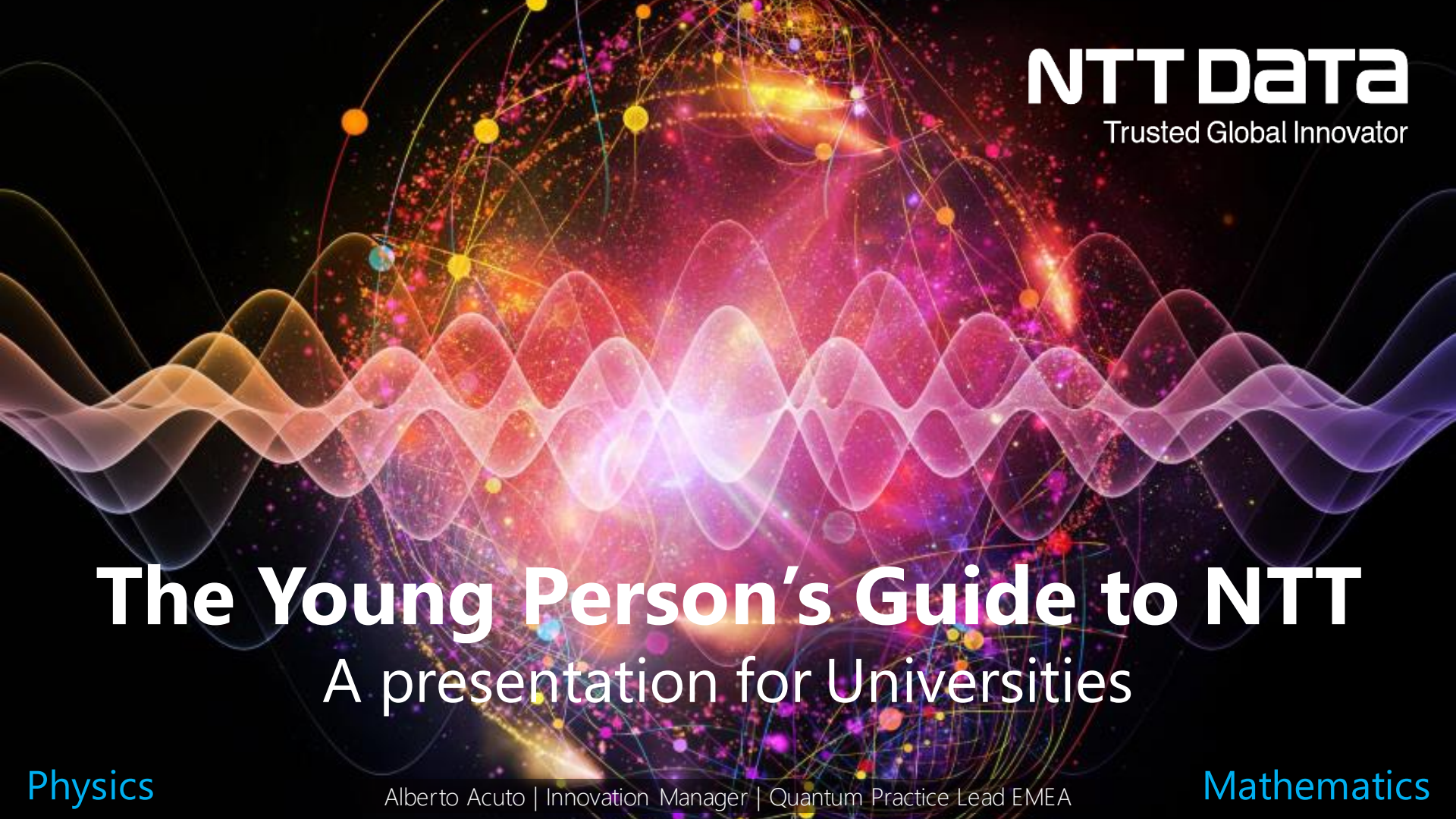

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The Young Person's Guide to NTT

