THE 5G BUSINESS POTENTIAL

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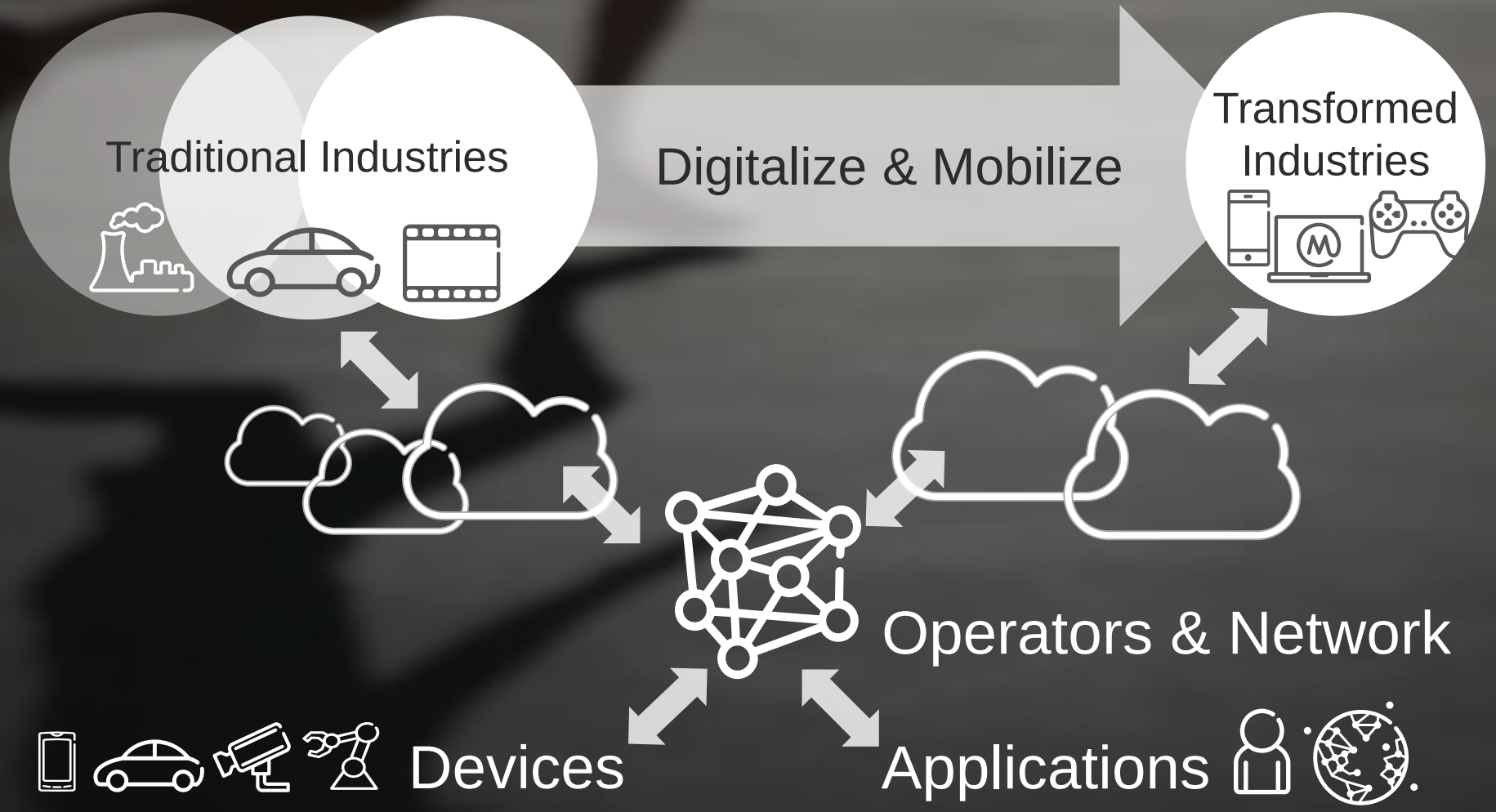
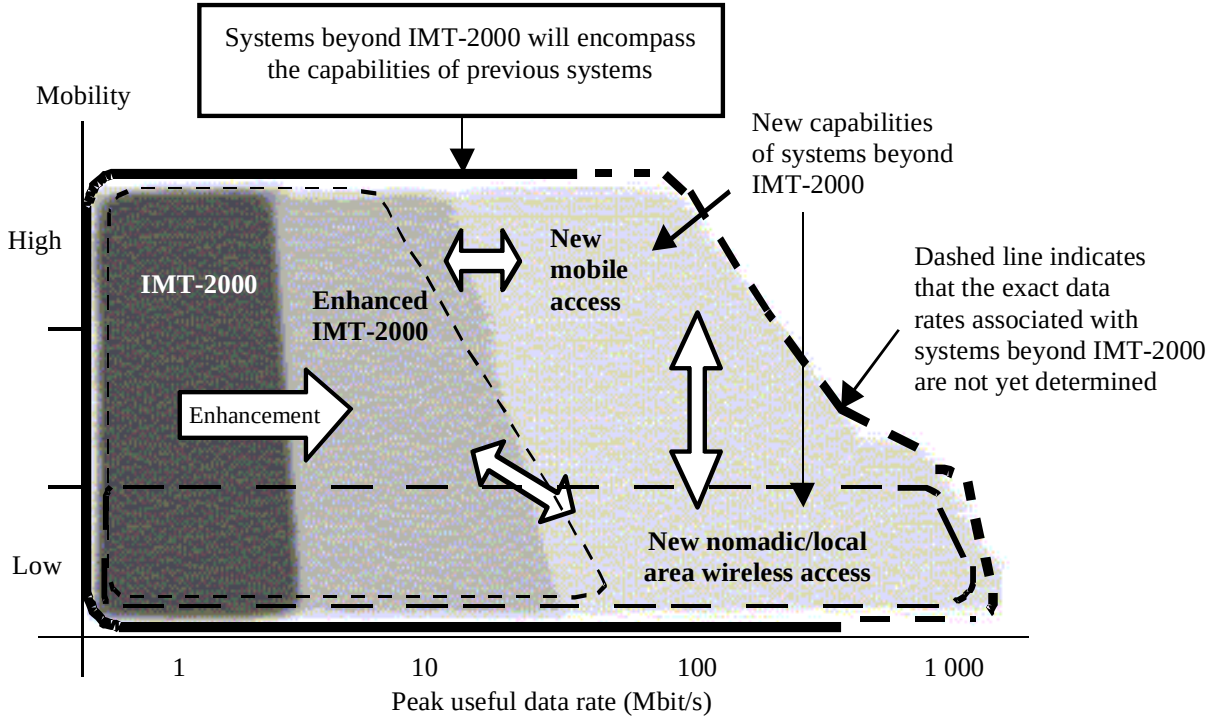
Networked Society Day 2017

INDUSTRY TRANSFORMATION



4G VS. 5G (KPI)

