

65
عَاماً
YEARS



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General Authority for Statistics

Digital Economy Statistics

An Overview of the Digital Economy

Today's information is the development of tomorrow



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Digital Economy Statistics Products

ICT Access and Use Survey for Households and Individuals

Sector: Households | **Frequency:** Annual

Reference Guides: Manual for Measuring ICT Access and Use by Households and Individuals, issued by the International Telecommunication Union (ITU).

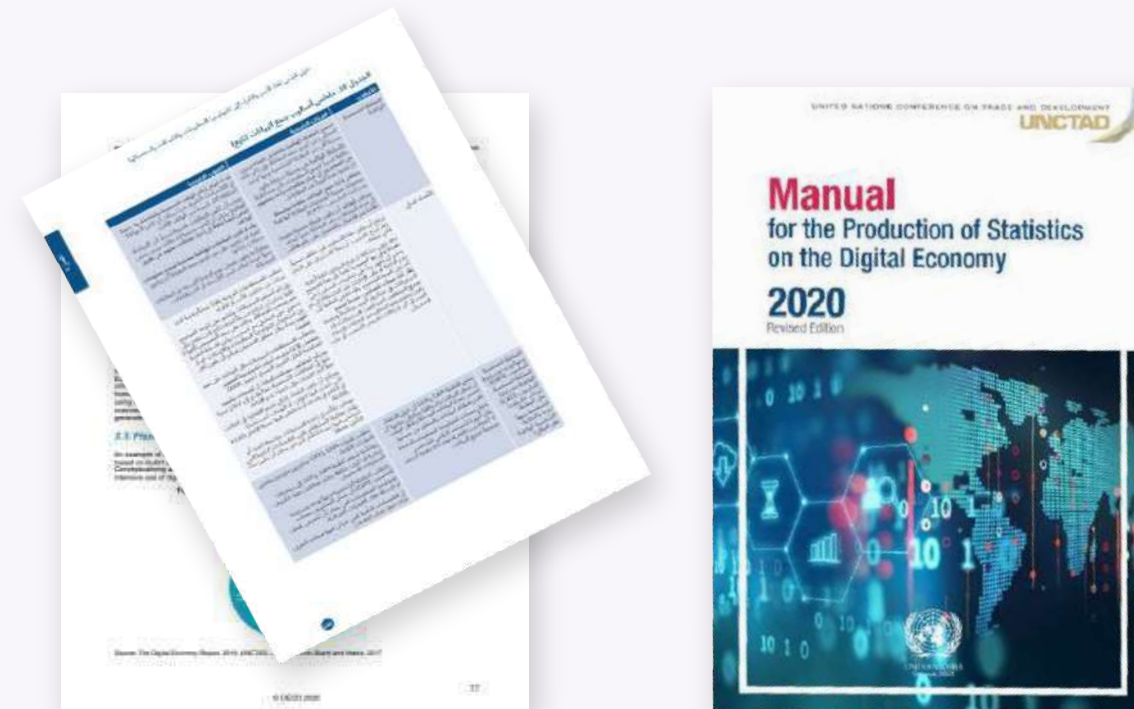


- Household access to information & communication technologies.
- Individuals' use of information and communication technologies.
- E-commerce and individuals' use of government digital services.

ICT Access and Use Survey for Establishments

Sector: Establishments | **Frequency:** Annual

Reference Guides: Manual for the Production of Statistics on the Digital Economy, issued by the United Nations Conference on Trade and Development (UNCTAD).



- Establishments' use of information & communication technologies.
- Establishments' use of e-commerce & government digital services.
- Use of cloud computing, the Internet of Things, and artificial intelligence.

