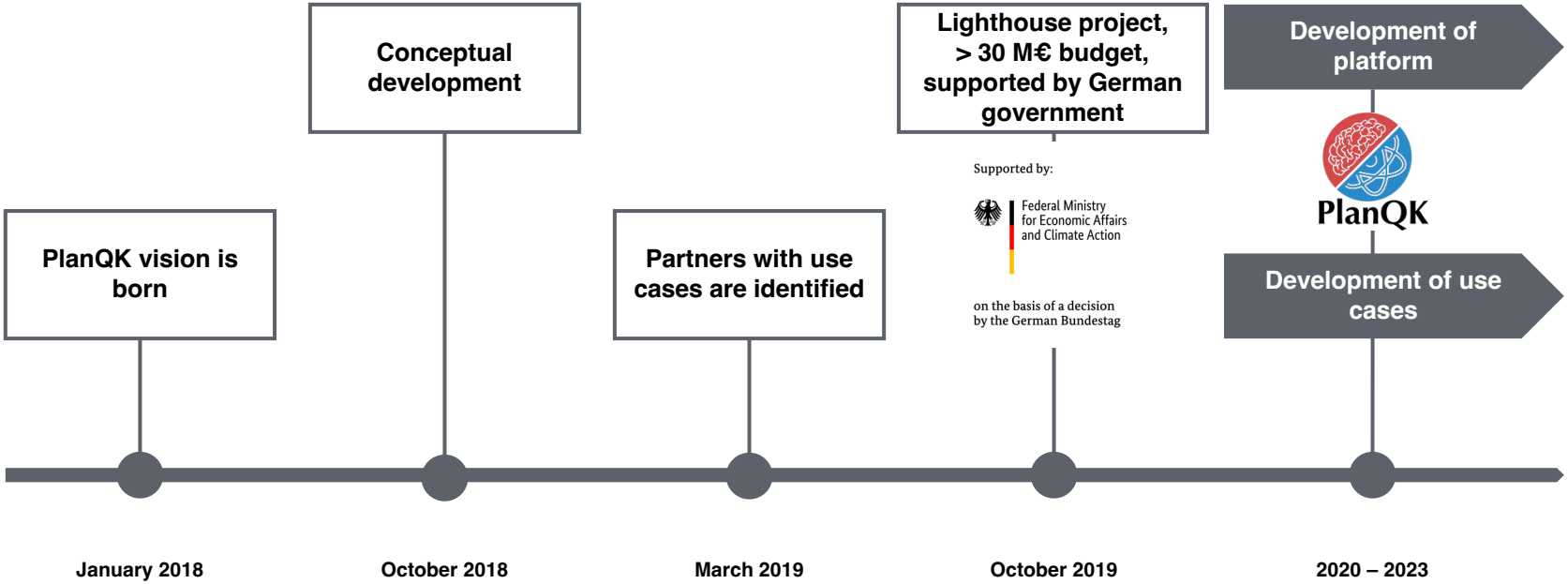
Tomorrow

PlanQK connects QC developers and customers

- Hosting, deployment and invoicing of QC services is handled by PlanQK, enabling QC developers to market worldwide
- Business applications can access QC services on PlanQK through APIs, negating cumbersome installation efforts



History and Future



ANAQOR | Frictionless Quantum

What we do

We deliver PlanQK – the next generation platform to integrate, deploy, advance, and monetize quantum code

We develop crucial quantum implementations for use by industrial customers and other developers through PlanQK

Our expertise in researching and developing quantum solutions fuels PlanQK's development and aids clients in their journey to quantum

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