A presentation for Universities

Physics

Alberto Acuto | Innovation Manager | Quantum Practice Lead EMEA

Mathematics

Who We Are

The NTT Group

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Some Numbers

ITALIAN STAFF

3,800

GROWING

R&D INVESTMENT

$2

BILLION

ANNUALLY

R&D STAFF

6,000

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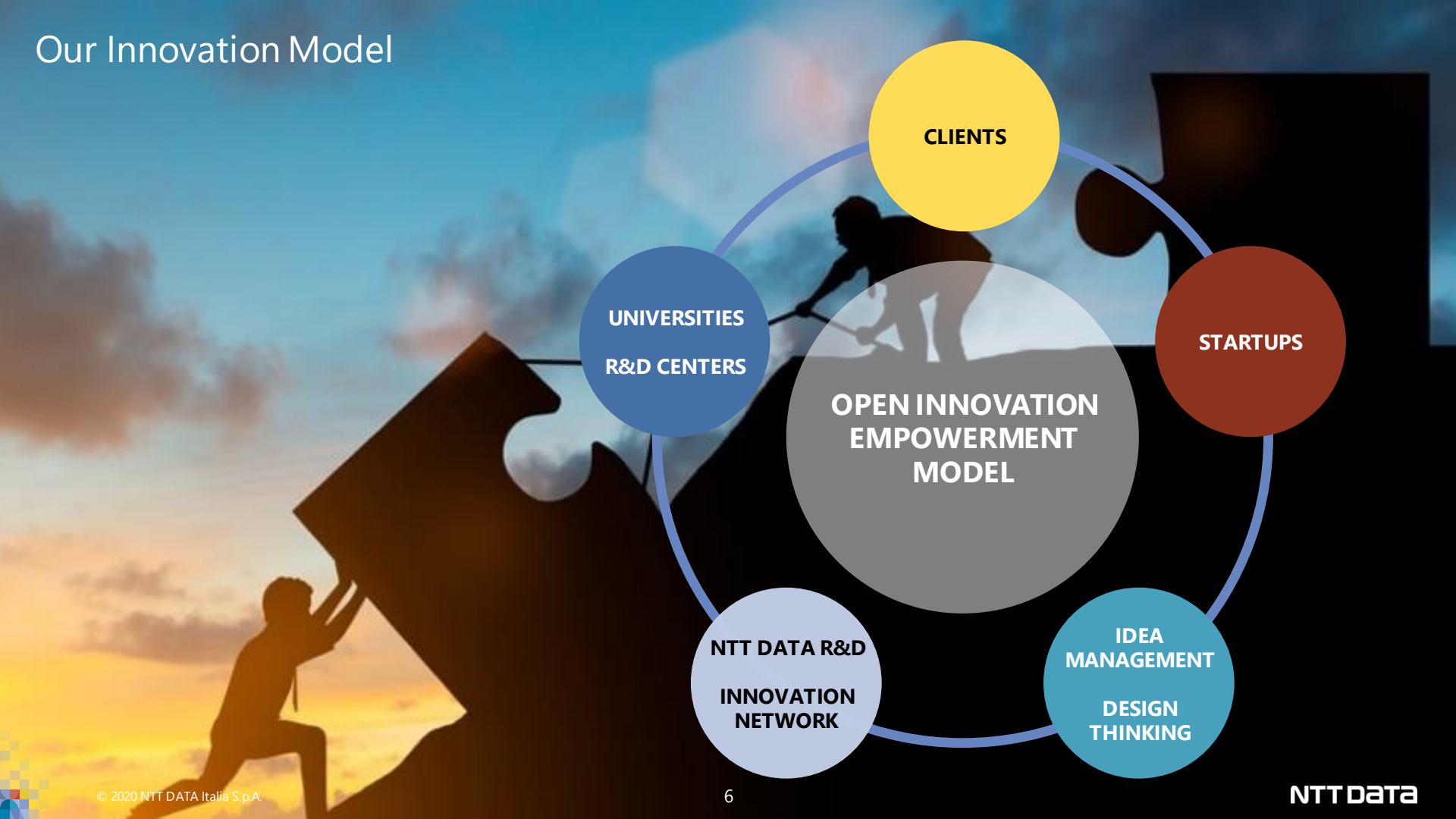
Our Innovation Model



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The Phygital World

Transparent Technology

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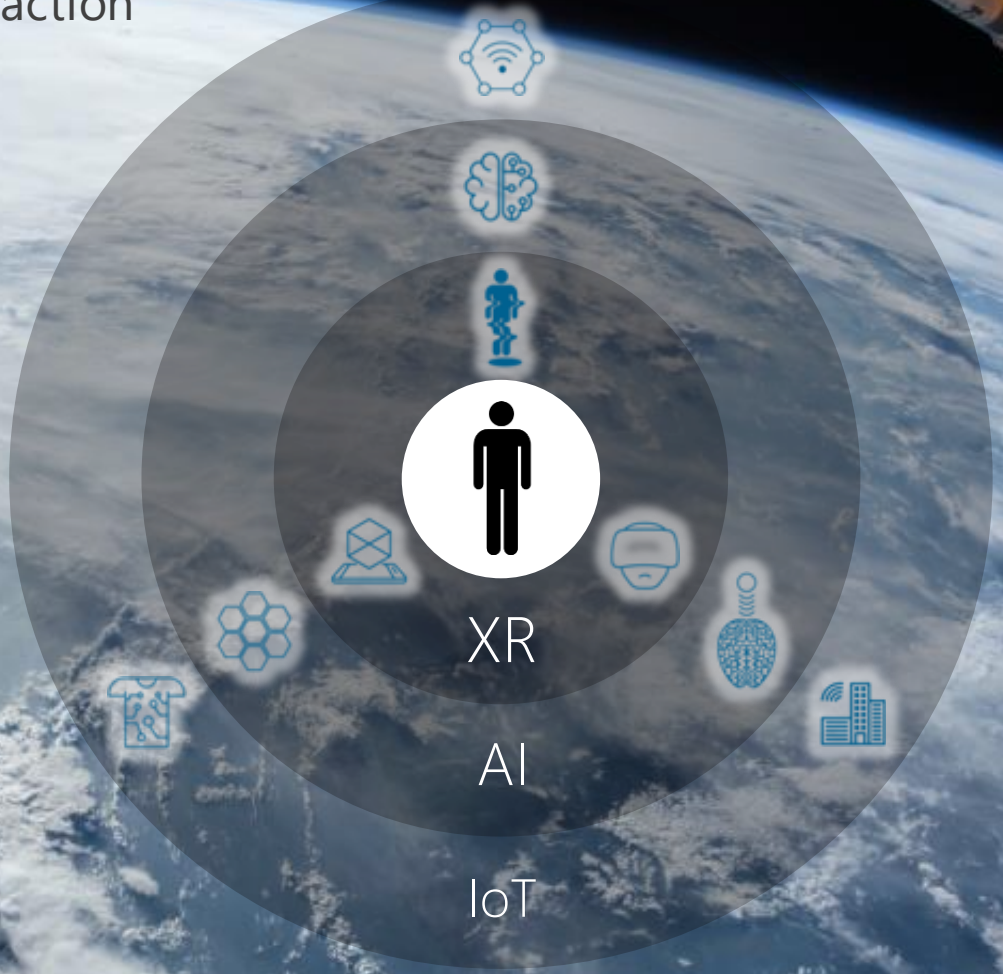
We Are Entering a New Era

