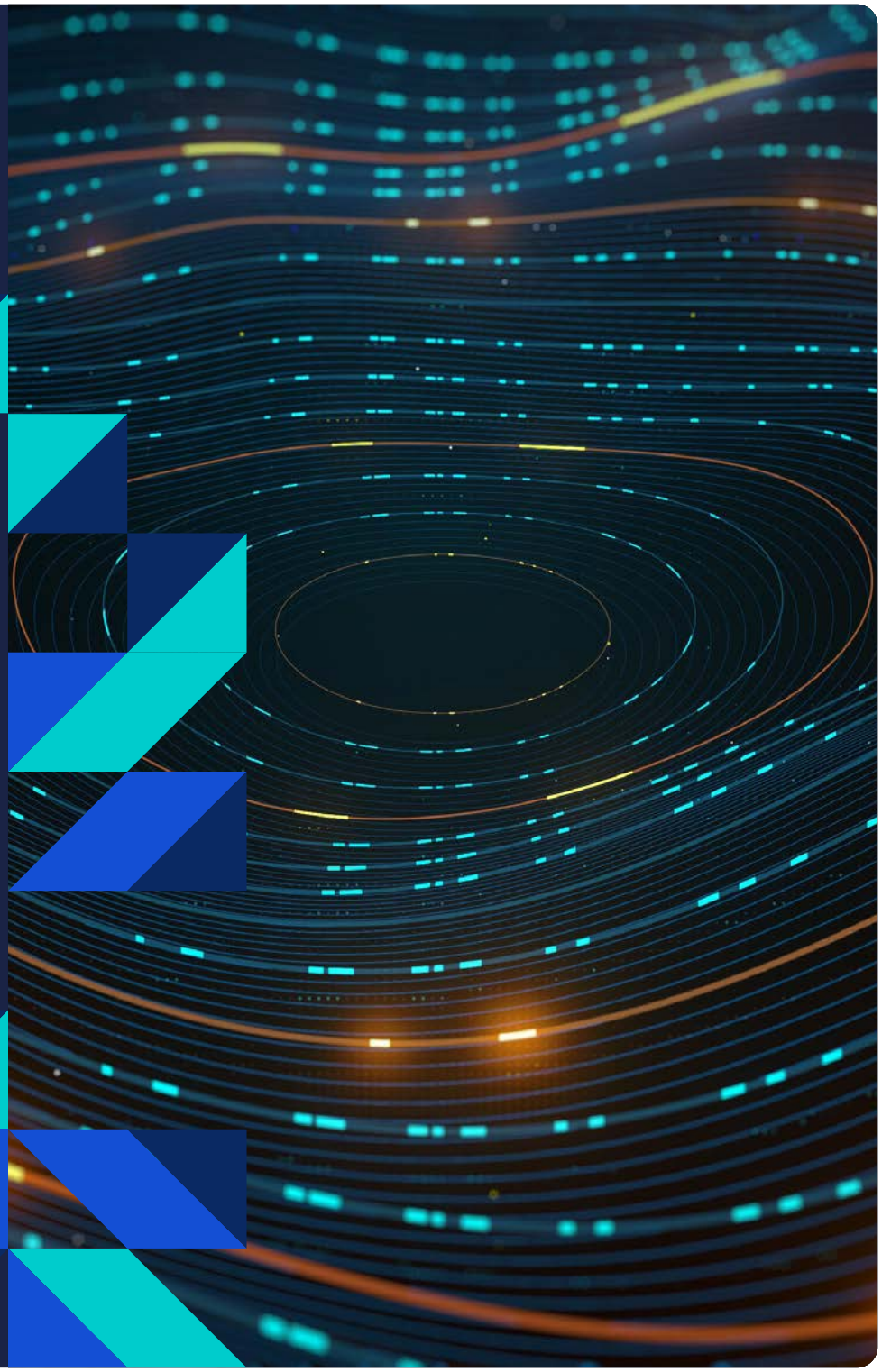
Telecoms & Tech Academy

5G Technologies



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CPD
The CPD Certification Service

5G Technologies

The programme explores the concepts of 5G technology, including capability requirements, the technologies that will deliver the core capabilities, and the impact on the customer proposition. We look holistically at the role of 5G in the technology roadmap and what it means for communication services providers (CSPs).

