### OPENING REMARKS

<table>
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<th>11.00 – 11.10</th>
<th>Welcome remarks</th>
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<td>Houlin Zhao, Secretary General, ITU</td>
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### INDUSTRY PROGRESS

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<th>11.10 – 11.30</th>
<th>Understanding the impacts of spectrum pricing on consumers</th>
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<td>Kalvin Bahia, Principal Economist, GSMA Intelligence</td>
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Spectrum policy experts and economists have long debated the impact of spectrum pricing on investment and consumer prices in mobile markets. A study by GSMA Intelligence provides, for the first time, robust empirical evidence that shows more expensive spectrum can - and has indeed - harmed consumers in both developed and developing countries. The findings have important ramifications for regulators, especially those that are prioritising improved coverage and increased investment in 4G and 5G.

### SPECTRUM PANEL

### DISCUSSION: How spectrum policy can drive investment and benefit economies and consumers

The importance of broadband internet access has been proven many times and its impact on the economy and citizens cannot be underestimated. However, data growth and greater broadband adoption requires more spectrum with ever wider bandwidths.

Carefully planned spectrum awards are vital – digital economies depend on them. Better spectrum pricing policies are needed to enhance the economic and social welfare of the 4 billion people that remain unconnected to mobile broadband services and to accelerate the roll-out of 5G. However, there are numerous examples (including some recent 5G awards in Europe) of mobile operators acquiring spectrum at very high prices. Are we back to the spectrum bonanza of the 3G era? What are the impacts on the economy and consumers?

This session will explore the latest pricing research, covering both developed and developing markets, and discuss evolving best practice policies to drive investment in high quality, affordable mobile broadband services.

**Moderator:** Brett Tarnutzer, Head of Spectrum, GSMA

**Panelists:**
- Ms. Joanne Wilson, Deputy BR Director, ITU
- Ms. Isabelle Mauro, Director, Head Digital Communications Industry, World Economic Forum
- Mr. Je Myung Ryu, Senior Digital Development Specialist, World Bank
- Mr. Robert Middlehurst, Vice President International Regulatory Affairs, Etisalat
- Mr. Gabriel Solomon, Head of Government & Industry Relations, Europe & Latin America, Ericsson

### KEY TAKEAWAYS

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<tr>
<th>12.10 – 12.15</th>
<th>Closing remarks – key takeaways</th>
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<td>Peng Zhao, Senior Director, Government and Regulatory Affairs, GSMA</td>
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