A New Society is coming.
Digital transformation provides
augmented abilities to people,
enabling them to pursue their dreams,
and bringing other major breakthroughs
to push the human race forward.

A New Way of Interaction



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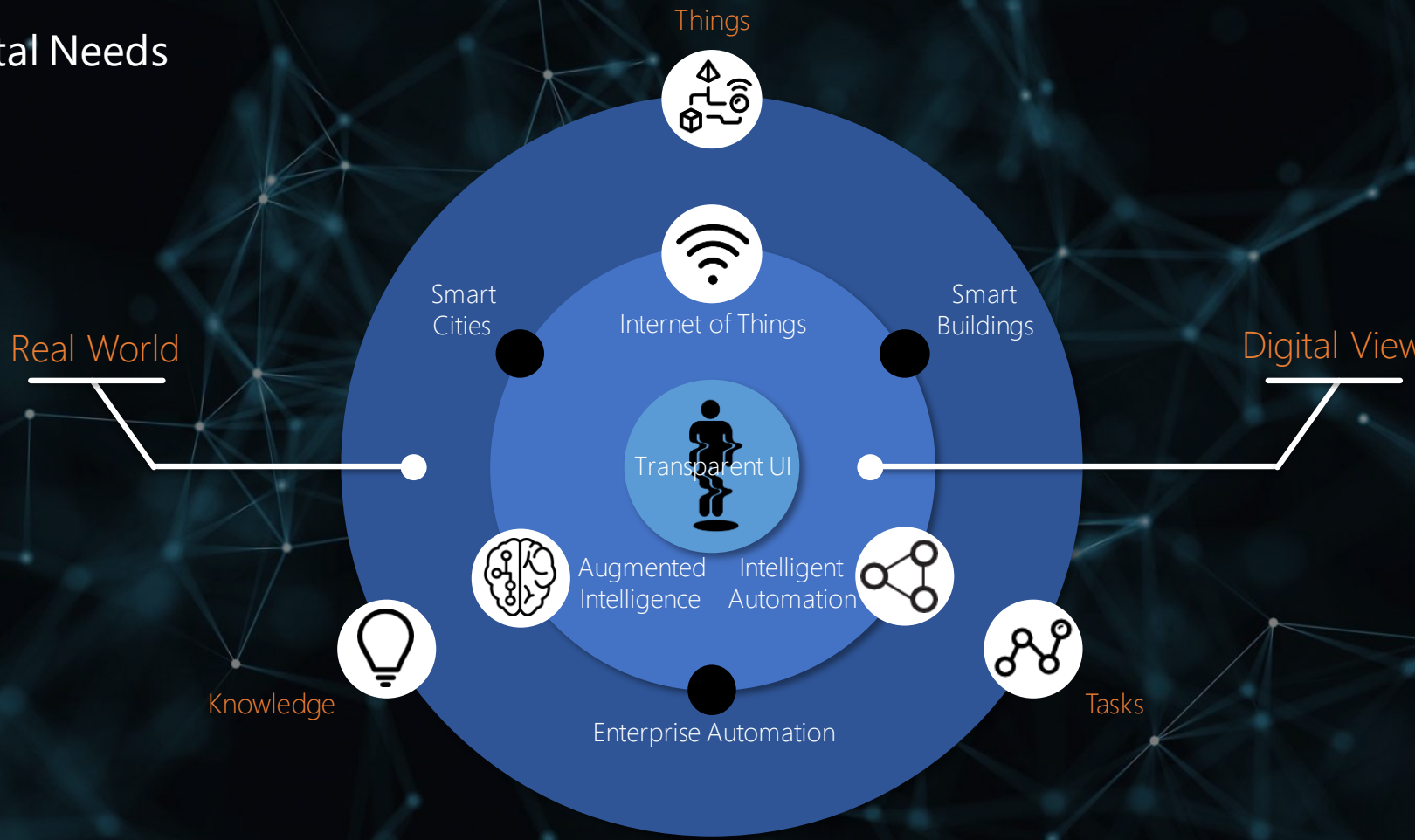
Digital Needs