Digital Economy Survey

Sector: Establishments | **Frequency:** Annual

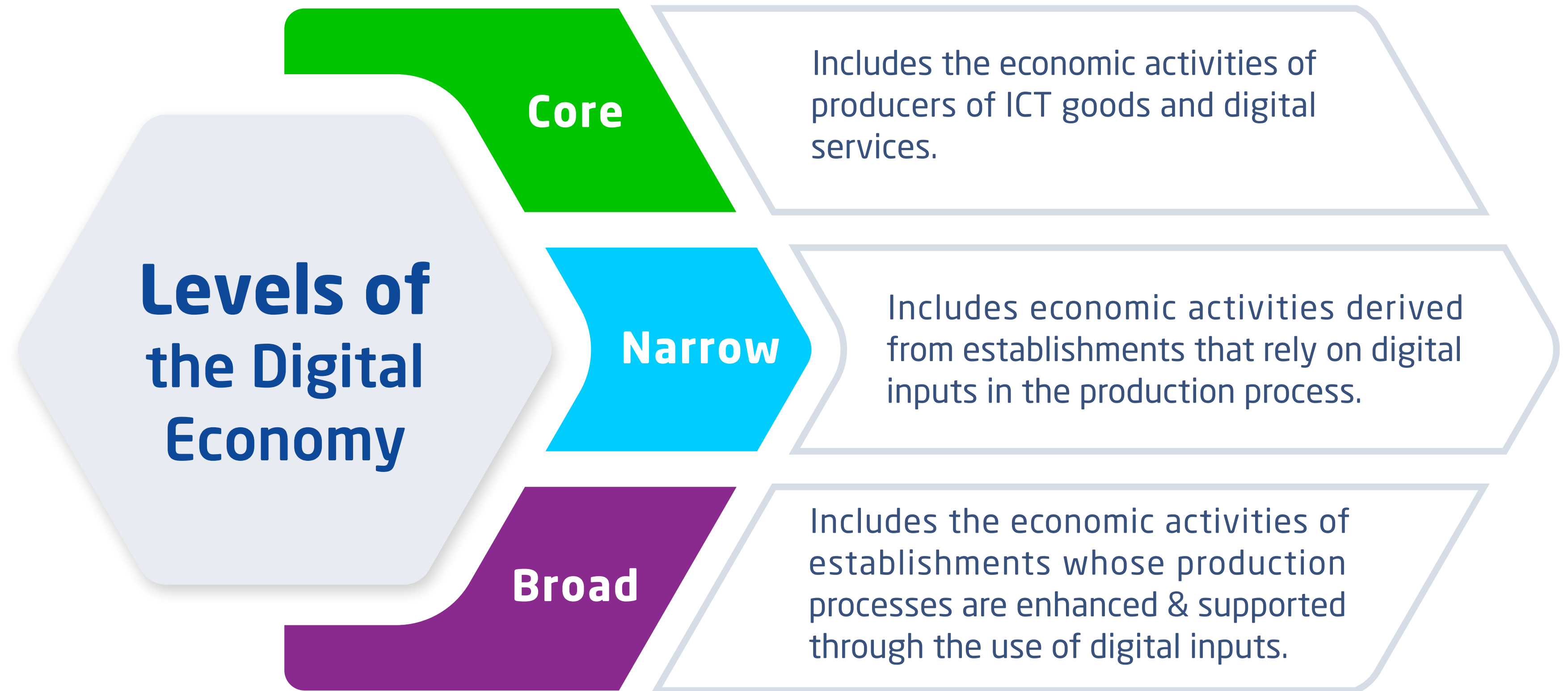
Reference Guides: Manual for the Production of Statistics on the Digital Economy, issued by UNCTAD, in addition to A Roadmap Toward a Common Framework for Measuring the Digital Economy, issued by the OECD.



- Contribution of the digital economy to GDP.
- Digital expenditures, revenues, and assets.

Digital Economy Measurement Levels

The digital economy includes digital technologies, digital infrastructure, digital services, data, and all economic activities that rely on the use of digital inputs or are enhanced and supported through the use of digital inputs.