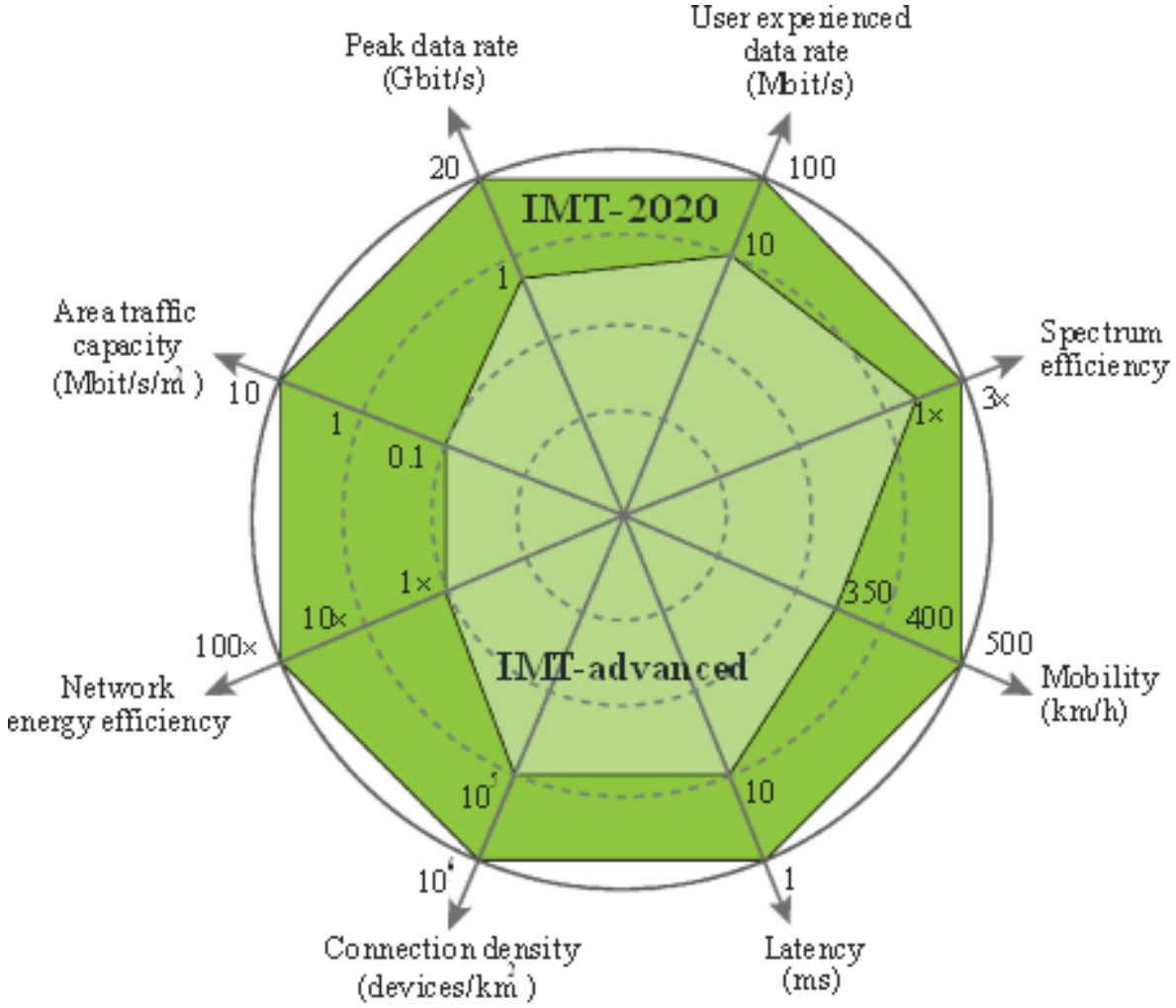


⟺ Denotes interconnection between systems via networks, which allows flexible use in any environment without making users aware of constituent systems

Nomadic/local area access systems

Digital broadcast systems

Source: Recommendation ITU-R M.1645 (06/2003)

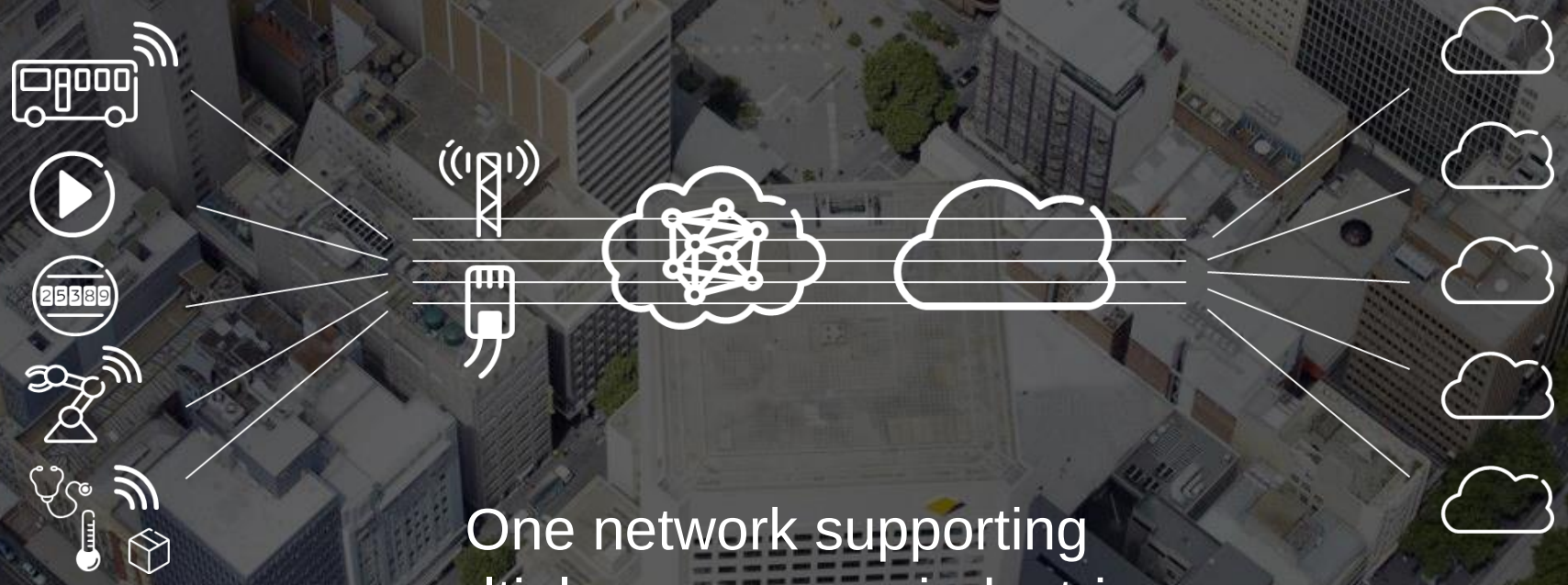


Source: Recommendation ITU-R M.2083-0 (09/2015)

THE EXPECTATIONS OF 5G

ERICSSON | LG

- **10-100x** END-USER DATA RATES
- **1000x** MOBILE DATA VOLUMES
- **5x** LOWER LATENCY
- **100x** MORE DEVICES
- **Cost** DEVICE COST REDUCTION
- **10+** YEARS BATTERY LIFE
- **+20dB** BETTER COVERAGE



One network supporting multiple use cases, industries

5G: THE ROAD AHEAD

5G BUSINESS POTENTIAL

METHODOLOGY

- The operator addressable share of revenue is based on the 2017 Arthur D. Little global telecoms study report, Major Strategic Choices Ahead
- Reconfiguring for Value is based on 150 industry interviews
- Source: Ericsson and Arthur D. Little

MANUFACTURING

PUBLIC SAFETY

MEDIA AND ENTERTAINMENT

PUBLIC TRANSPORT

HEALTHCARE

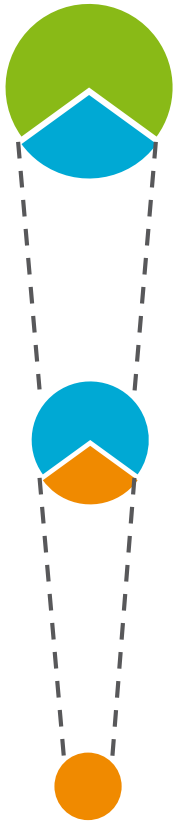
AUTOMOTIVE

FINANCIAL SERVICES

ENERGY UTILITIES

GLOBAL DIGITALIZATION AND THE VALUE OF 5G IN THREE STEPS

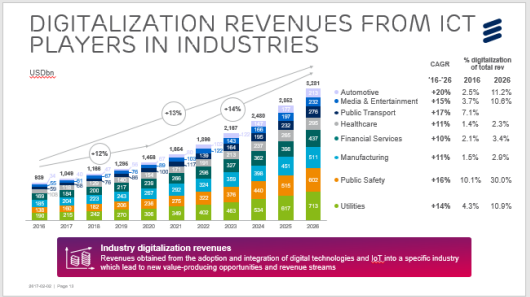
1 Digitalization revenues for ICT players



Key takeaways

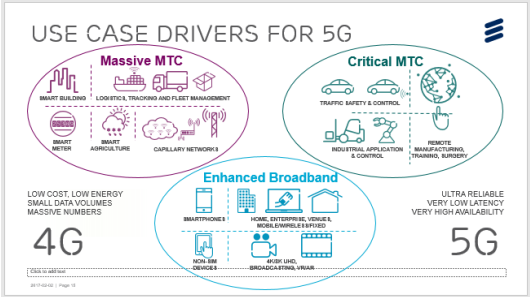
- Current operator service revenues is in stagnation
- All industry verticals are facing large scale ICT-driven transformations
- Operators may find new sources of revenues in B2B2x opportunities

Illustration



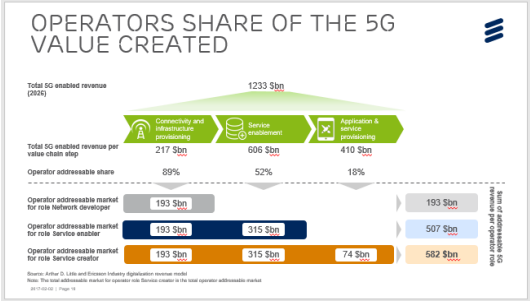
2 5G enabled digitalization revenues

- 5G has high performance in many key KPIs
- Many industry use cases applications can be created or enhanced by 5G
- A forward shift in the smart value chain is expected



3 5G operator addressable digitalization revenues

- Operator addressability in the smart value chain will differ by industry:
  - Rate of disruption
  - Geographic relevance
  - Complexity of applications
  - Privacy and security concerns



DIGITALIZATION REVENUES FOR ICT PLAYERS: DEFINITION

Description

What is included?

