PREPARING FOR LPWA: HOW OPERATORS ARE MAXIMISING THEIR CHANCES OF SUCCESS

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About this report

This report analyses the nascent low-power, wide-area (LPWA) network market and the key uncertainties that LPWA network providers face. This will include analysis of:

- maximising LPWA revenue: building value beyond connectivity

- building an open ecosystem: how to help build awareness of LPWA and engage with the ecosystem.

- market fragmentation: there are several competing LPWA technologies with no obvious winner

The report also provides recommendations for LPWA network owners including mobile and fixed network operators and new entrants.

It is based on several sources:

- Analysys Mason's internal research and resources, for example, LPWA value chain forecast

- interviews with stakeholders in the mobile IoT market.

KEY QUESTIONS ANSWERED IN THIS REPORT

- How can operators maximise revenue for LPWA and build value beyond connectivity?

- Which types of players are best-positioned to succeed?

- How can operators address the issues of technology fragmentation and the lack of a winning standard?

- How does the role of the ecosystem underpin the success of the LPWA business model?

WHO SHOULD READ THIS REPORT

- Executives responsible for LPWA strategy within:
  - mobile operators
  - fixed operators
  - new-entrant LPWA network operators.

- Vendors of LPWA infrastructure and software platforms.

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Executive summary

Analysys Mason is forecasting up to 3.4 billion LPWA connections in 2025[1] and total addressable value chain revenue of USD72 billion. The cost of failing to build a viable LPWA business will be high and will result in exclusion from a large portion of the wide area IoT market.

The rationale for building a LPWA network has been established; it will allow IoT service providers to connect a new wave of devices, generate new revenue streams and create benefits for their customers. Some network operators have already launched LPWA networks; others will launch in the near future.

Success in LPWA is not a foregone conclusion. Network owners will need to address several important challenges in order to build successful LPWA services. This report explores how operators might maximise their chances of success in the LPWA market. The key recommendations from this report are as follows.

- Operators must position higher up the value chain, experiment with different business models and differentiate to succeed.

- Operators should support the ecosystem of their selected technology, but they cannot do this alone.

- Operators must choose their LPWA technologies based on their target markets and should start to build expertise in LPWA. They cannot afford to wait for a winning technology to emerge.

[1] For more information, see Analysys Mason's DataHub. Available at www.analysysmason.com/DataHub.

Figure 1: Steps for operators to maximise the LPWA revenue opportunity in 2025
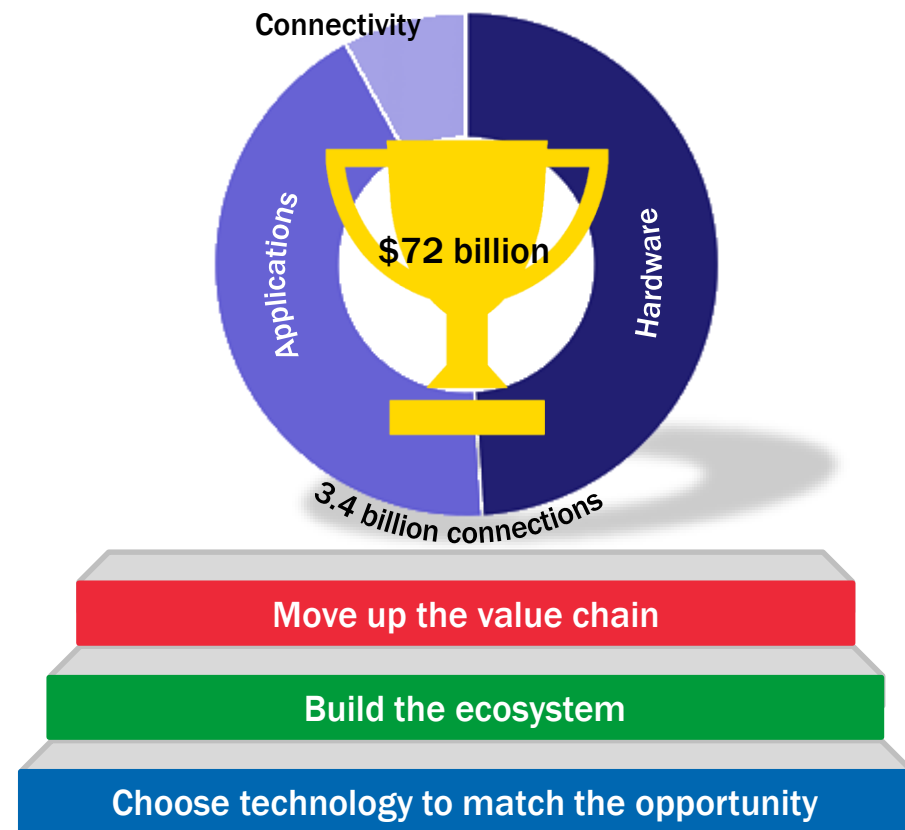
Source: Analysys Mason

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Operators face significant challenges to maximise their chances of success in the LPWA market

Connectivity revenue represents only 8% of the total LPWA network value chain in 2025. Operators will need to develop strategies early to generate additional value.