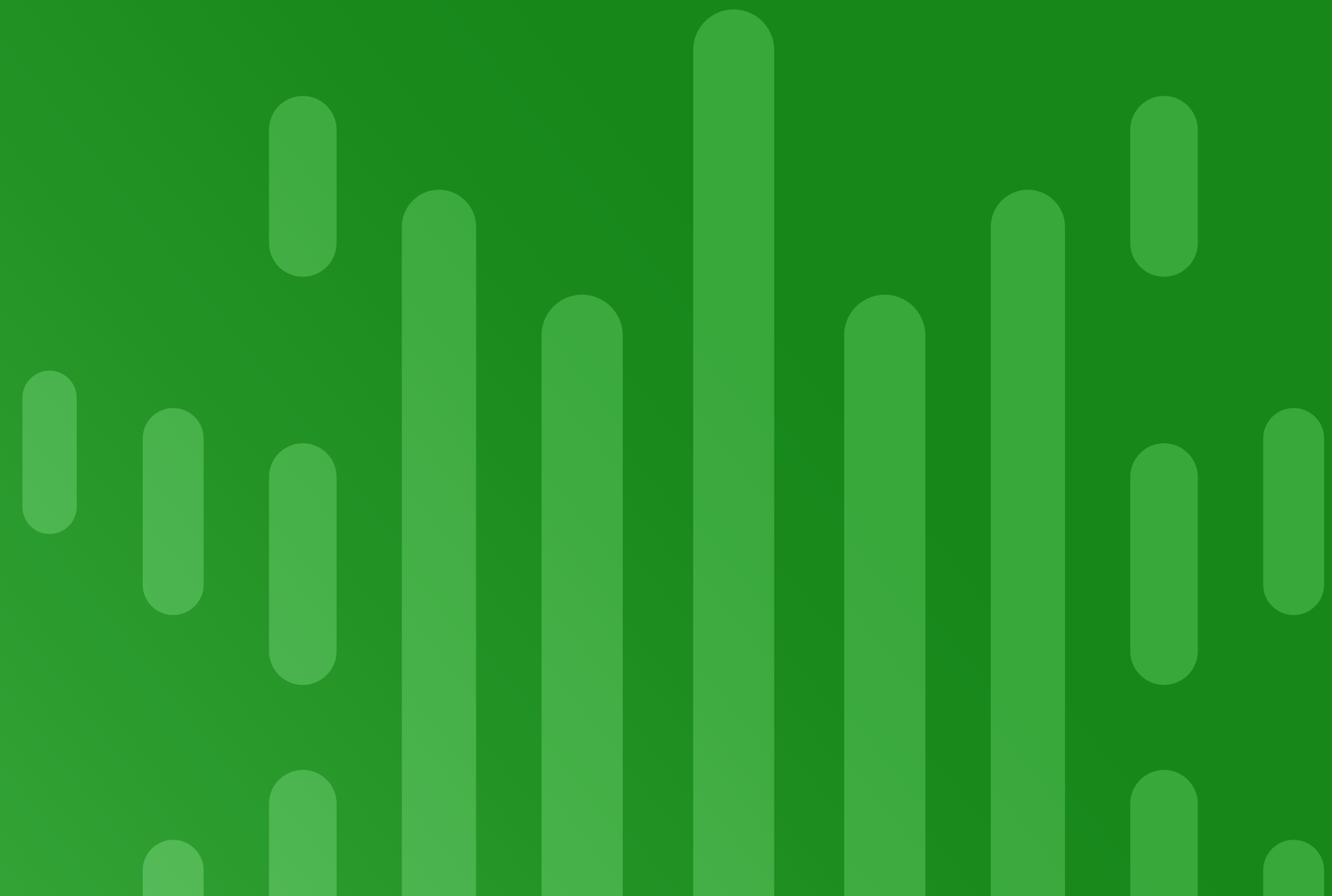


Digital Economy Share of Gross Domestic Product (GDP)

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Methodology for Measuring the Core Level

The core level was measured by calculating the value added of establishments classified at the 4-digit level of the International Standard Industrial Classification of All Economic Activities within ICT sector activities.

Core Level

26	Manufacture of computer, electronic and optical products
2610	Manufacture of electronic components and boards
2620	Manufacture of computers and peripheral equipment
2630	Manufacture of communication equipment
2640	Manufacture of consumer electronics
2680	Manufacture of magnetic and optical media

46	Wholesale trade, except of motor vehicles and motorcycles
4651	Wholesale of computers, computer peripheral equipment and software
4652	Wholesale of electronic and telecommunications equipment and parts

61	Telecommunications
6110	Wired telecommunications activities
6120	Wireless telecommunications activities
6130	Satellite telecommunications activities
6190	Other telecommunications activities

62	Computer programming, consultancy and related activities
6201	Computer programming activities
6202	Computer consultancy and computer facilities management activities
6209	Other information technology and computer service activities