- Revenues captured by **ICT players in the smart value chain** generated by new value producing opportunities related to digitalization
- Revenues related to providing **connectivity** for the smart object, **enablement** of the smart object and **service provisioning** for the **smart object**
- **IoT** revenues of **operators**

What is not included?

- **Savings** generated by **digitalization**
- Revenues generated by **industry players**
- Revenues related to the **sale** of the **'smart object'** (e.g. the car, the forklift, the hospital bed, etc.)
- **Current operator service revenues**

Example of players

TELEFONICA, DISNEY, SONY, APPLE, GOOGLE, FACEBOOK, EBAY, ORACLE, ORANGE, AMAZON, ERICSSON, AT&T, MICROSOFT, ALCATEL LUCENT, ACCENTURE, COMCAST

KAROLINSKA UNIVERSITY HOSPITAL, NEW YORK CITY, EON, CNN, BANK OF CHINA, VOLVO, CAT, BP, PARIS METRO

Revenues obtained from the adoption and integration of digital technologies and IoT into a specific industry which lead to new value-producing opportunities and revenue streams

Source: Arthur D. Little

DIGITALIZATION REVENUES FOR ICT PLAYERS

ADL Smart Market Model
Arthur D. Little proprietary smart market model

Market reports
> 20 reports from established industry players forecasting digitalization or ICT revenues

Expert interviews
>10 interviews with Ericsson experts to test figures
> 100 interviews with executives from ICT companies

ADL insights
Discussions with global and local representatives of each industry practice to validate figures

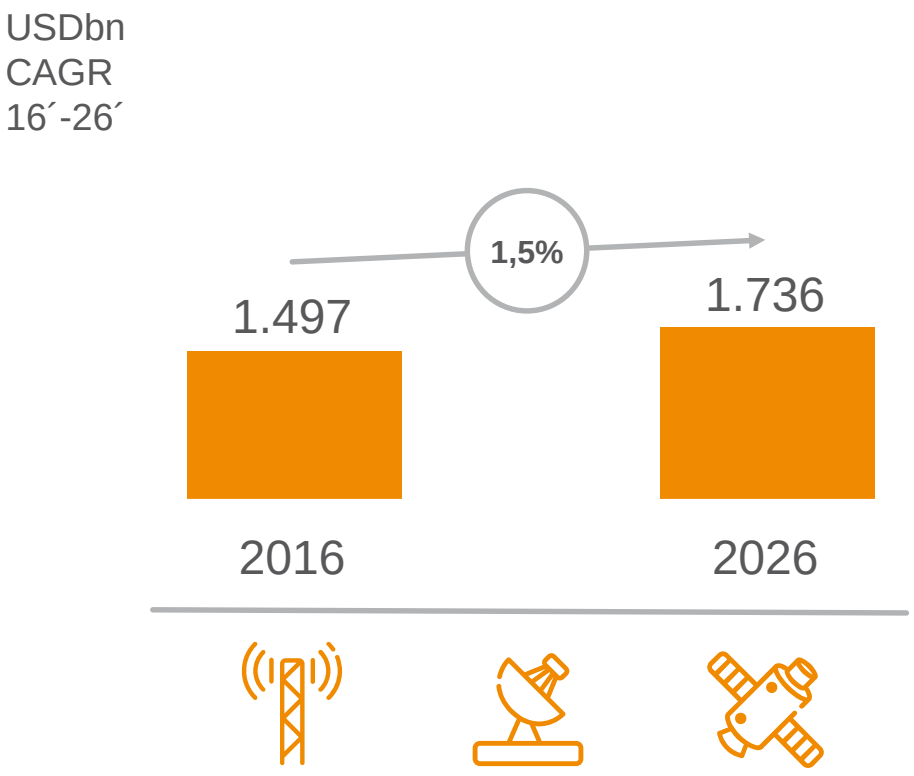
Assumptions
Management assumptions on CAGRs and removal of outliers