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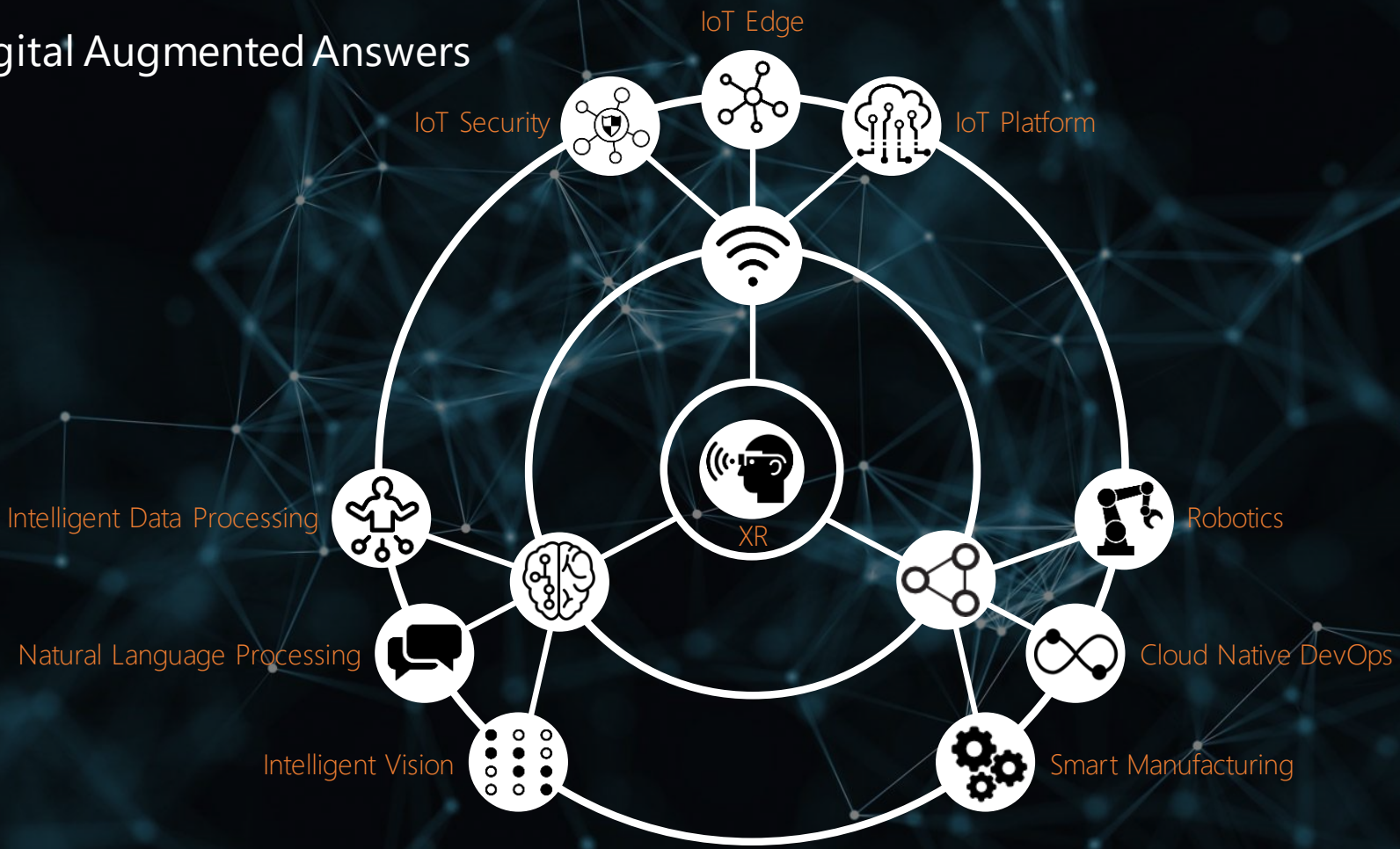
Digital Augmented Answers