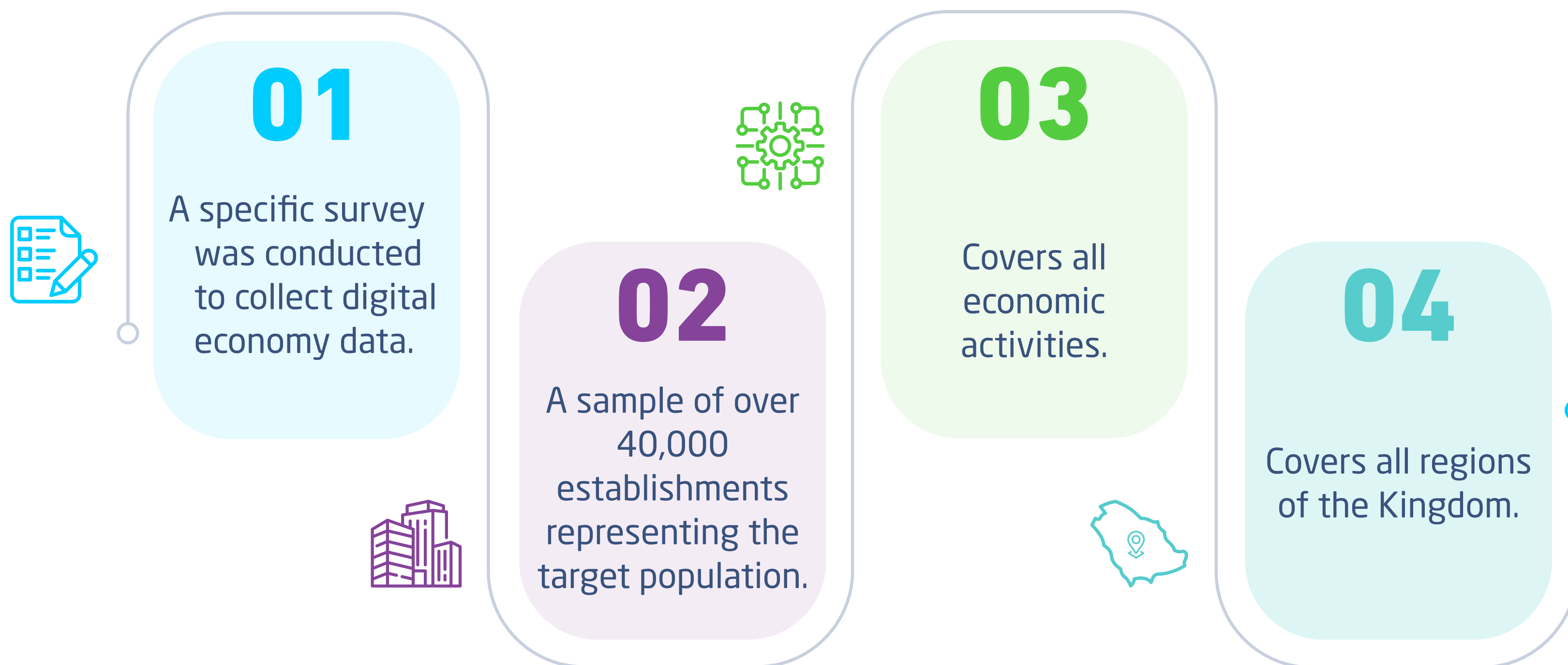
58	Publishing activities
5820	Software publishing

63	Information service activities
6311	Data processing, hosting and related activities
6312	Web portals

95	Repair of computers and personal and household goods
9511	Repair of computers and peripheral equipment
9512	Repair of communication equipment

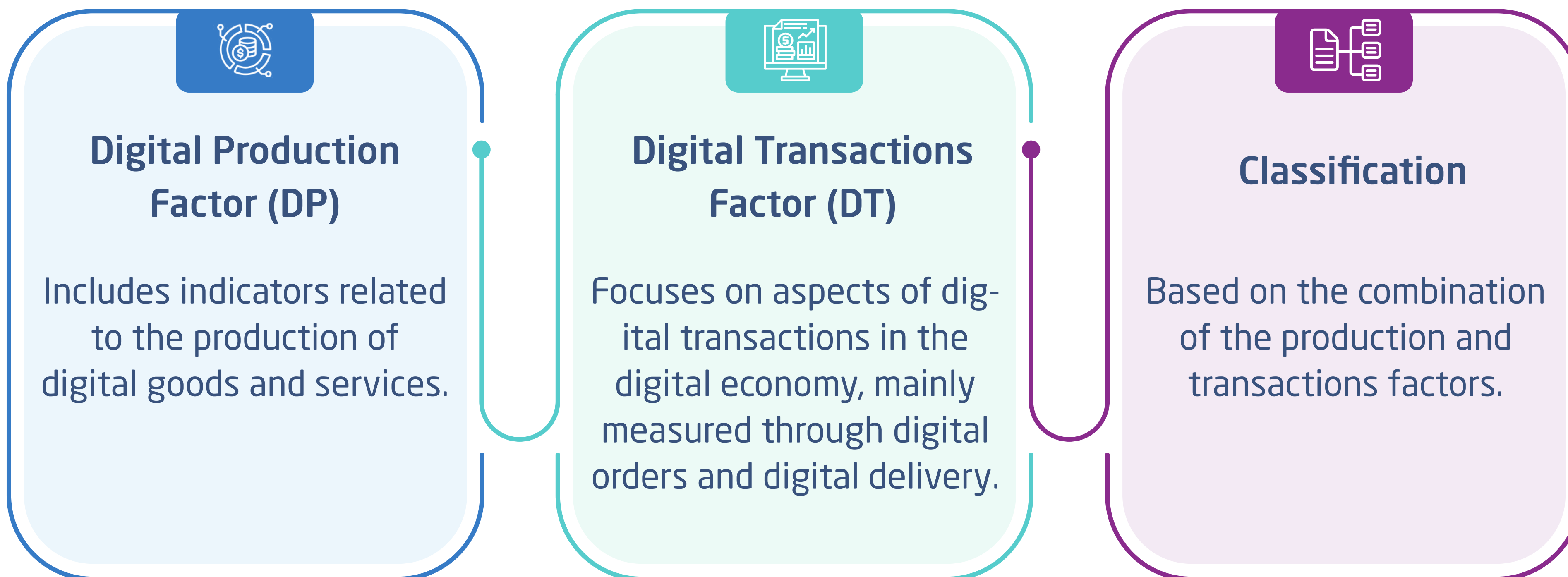
Methodology for Measuring the Narrow & Broad Levels of the Digital Economy