The barriers to entry to the LPWA market are lower than traditional cellular markets, which have operated as natural oligopolies due to the finite nature of spectrum. In LPWA, strong competition coupled with low traffic volumes will assert downward pressure on connectivity revenue. Operators face the following challenges.

Maximising revenue

- **Business case challenges:** Connectivity revenue is low and a small share of the total addressable opportunity.

- **Uncertain use cases:** Lots of potential uses, but no certainty as to which will dominate. Operators lack expertise in vertical markets.

- **Operator structure:** Most operators will focus on, and invest more in, the core business. Internal competition for resources may be to the detriment of LPWA.[1]

Ecosystem

- **Lack of an existing ecosystem around LPWA:** It will take time to build momentum among suppliers and drive costs down.

- **Market awareness:** Levels of understanding of LPWA are low.

Figure 2: Three challenges faced by operators when addressing the worldwide LPWA opportunity
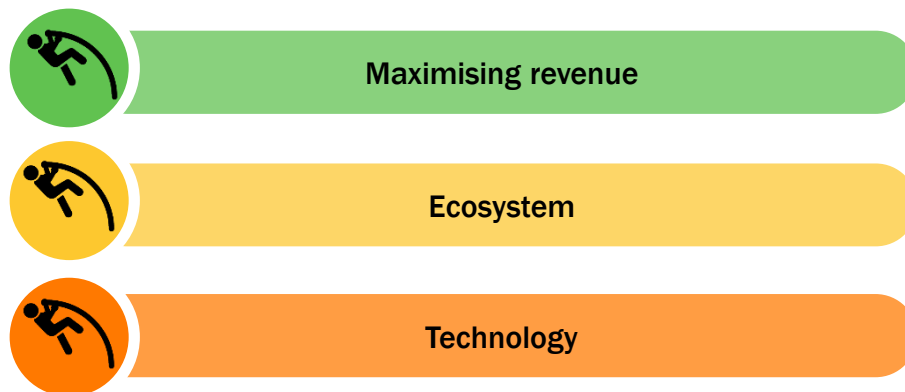
Source: Analysys Mason

Technology

- **Competing technologies:** Many technologies are competing in this space and there is no obvious winner. Operators cannot afford to wait for a winning technology to emerge because barriers to entry will be too high.

- **Operator weaknesses:** Most operators are too small to affect the outcome.

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[1] This issue is not explored in this report but is explored in Analysys Mason's *Bouygues Telecom and Vodacom show how operators can use separate units to develop IoT solutions*.