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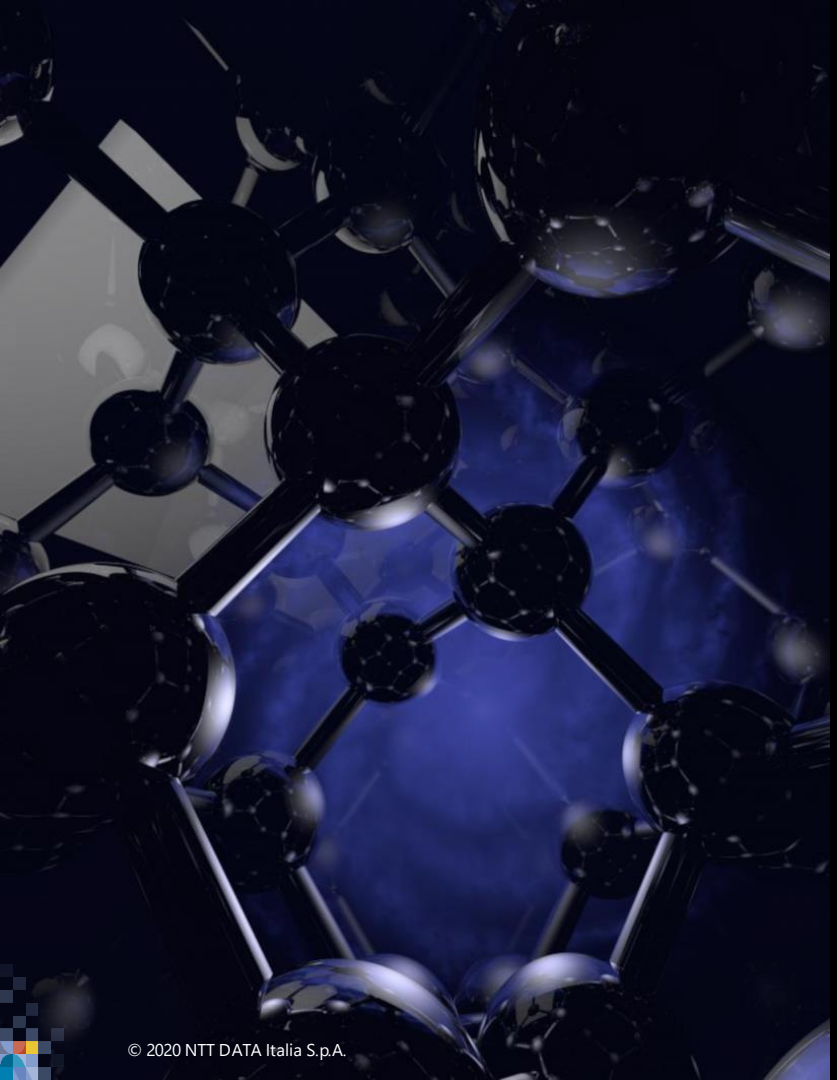


Beyond Digital

Quantum Computing

NTT DATA

Our Vision

Rethinking the computer from principles of critical phenomena in neural networks

We are here to uncover fundamental principles and novel technologies that advance our information processing beyond state of the art. We exist to rethink "computation" within the fundamental principles of quantum physics and brain science, and to develop hardware and software simultaneously.

2020 Technology Trend #06: Computer Power Evolution

The inexhaustible demand for computing power is being tackled through a combination of new, denser chips and application-specific architectures. To solve power requirements additional new materials like carbon nanotubes, and approaches like photonics and neuromorphic architectures are also being investigated and introduced.

The NTT Quantum Map

NTT Research

Build simple, efficient and practical solvers for real-world problems in our information intensive society.

University of Michigan

Theoretical studies of topological states with anyon statistics in nonlinear optics and synthetic topological matter.

Cornell University

Develop a k-SAT solver based on error detection and error correction feedback.

Stanford University

Optical and superconducting devices for studying the quantum-to-classical crossover and critical phenomena in the neural network.

Caltech

Develop scalable architecture for efficient quantum simulation of many-body spin systems using OPO networks.

NASA Ames Research Center

Perform benchmark studies of CIMs vs. modern heuristics on various optimization problems.

MIT

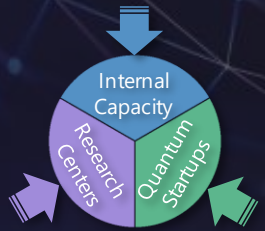
Develop the photonic accelerators for deep learning and the superconducting CIMs for fundamental study.

1QBit

Perform research in design and analysis of a stack of algorithms that bridge commercially viable applications.

NTT Ltd. & NTT DATA EMEA

Integrating clients business cases with quantum and quantum-inspired techniques. NTT DATA Quantum Team and internal academy.



Cambridge Quantum Computing

CQC provides expertise in quantum software – a quantum development platform, quantum machine learning, quantum chemistry, and quantum augmented cybersecurity.

IQM

A spin-off from Aalto University and VTT Technical Research Centre of Finland, focused on building the first European quantum computer based on superconducting circuits.

JoS Quantum

A startup partner focused on quantum and quantum-inspired algorithms for finance, insurance, energy, and transportation.

AQT

A spin-off from Innsbruck University, Alpine Quantum Technologies is a leading player on quantum hardware based on ion-trap technologies.

NTT & NTT DATA R&D

Research & Development Headquarters. LASOLV solution development.