GASTAT relied on the Digital Economy Survey as the main source of data required to measure the narrow and broad levels of the digital economy.



Methodology for Measuring the Narrow & Broad Levels of the Digital Economy

After conducting Principal Component Analysis (PCA), two factors were identified to classify digital economy establishments into the narrow and broad levels:



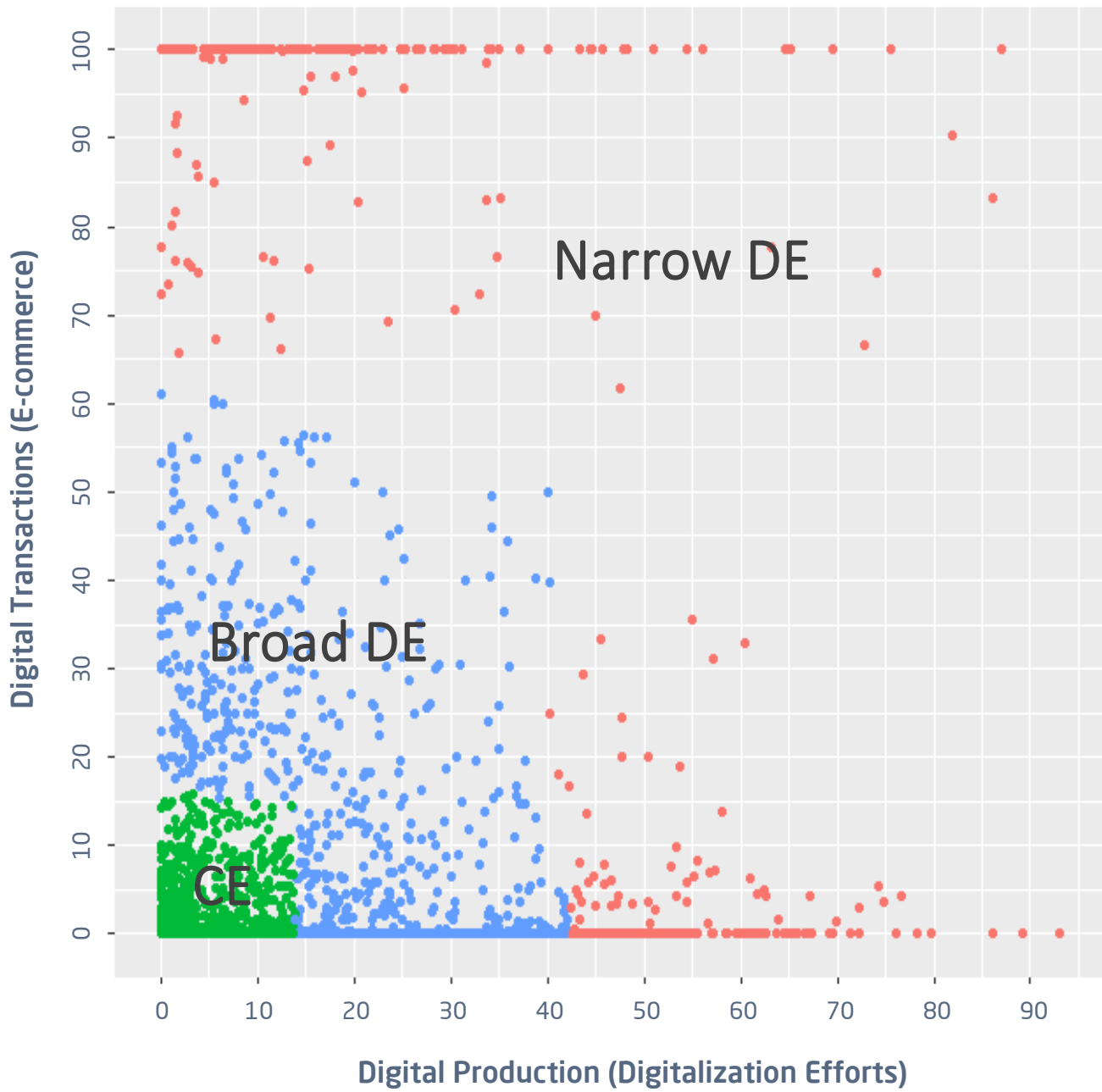
Methodology for Measuring the Narrow & Broad Levels of the Digital Economy