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Operators should focus on what they can control despite the risks and prepare for what they cannot control
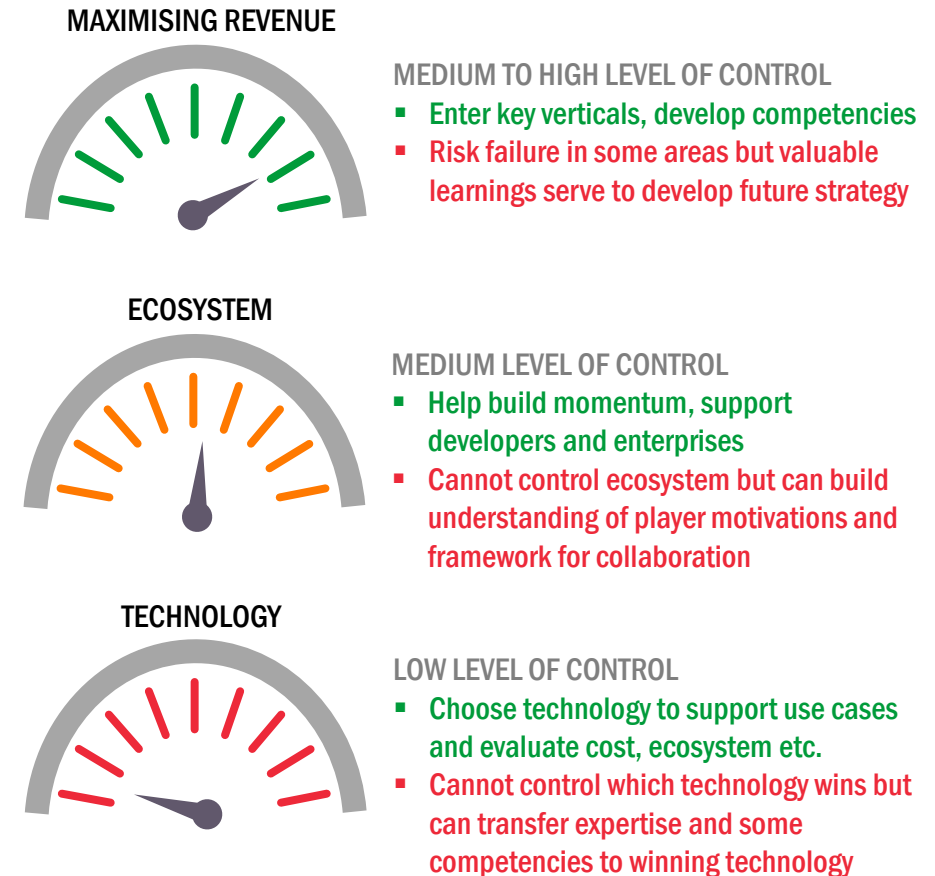
LPWA network operators need to target their resources to address the best LPWA opportunities in their markets.

Maximising revenue: This report examines how operators can provide value beyond connectivity, choose the sectors that will afford the biggest opportunity and build or leverage existing competencies to move along the value chain. It also assesses some of the use cases and the drivers and barriers that will affect adoption.

Ecosystem support: The second section of the report examines how operators will need to mobilise to build an ecosystem around their chosen technology. Operators will need to support device and module vendors, application and solution developers. Many players will not be familiar with LPWA and awareness of the technology will need to be raised. A buoyant ecosystem will be critical for driving down costs, fostering innovation and instilling confidence in the longevity of the network.

Technology fragmentation: The final section considers that operators may not exercise much control over which technologies win. However, they should make their technology choices based on the sectors and applications that they want to serve as well as other considerations such as cost and ecosystem support. Failure to enter the market early will probably result in failure to secure a foothold in the IoT market.

Figure 3: Level of control that operators have over the outcome

MAXIMISING REVENUE

MEDIUM TO HIGH LEVEL OF CONTROL
- Enter key verticals, develop competencies
- Risk failure in some areas but valuable learnings serve to develop future strategy

ECOSYSTEM

MEDIUM LEVEL OF CONTROL
- Help build momentum, support developers and enterprises
- Cannot control ecosystem but can build understanding of player motivations and framework for collaboration

TECHNOLOGY

LOW LEVEL OF CONTROL
- Choose technology to support use cases and evaluate cost, ecosystem etc.
- Cannot control which technology wins but can transfer expertise and some competencies to winning technology

Source: Analysys Mason

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Recommendations

1

Operators should assess how to differentiate their LPWA offering; it is unlikely that connectivity will be the differentiator.

Differentiation could be based on connectivity pricing, but LPWA is predicated on low-traffic and low-cost options so this strategy is unlikely to result in significant revenue or margins. Operators will need to evaluate how to develop horizontal or vertical solutions to move up the value chain, and will need to assess the opportunity for providing professional services and working with end users to educate the market.

2

Operators should play a role in building and supporting the ecosystem for their chosen LPWA technology (or technologies). They do not have the skills or resources to deliver the complete LPWA solution.

Operators need to raise awareness of LPWA technologies. This will require initial investment in making the technology available to ecosystem partners to build and test hardware, devices and applications. Momentum around their chosen technology will help instil confidence in a new market as well as drive down costs of deployment. Ecosystem partners will be essential for delivering comprehensive solutions.

3

Operators should choose LPWA technology based on target use cases, ecosystem momentum and local opportunities. Operators should not wait for a winning technology to emerge before testing the market.

Operators that wait for a winning technology to emerge before entering the market risk losing out on the opportunity and the valuable learning experience that such an entry affords. There is some consensus already that two or three technologies will dominate. Operators should trial and test different technologies and build experience. In countries where there are early entrants, operators need to assess the impact of late market entry.