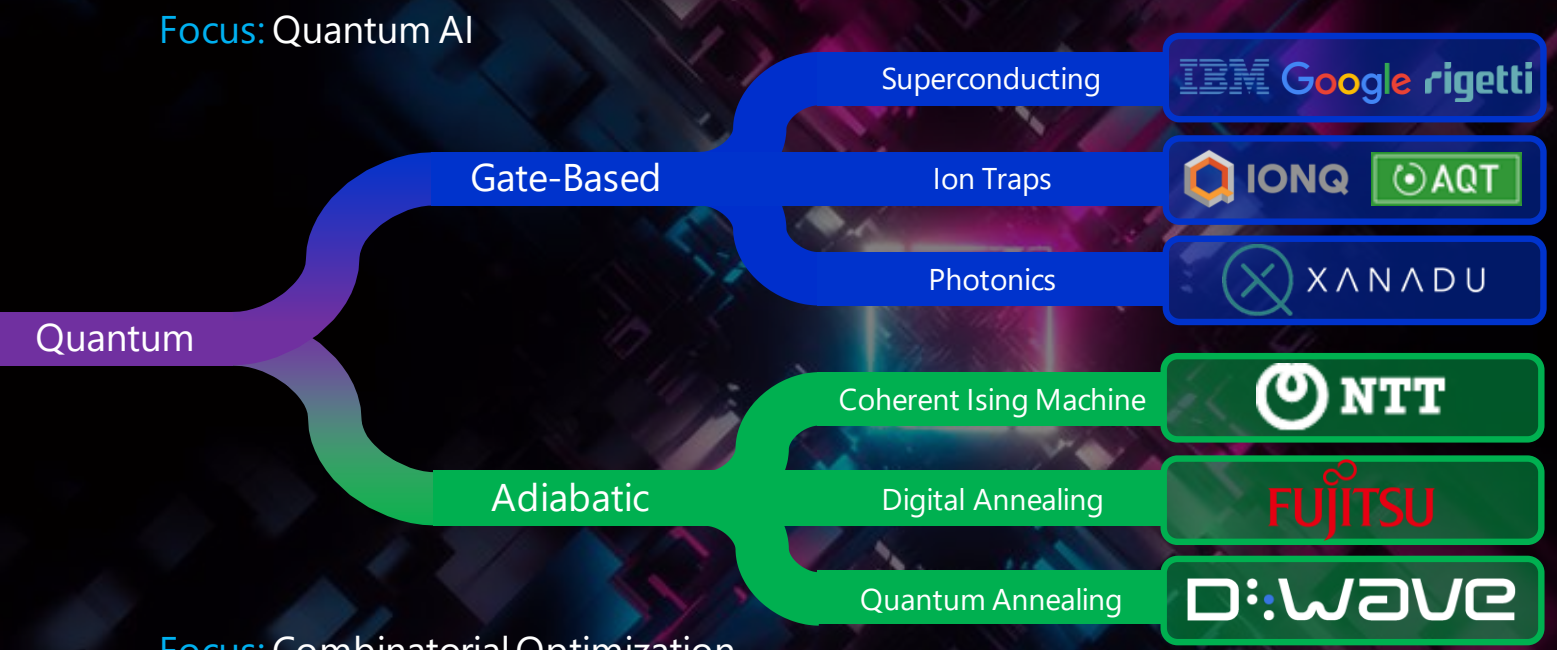
NTT DATA Quantum Lab, focusing on technology benchmarking and selection, prototyping, trial support.

Swinburne University

Develop and implement the quantum phase space methods for CIMs.

The NTT Group Global Network on Quantum Technologies

Approaches to Quantum Computing



STRAWBERRY FIELDS

PENNY LANE

TensorFlow Quantum

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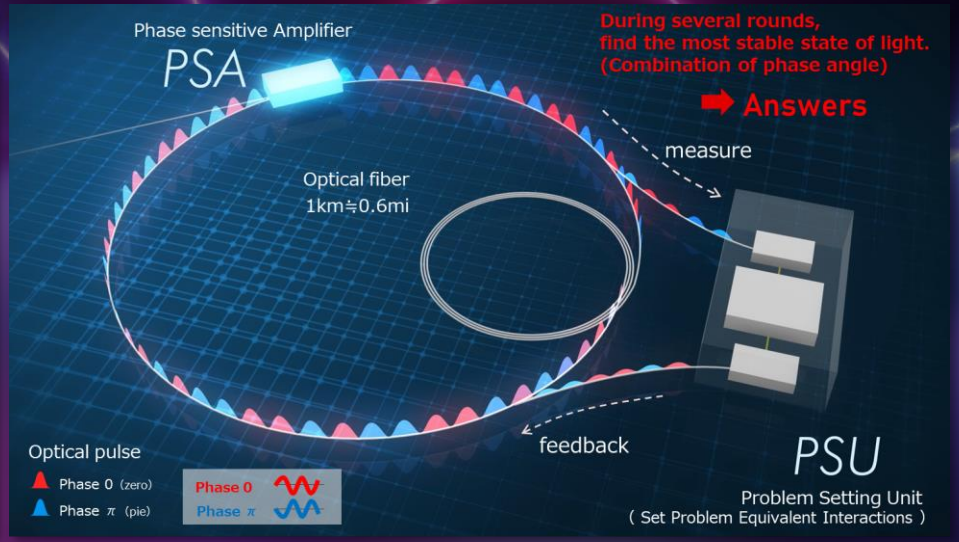
LASOLV – Laser Ising Machine

- Using optical physics to solve problems
- Operable at room temperature
- Fully-connected Ising model
- Now in the basic research stage, and we plan to extend to 100K nodes (currently 2K nodes)



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What We Offer

Join the Team!