Following an analysis using the K-means algorithm, establishments were classified into three clusters:

Digitalization Efforts	E-commerce	Level
Low digital intensity	Low digital intensity	Conventional
Low digital intensity	Medium digital intensity	Broad
Medium digital intensity	Low digital intensity	
High digital intensity	Varying digital intensity	Narrow
Varying digital intensity	High digital intensity	

$$S_d^{Narrow DE} = \frac{\sum_i \text{in the narrow DE in division } d^{Y_i}}{\sum_i \text{in division } d^{Y_i}}$$
$$GVA^{Narrow DE} = \sum_{\text{all divisions } d} S_d^{Narrow DE} GVA_d$$

$$S_d^{Broad DE} = \frac{\sum_i \text{in the broad DE in division } d^{Y_i}}{\sum_i \text{in division } d^{Y_i}}$$
$$GVA^{Broad DE} = \sum_{\text{all divisions } d} S_d^{Broad DE} GVA_d$$



The digital intensity of these establishments is measured using two composite indicators

01. Factor 1:

▲ Digital Production (Digitalization Efforts)

02. Factor 2:

▲ Digital Transactions (E-commerce)

Establishments are then classified based on a combination of digital production and digital transaction factors

Digital Economy Contribution to GDP

The total contribution of each digital economy level is calculated by aggregating the shares of value added across **all economic activities**:

Contribution to Gross Domestic Product:

Sum of the value added of the Core Digital Economy, Narrow Digital Economy, and Broad Digital Economy ÷ Gross Domestic Product of Saudi Arabia.



Digital Economy Measurement Process

01

Step 01

Estimate the share of the total value of the Core Digital Economy at the activity level.

02

Step 02

Classify digital economy establishments into the Narrow & Broad Levels using data from the Digital Economy Survey.

03

Step 03

Estimate the share of the total value of the Narrow and Broad Digital Economy at the activity level.