Final calibration
Final sense check and calibration with project team

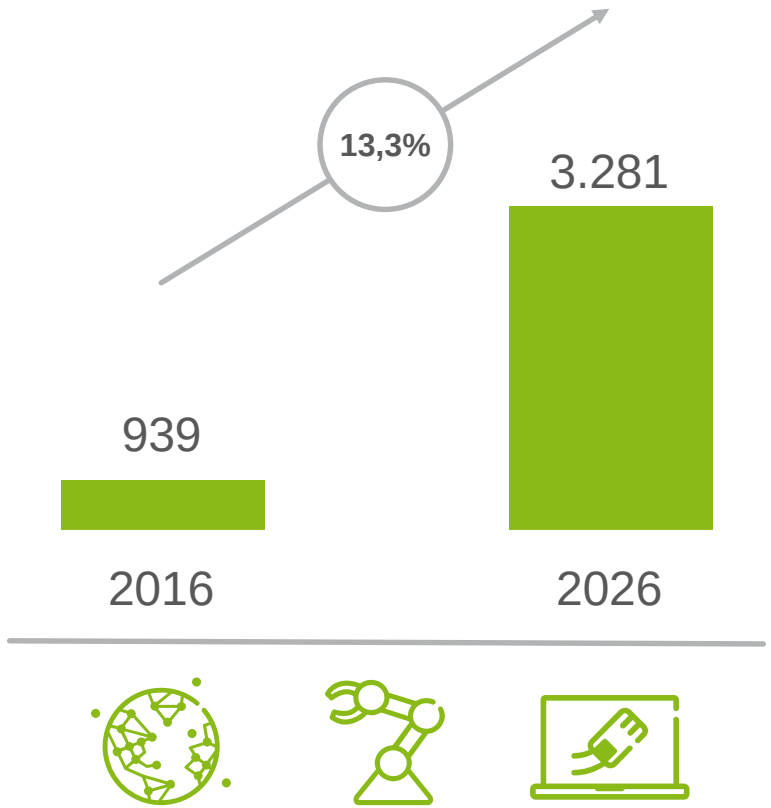
Digitalization revenues for ICT players

A GROWING SHIFT IN THE REVENUE POOLS

Current operator service revenues

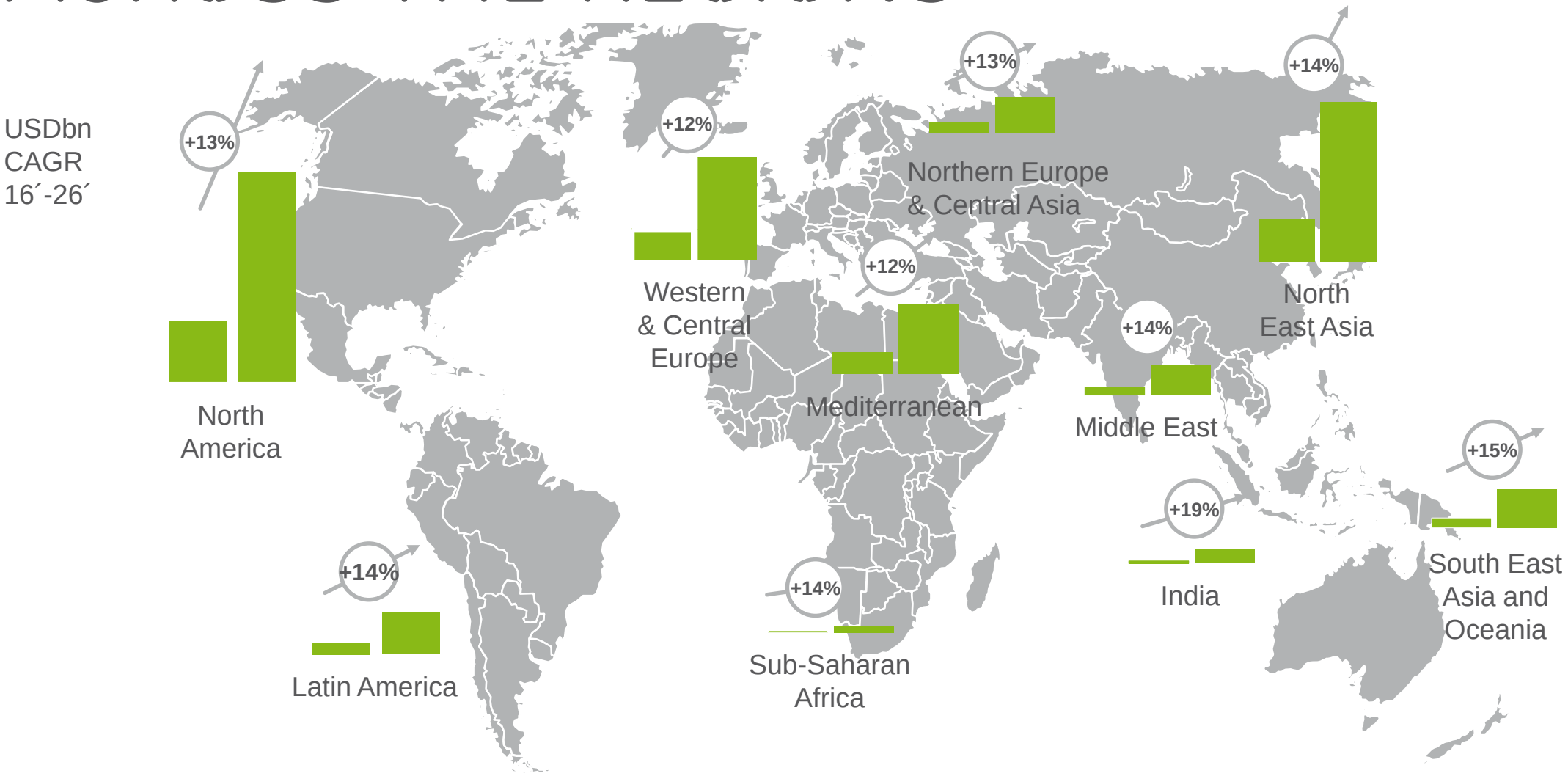


Digitalization revenues for ICT players



Source: Ericsson and Arthur D. Little

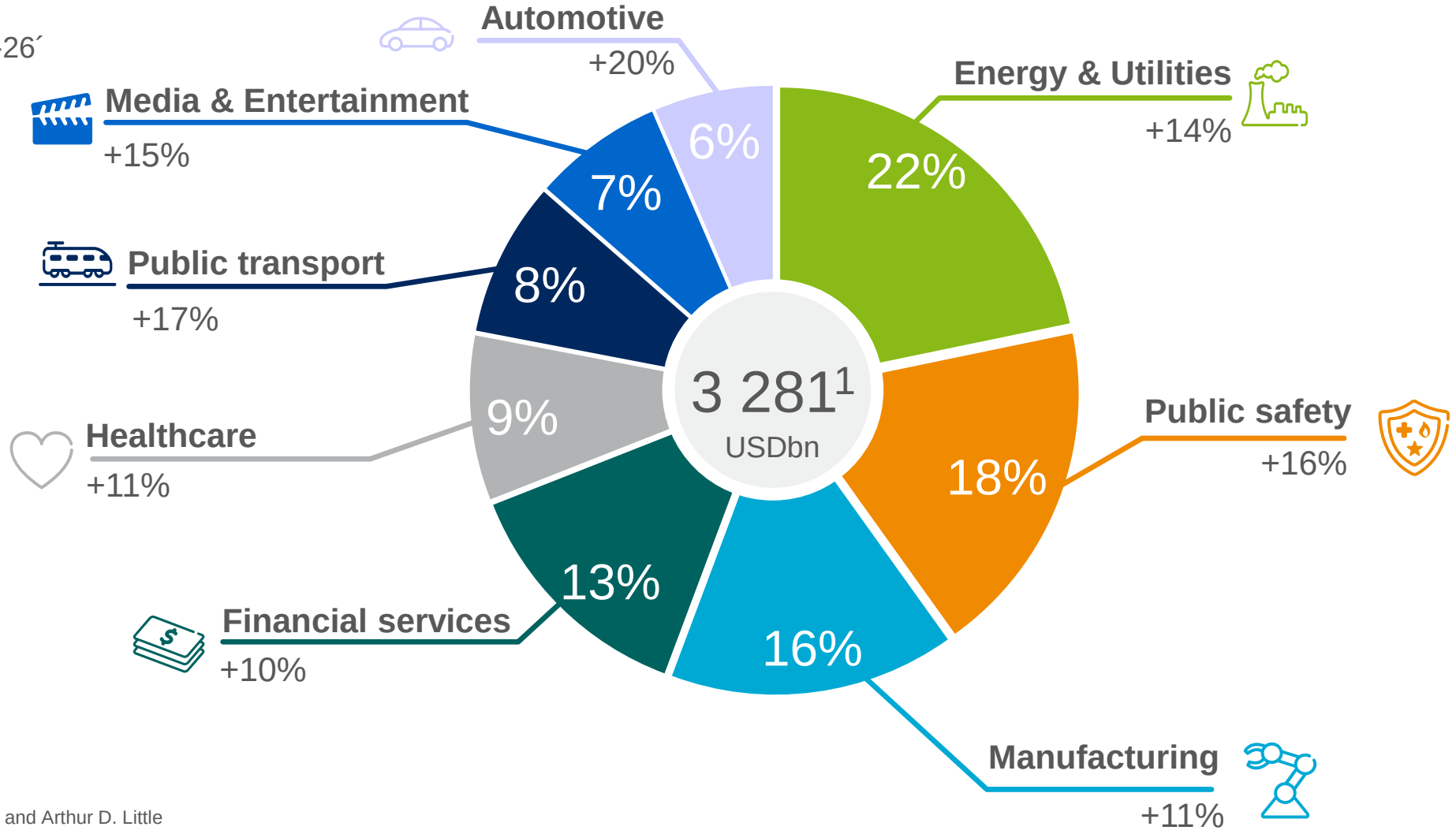
DIGITALIZATION REVENUES ACROSS THE REGIONS