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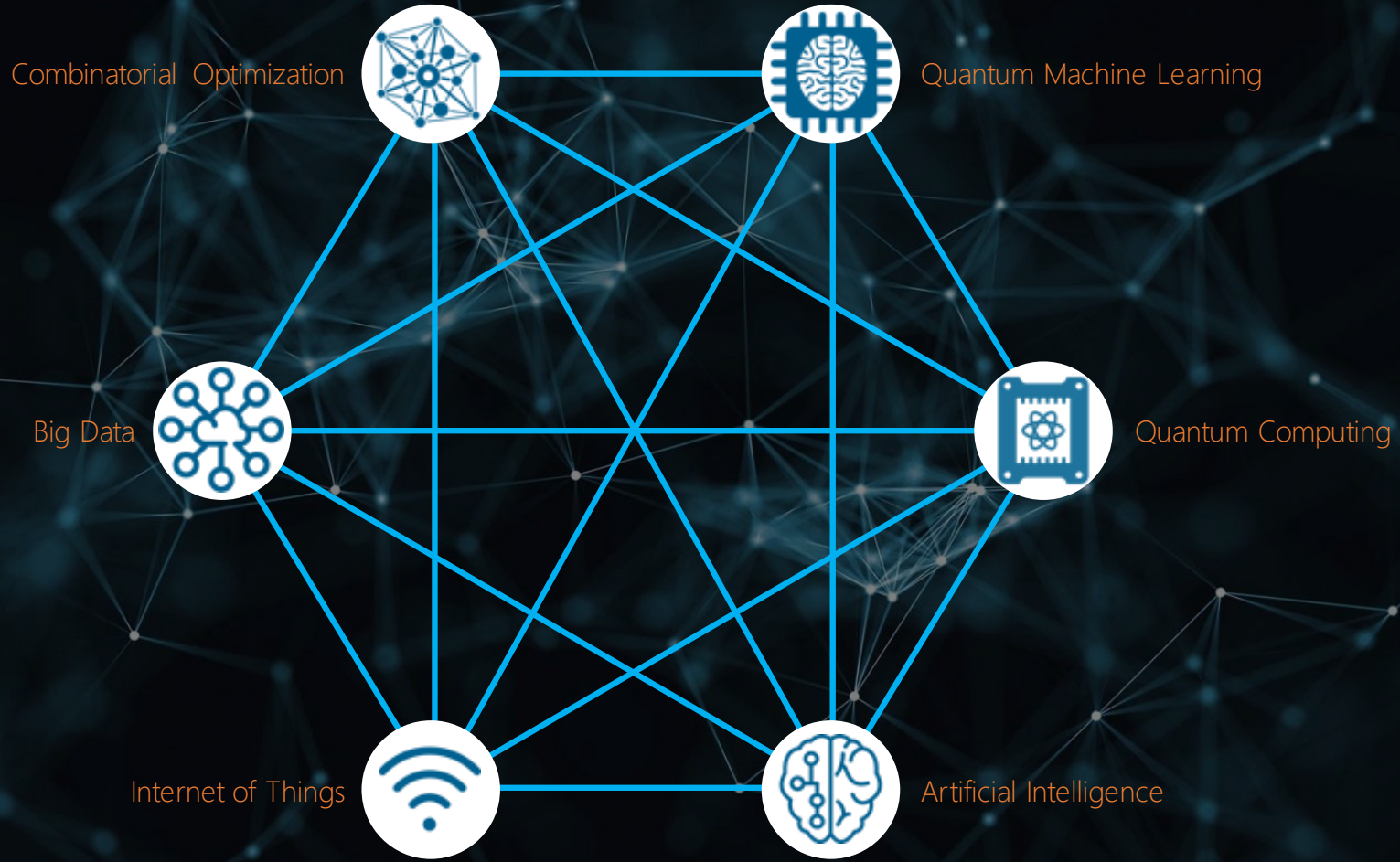
Internship



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NTT DATA Human Academy: a Huge Educational Offer

HARD SKILLS

- Application Design
- Cloud Development
- Cloud Infrastructures
- Innovation Management
- Design Thinking Methodologies
- Information Security Management
- Enterprise Architecture Design
- System Architecture Design
- System Integration
- Testing
- ...