04

Step 04

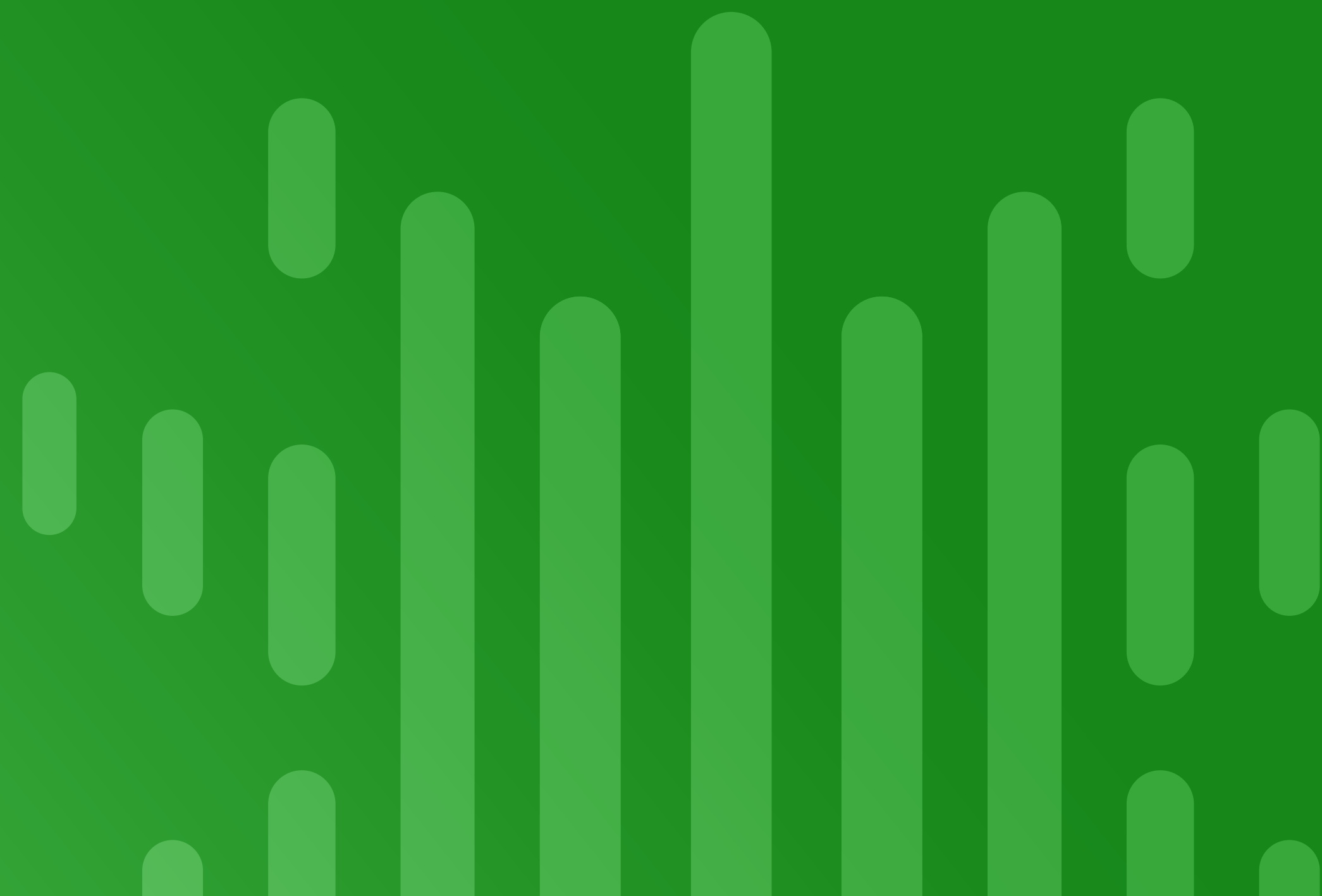
Estimate the total contribution of the Core, Narrow, and Broad Levels of the Digital Economy to GDP.

Digital Economy Indicators

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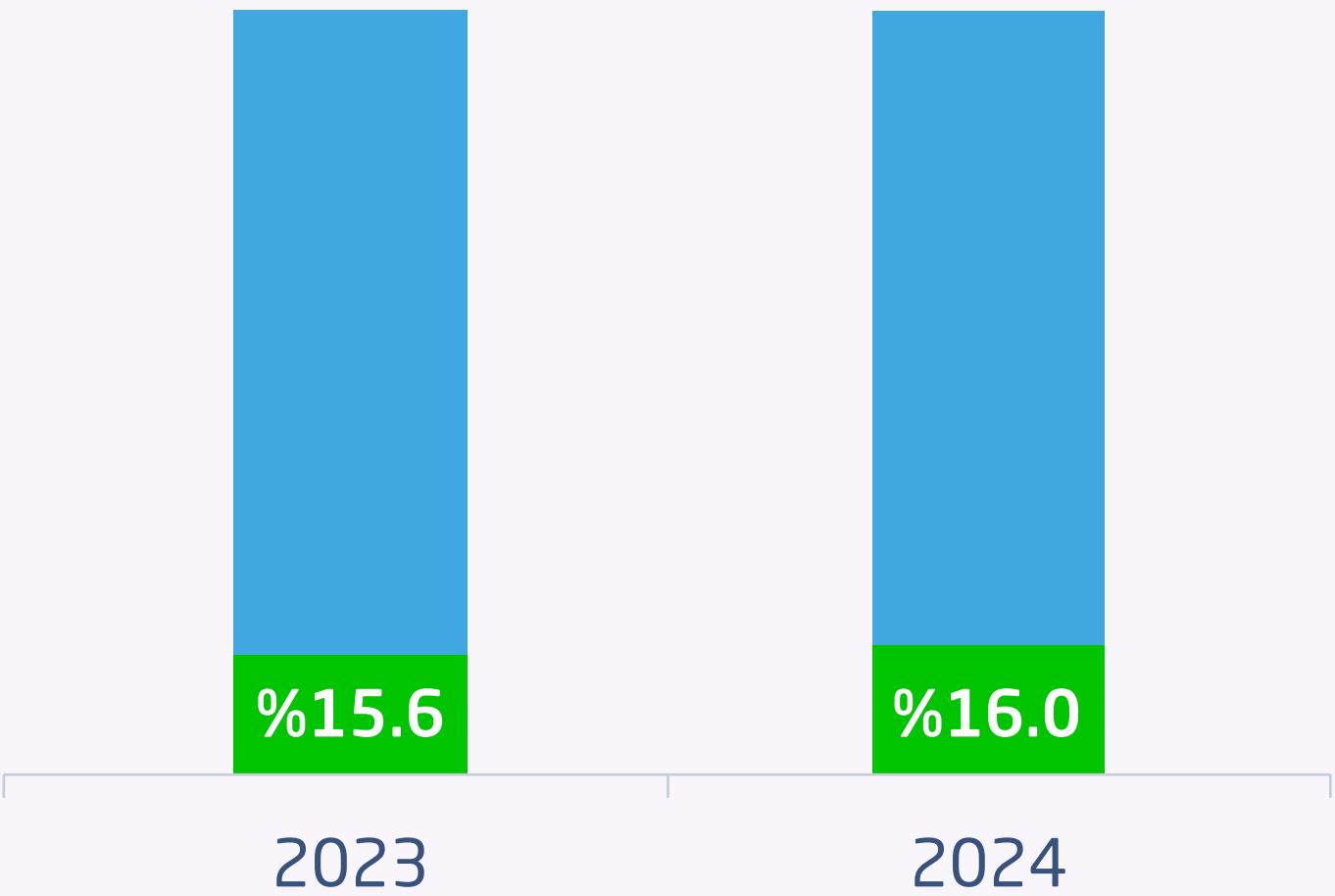