Source: Ericsson and Arthur D. Little

DIGITALIZATION REVENUES FOR ICT PLAYERS IN INDUSTRIES

CAGR 16´-26´

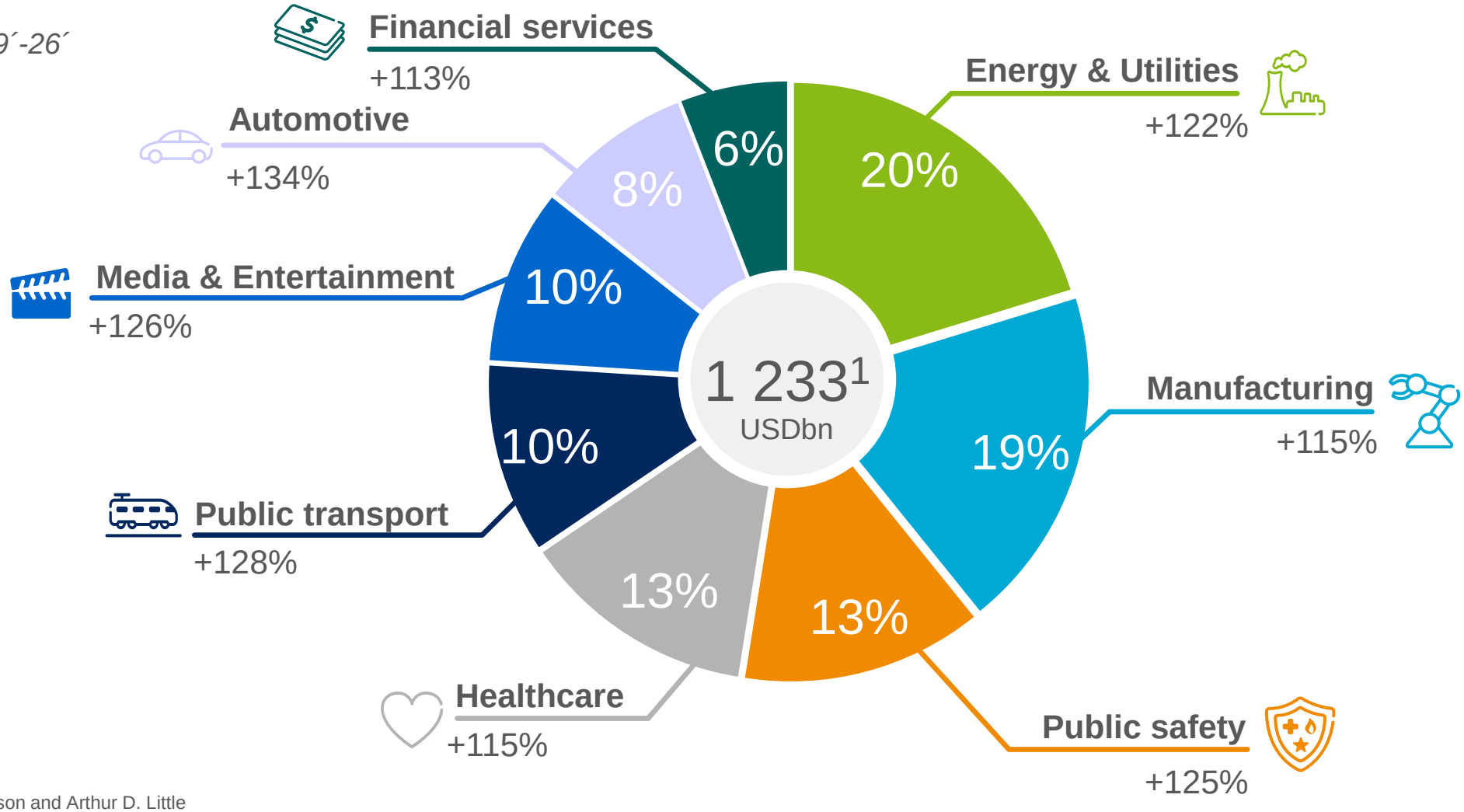


Source: Ericsson and Arthur D. Little

Note; 1) Year 2026

5G ENABLED DIGITALIZATION REVENUES FOR ICT PLAYERS

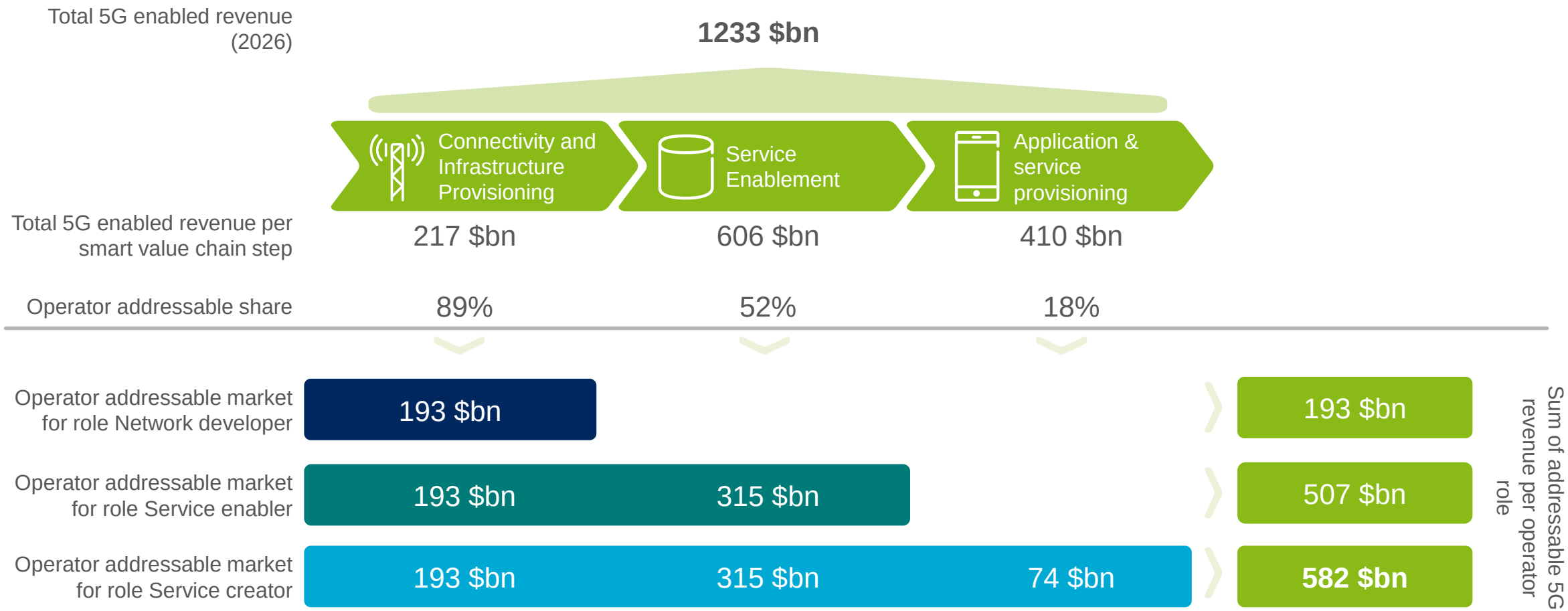
CAGR 19´-26´



Source: Ericsson and Arthur D. Little

Note; 1) Year 2026

OPERATORS SHARE OF THE 5G VALUE CREATED

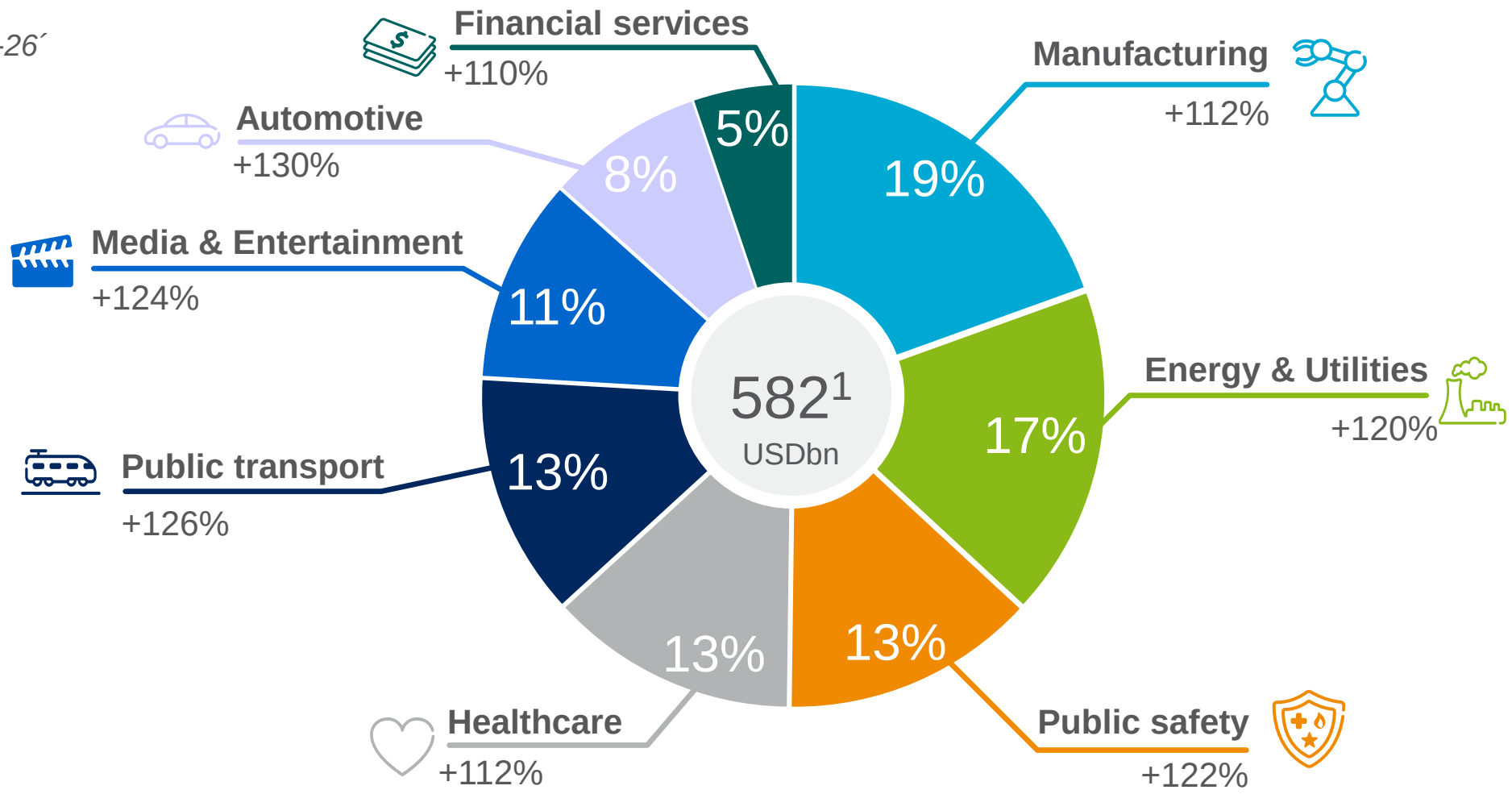


Source: Ericsson segmentation model, Arthur D. Little smart market model

Note: The total addressable market for operator role Service creator is the total operator addressable market