Topics including current standardisation work, regulation and industry activity; usage scenarios and deployment options; performance; capacity requirements; interoperability; security requirements; architectures; spectrum; and the impact on business models are all discussed.

Participants will build a comprehensive picture of 5G, as it stands, enabling them to make more informed technology and business decisions and contribute more effectively to successful strategy development.

PROGRAMME FORMAT

All our programmes are available on a customer-specific basis:

- Fully Customisable
- Range of delivery formats available
- PACE-enabled: maximise learning & ROI
- Experienced consultants and trainers

LEARNING OUTCOMES

Participants will develop or be able to:

- Contribute much more effectively to decision making and medium / long term strategy development within your organisation.
- Evaluate implementation options for 5G, building knowledge of a comprehensive set of technology / deployment scenarios and identifying the use case that each combination can effectively support.
- Develop technology solutions and roadmaps that are better aligned with the expected industry direction and that take account of latest technology developments and initiatives.
- A solid foundation on which to build organisational competency development plans to ensure opportunities arising from 5G can be maximised.
- Confidence to set expectation and drive internal debate on advanced technology issues, and to better evaluate solutions in terms of commercially viability, risk, and strategy.

Programme Agenda

Appoximate Course Duration: 2 Days

Module 1

OMDIA Operator Survey of 5G

A brief opening session presenting the findings of recent survey of mobile operators in which the respondents answered questions on their 5G expectations and strategies, the key 5G technologies and probable utilisation of 5G services.

Module 2

Defining 5G, Market Drivers And Use Cases

Topics

- 5G as a Concept
- Market Drivers for 5G
- Key Requirements & Design Principles
- Performance Requirements
- Broadcast & Multicast Services
- Supporting Video and TV
- 5G, M2M and the Internet of Things
- Advanced Use Cases
  - Smart Sensors
  - HD City
  - Augmented Reality
  - Stadium
  - Public Safety / Emergency
- Organisations Driving 5G Development
- Standardisation Roadmap
- 5G and LTE Co-existence
- Spectrum, Licensing and Regulatory Issues
- 5G Private Networks
- Impact of 5G on CSP / Operator Strategy
- Case Studies

Module 3

5G Technologies Architecture Options And Principles of Working

Topics

- Design Principles for 5G
- Service Provision Principles
- Radio Network
- Core Network
- Operations and Maintenance
- Networking Technologies for 5G
- Edge Technologies
- Network Exposure
- Interworking
- Security

Module 4

The 5G Core Network

Topics

- 5G Core Network Concepts
- Overall Network Picture and Ideas
- Functional Areas of the 5G Network
- Service Based Architecture Principles
- Control and User Plane Separation
- Network Slicing Concepts
- Network Slice Provisioning and Management
- Network Function Virtualisation (NFV)
- NFV Concepts, Benefits and Challenges
- NFV in Hybrid 4G/5G Networks
- Software Defined Networks
- SDN Concepts, Benefits and Challenges
- SDN in Hybrid 4G/5G Networks
- Multi-Access Edge Computing (MEC) in detail
- MEC Architectures and example services
- MEC Exposure

Module 5

The 5G Radio Access Network

Topics

- Introducing 5G RAN
- RAN Architecture
- Centralised and Distributed RAN Options
- Fronthaul and Backhaul requirements
- Open RAN Considerations
- 5G RAN Performance
- Evolving LTE toward 5G
- Low Latency Design
- Bandwidth Scaling
- Radio Efficiencies
- Frame Structures
- Multiple Access for 5G Radio
- Introduction to Millimetre-wave in 5G
- MIMO in 5G
- RAN Protocols and Transmission

Telecoms & Tech Academy

Informa Telecoms & Tech Academy, part of Informa Tech, has been providing training programmes and workshops for organisations within the telecoms/ICT space for the past 20+ years.

We have a wide portfolio of telecoms/technology/ICT specific programmes. We take time to understand your requirements, you'll work with our specialist training team to ensure that we deliver your perfect training programme for your business. Our programmes include the latest relevant market research, analysis and insights from Omdia – the biggest research organisation in the industry. We train right across an organisation.

Job Functions include:

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- Senior Manager
- Middle Manager
- Identified Talent
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- Retail Sales
- Technology Teams
- Supporting Functions (Finance, HR, Marketing, Operations)

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