# 5G Advanced for Product Managers

## CONTENTS

This course provides a practical, product-focused overview of 5G Advanced — the second wave of 5G standardization that begins with 3GPP Release 18 and continues through Release 19 and beyond.

It starts with the groundwork every product team needs: the difference between Non-Standalone and Standalone deployments, the three ITU service categories, the service-based 5G core and its key network functions, and how to read the 3GPP release map, including Study Items, Work Items, functional and protocol freeze, and the four Es of Release 19.

From there, the course goes deep on the three most commercially visible themes of 5G Advanced: AI and machine learning in the radio access network, network energy saving as a measurable opex lever, and lean device tiers such as RedCap and eRedCap for industrial, metering and wearable use cases. It closes with the wider feature set — extended reality, fixed wireless access uplink, non-terrestrial networks and positioning — plus an early look at the 6G timeline.

Throughout, the focus stays on turning specification activity into credible product decisions: what each feature delivers, what it costs in latency, coverage or capacity, and when it will realistically be available.

## TARGET AUDIENCE

This course is intended for product managers, product owners and business-side professionals working with mobile network technology who need to translate 3GPP specification work into roadmap and pricing decisions. It is equally useful for technical marketing, pre-sales, strategy and innovation roles, as well as engineers and architects who want the commercial perspective on 5G Advanced. It suits anyone evaluating features such as AI in the RAN, network energy saving, RedCap devices, fixed wireless access, satellite coverage or positioning — and anyone who needs to judge what is available today versus what is still announced or merely planned.

## COURSE OBJECTIVES

By the end of this course, you will be able to:

- Distinguish Non-Standalone and Standalone 5G and their product consequences.
- Explain the service-based 5G core and its key functions and interfaces.
- Read the 3GPP release map, including Study Items, Work Items and freezes.
- Classify features using eMBB, URLLC, mMTC and the Release 19 four Es.
- Describe how AI/ML is framed in the RAN and on the NR air interface.
- Assess RAN energy-saving levers and the trade-offs each one carries.
- Compare RedCap and eRedCap against cost, throughput and battery targets.
- Outline XR, fixed wireless uplink, NTN and positioning capabilities.
- Position 5G Advanced within the 6G study and standardization timeline.
- Judge feature readiness from specification freeze to commercial availability.

## PREREQUISITES

No specific prior knowledge is required. A general understanding of mobile networks is helpful, and familiarity with basic 4G or 5G terminology or experience in a telecom product or technical role will make the material easier to apply.

## 5G Groundwork and Release Map

- 5G Building Blocks for Product Teams
- Reading the 3GPP Release Map

## AI, Energy Saving and RedCap

- Machine Learning Inside the RAN
- Cutting RAN Energy Consumption
- Lean Device Tiers for IoT

## Wider Feature Set and 6G Outlook

- Beyond the Priority Three