5G OPERATOR ADDRESSABLE DIGITALIZATION REVENUES

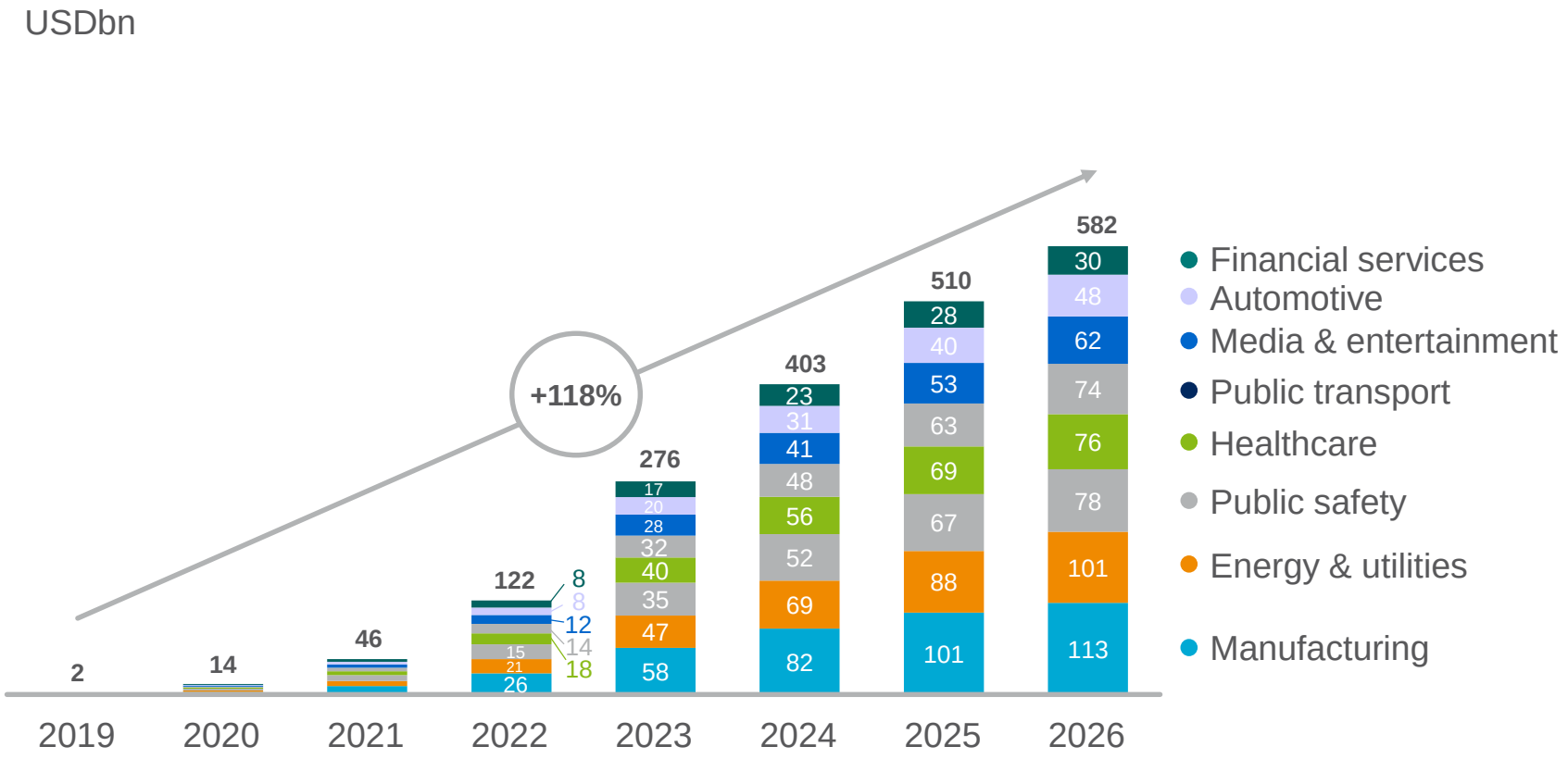
CAGR 19´-26´



Source: Ericsson and Arthur D. Little

Note; 1) Year 2026

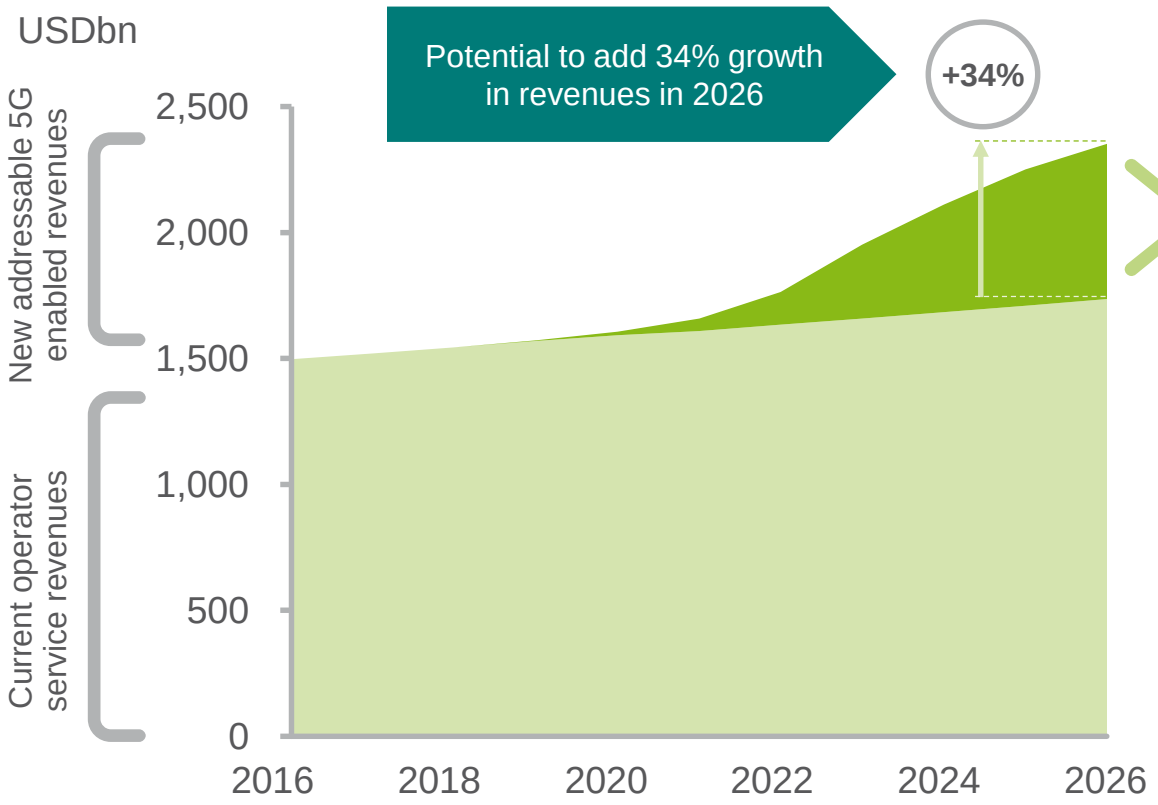
5G OPERATOR ADDRESSABLE INDUSTRY DIGITALIZATION REVENUES



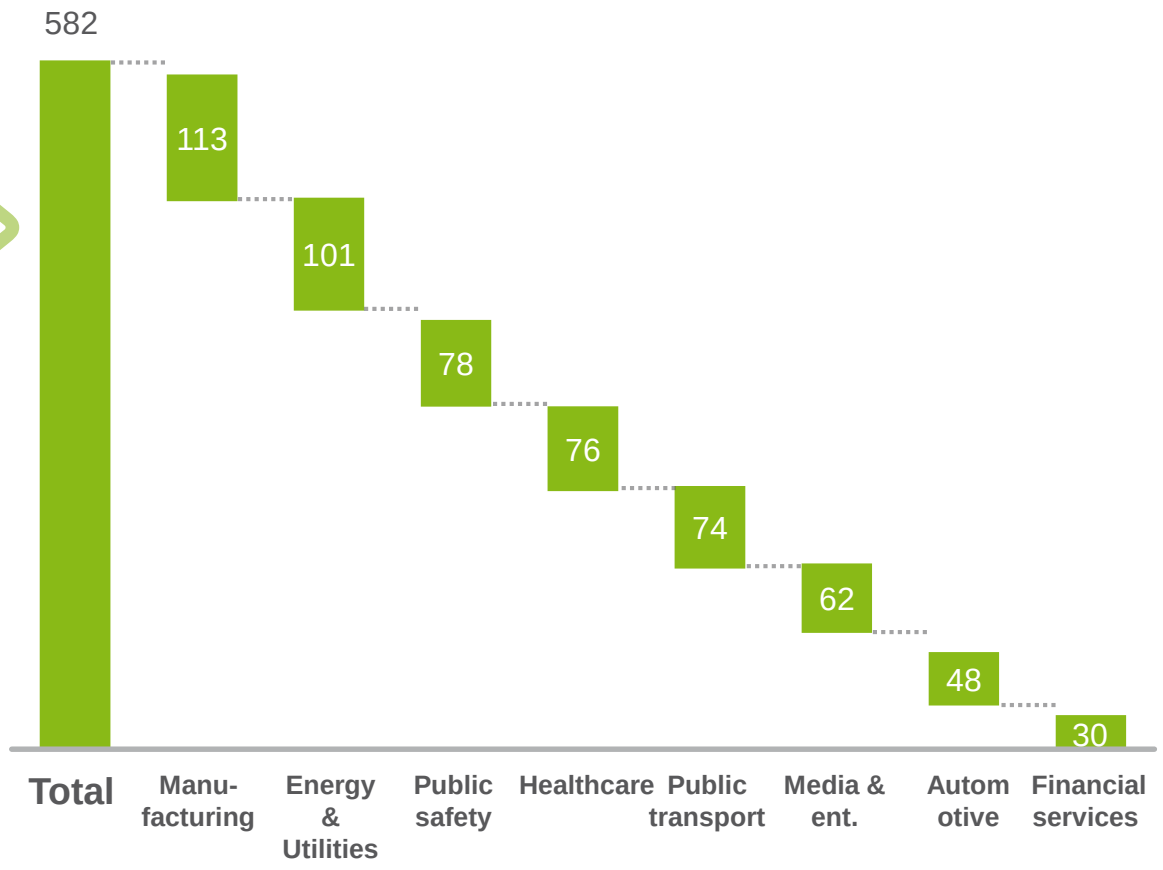
5G Operator Addressable Industry Digitalization Revenues
Portion of the 5G enabled smart industry revenues that can be captured by telecom operators

OPPORTUNITY FOR OPERATORS

Current & 5G addressable revenues



Split per Industry (2026)