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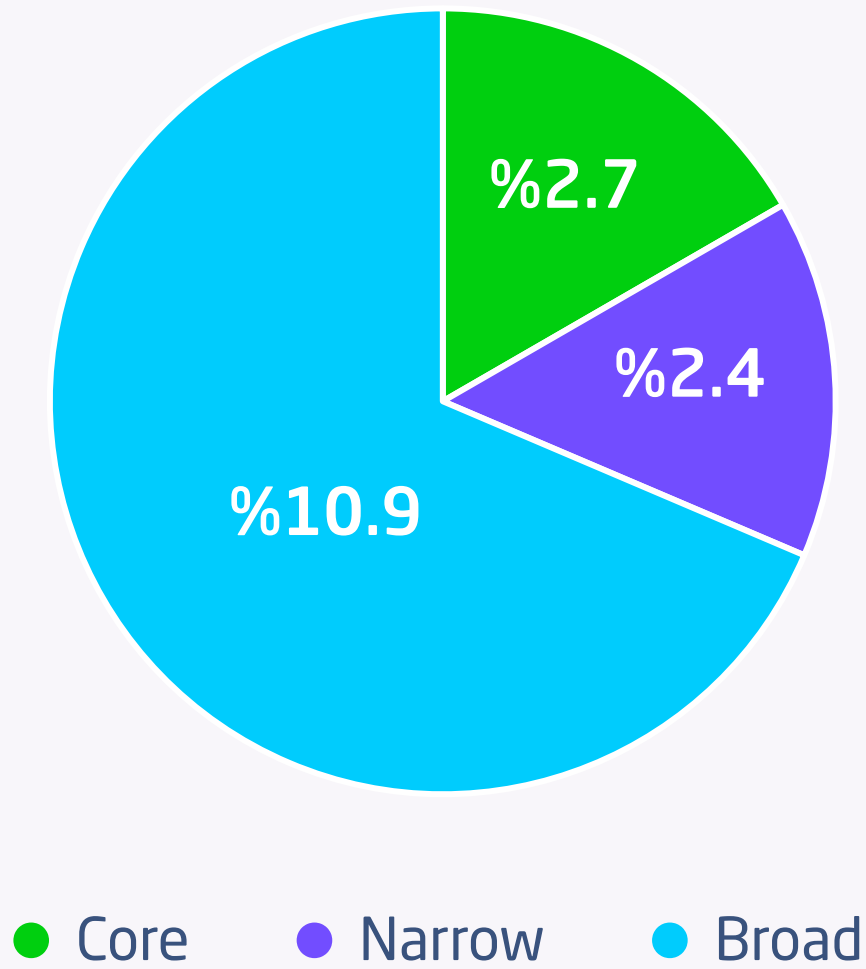


Growth in the Digital Economy's Share of GDP Between 2023 and 2024

Digital Economy Share of GDP
in 2023 and 2024



Digital Economy Share of GDP by
Digital Economy Level, 2024



Key Digital Economy Indicators for 2024

Digital Economy Share of GDP



16.0%

ICT Sector Operating Indicators



Operating
Revenues

249.8 SAR billion



Operating
Expenditures

122.2 SAR billion



Employees
Compensation

29.2 SAR billion

Thank you