CERTIFICATIONS

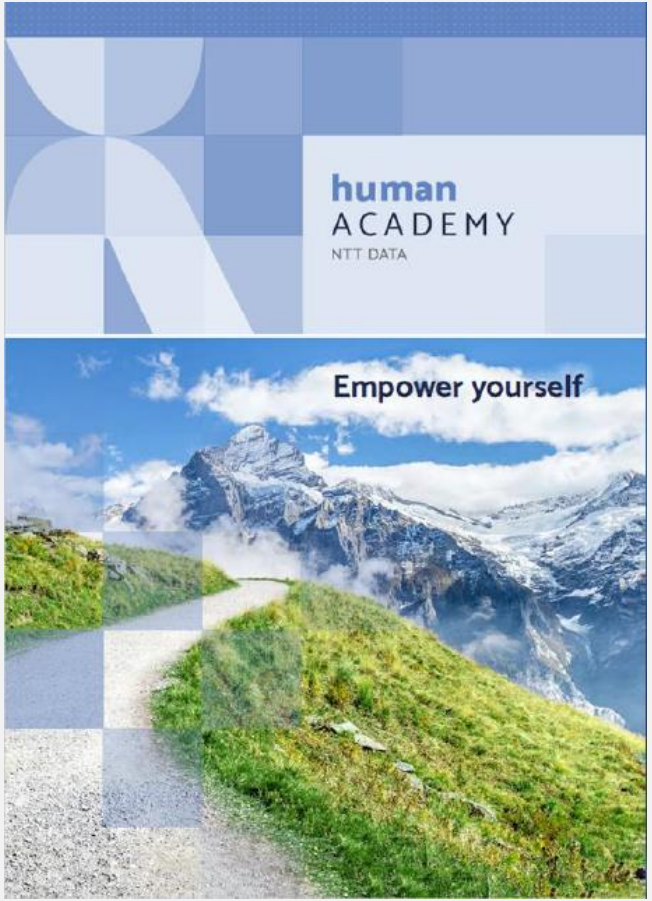
- AWS
- Azure
- Google Cloud
- Salesforce
- DevOps
- TOGAF
- Scrum
- ISTQB
- PMI
- ITIL
- ...

SOFT SKILLS

- Effective Communication in Services
- The Golden Rules for Effectiveness
- Advanced Conflict Management
- Adaptability and Flexibility
- Perspective Thinking
- Personal Branding
- Goal Settings
- Happiness
- ...

3 PROFESSIONAL PROGRAMS

- Project & Program Management
- Consulting Professional Program
- Service Management



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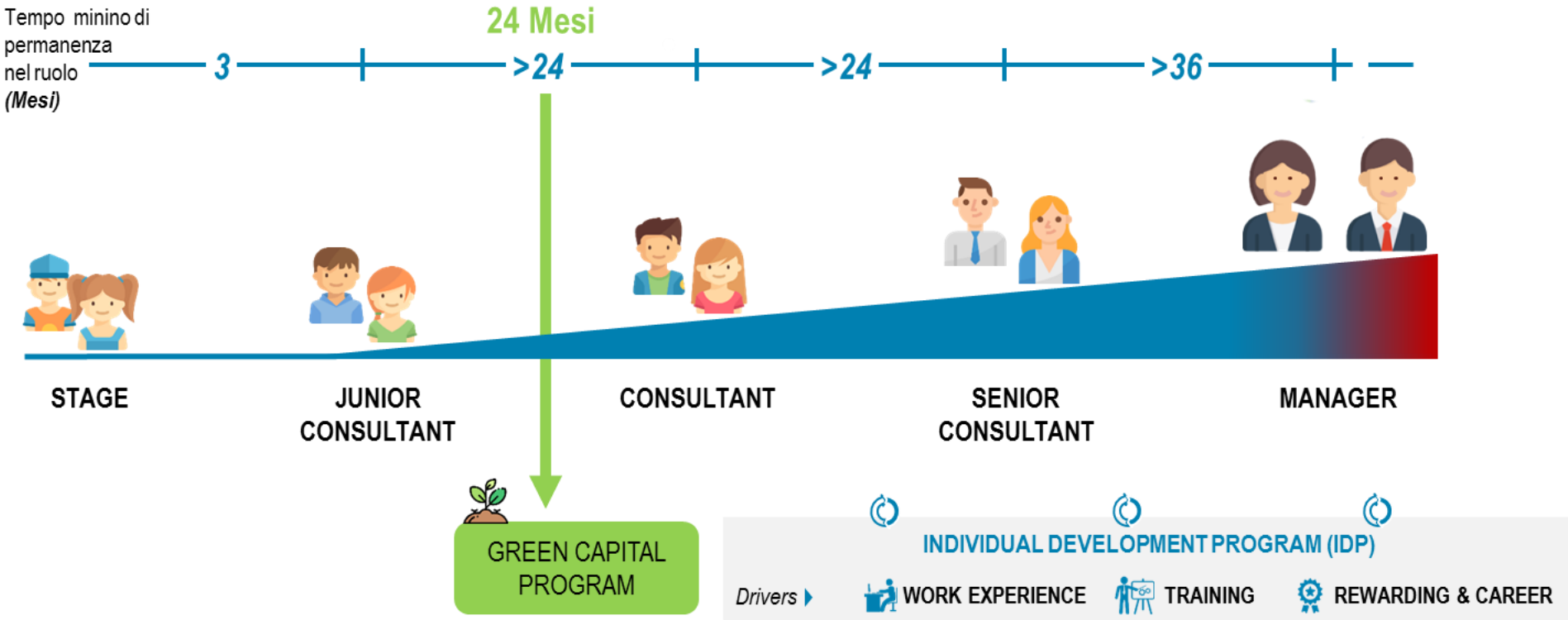
Career Path



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