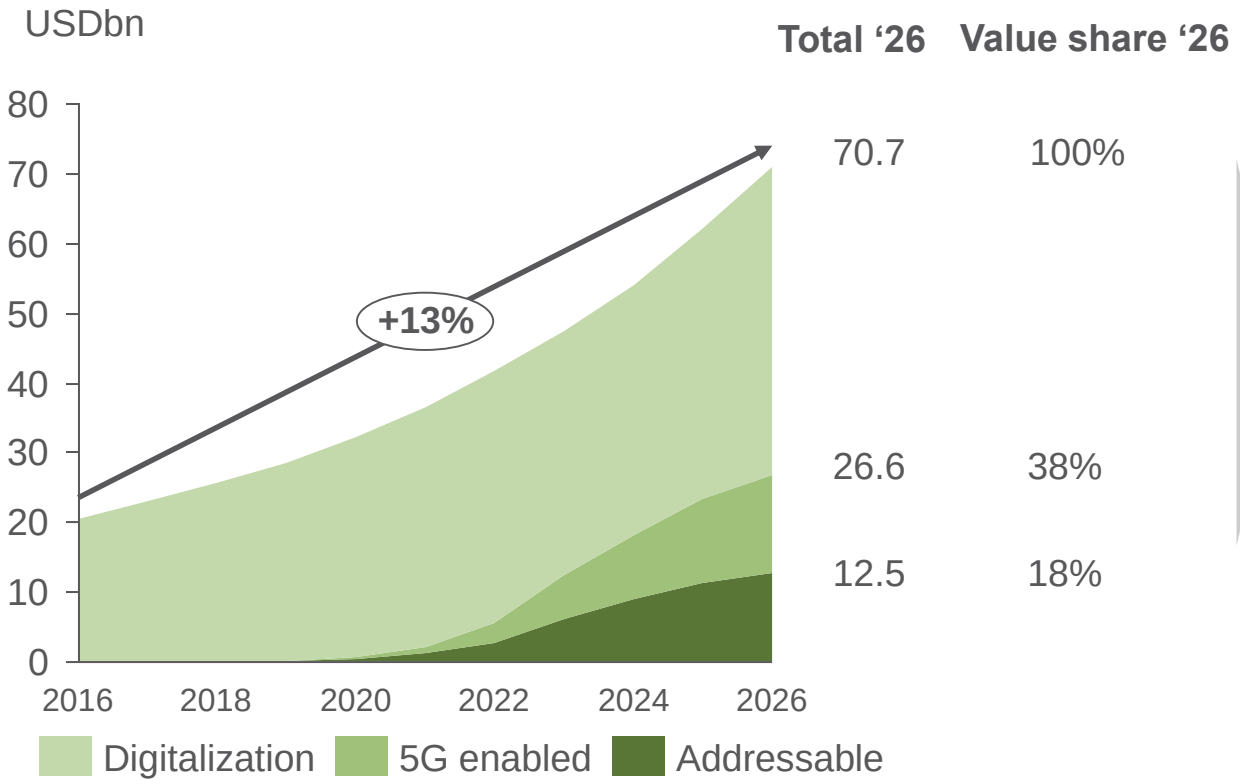


INDUSTRY USE CASE CATEGORIES

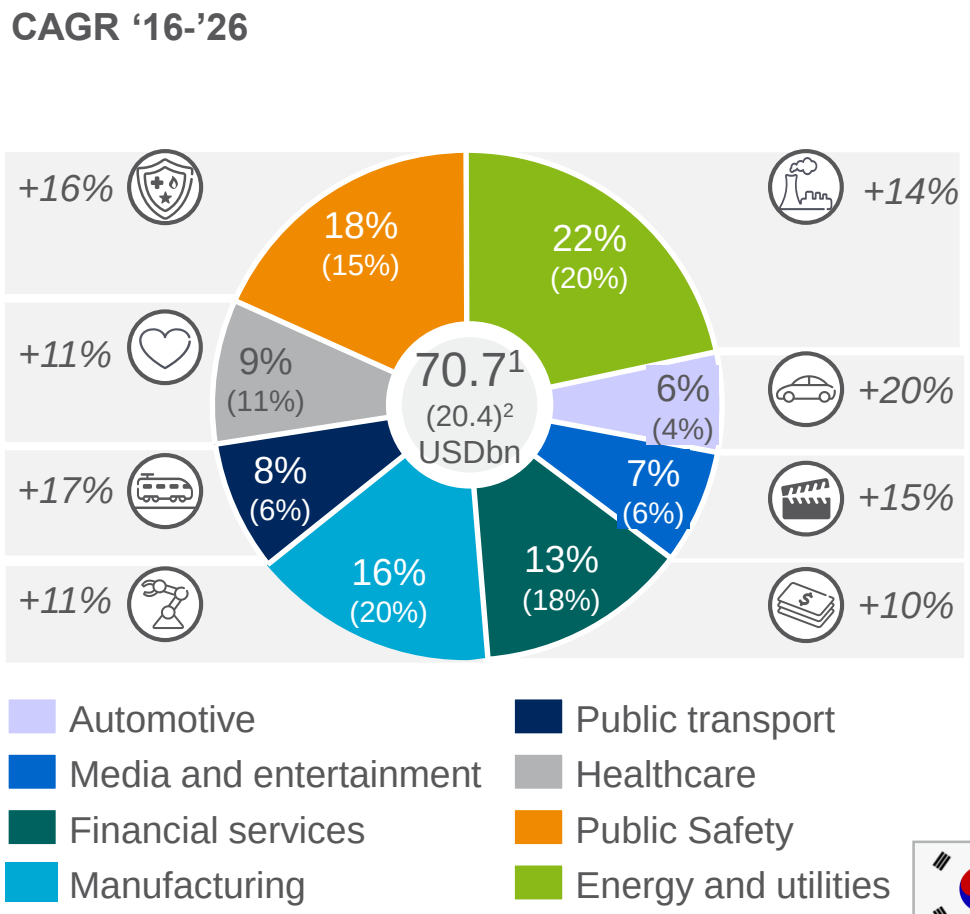
Manufacturing	Automotive	Public transport	Energy & utilities	Public safety	Financial services	Healthcare	Media & entertainment
Industrial control and automation	Autonomous driving	Monitoring, communication and analytics systems	Smart grid	Urban and infrastructure security	Lending, payments and investment	Patient applications	Entertainment
Planning and design systems	Connected services	Passenger information systems	Smart energy management	ID management	Insurance	Hospital applications	Advertising
Field devices	Safety and traffic efficiency services	Smart ticketing systems		Cyber security		Medical data management	
Other	Other	Other	Other	Other	Other	Other	Other

INDUSTRY DIGITALIZATION REVENUE FOR ICT PLAYERS (KOREA)

Digitalization, 5G enabled and addressable revenues



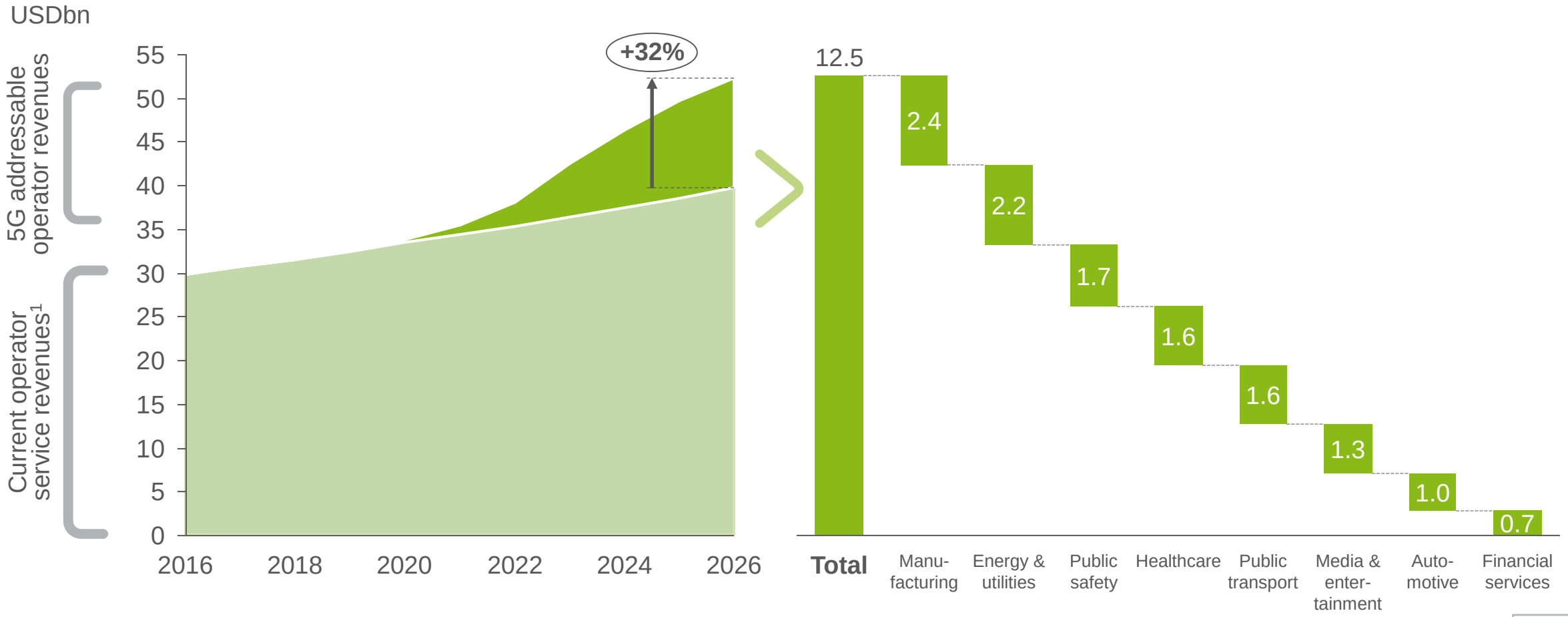
Revenue split per industry



Source: Ericsson and Arthur D. Little

Note 1) Year 2026 2) Numbers and percentage points in parenthesis are for year 2016.

CURRENT OPERATOR SERVICE REVENUES & 5G ADDRESSABLE (KOREA)



Source: Ericsson and Arthur D. Little; Major strategic choices ahead of TelCos: Reconfiguring for value, Arthur D. Little; IDC; Gartner

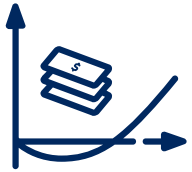
Note: 1) Excludes revenues from equipment's

주요 시사점

환율: 1 USD = 1,100 원 가정

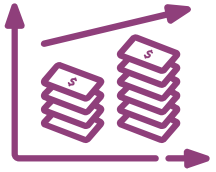
산업 디지털화에 따라 정보통신 업계에 77조원 규모의 매출이 창출될 것이며, 이 중 29조원은 5G 기술로 달성될 수 있음 (2026년 한국 기준)

(글로벌의 경우 3,609조원 규모 및 5G에 의한 매출 1,356조원)



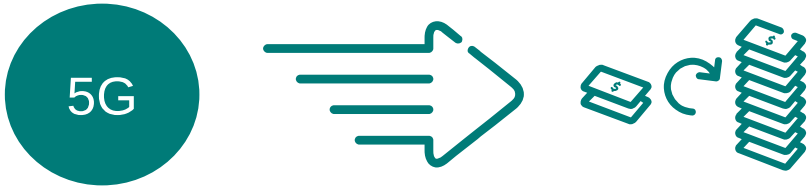
5G에 의해 창출될 시장 기회로 부터 통신 사업자는 32%의 추가적인 이익(13.8조원)을 얻을 수 있을 것으로 기대됨 (2026년 한국 기준)

(글로벌의 경우 34% 추가 이익(640조원) 기대)



5G가 촉발하는 디지털화는 사회 전반과 산업계에 상당한 이익을 마련할 수 있는 잠재력을 가지고 있음. 이 중, 제조업, 에너지, 공공안전 분야 등에서 많은 매출이 창출될 것으로 기대됨.

지금이 바로 5G 비즈니스를 창출하기 시작할 시점입니다.



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