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About the author

Michele Mackenzie (Principal Analyst) is an analyst for Analysys Mason's IoT and M2M Services research programme, with responsibility for M2M and LPWA forecasts. She has 17 years of experience as an analyst. She produces reports and forecasts on M2M and IoT in industry sectors such as transport, healthcare and smart cities, and analyses the impact of IoT network technologies such as LPWA networks. Prior to joining Analysys Mason in February 2014, Michele was a freelance analyst with a focus on M2M and IoT technology and trends. She has written reports for Machina Research and produced research for other clients in areas such as mobile broadband and digital media.

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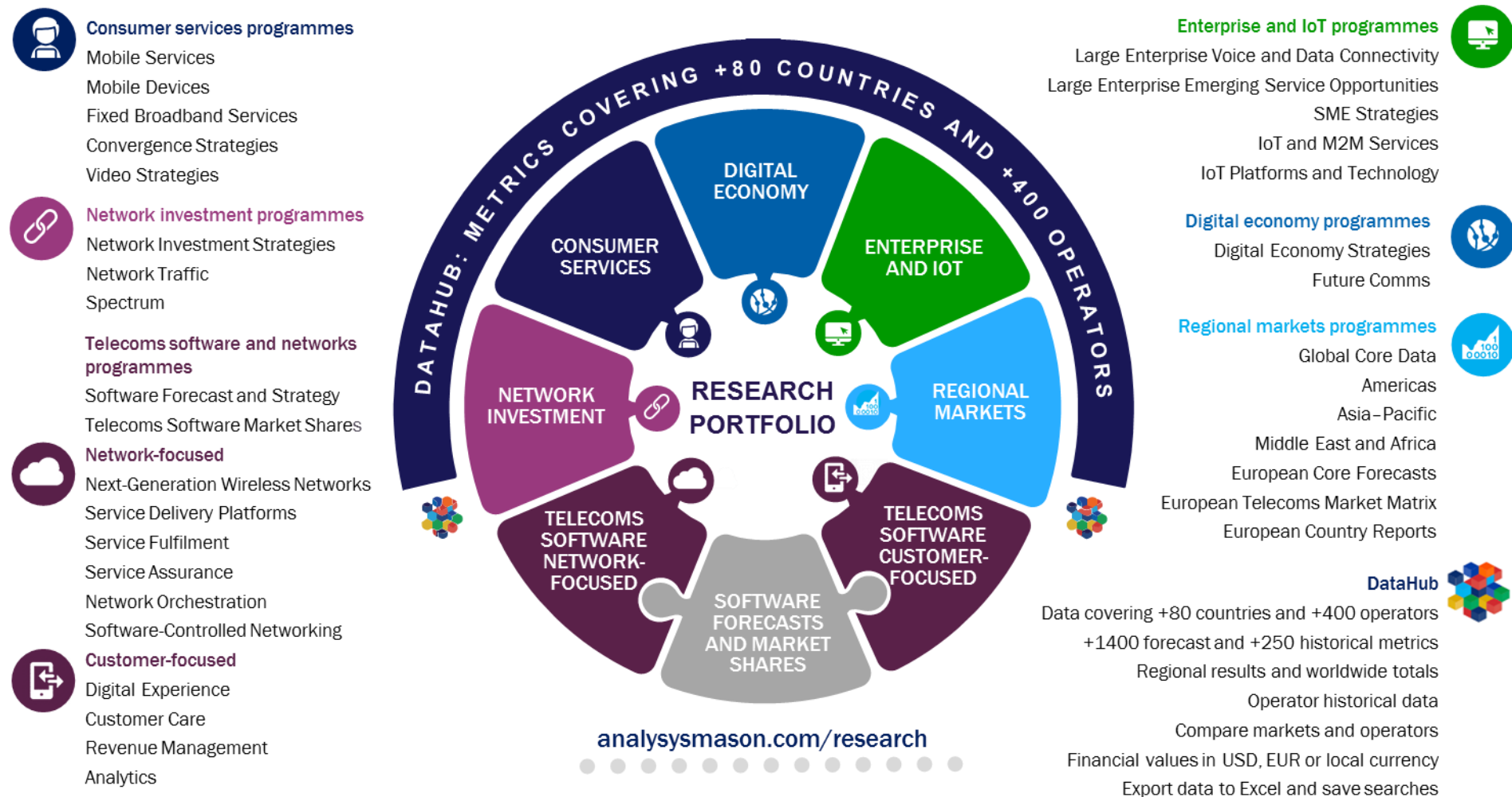Analysys Mason's consulting services and research portfolio
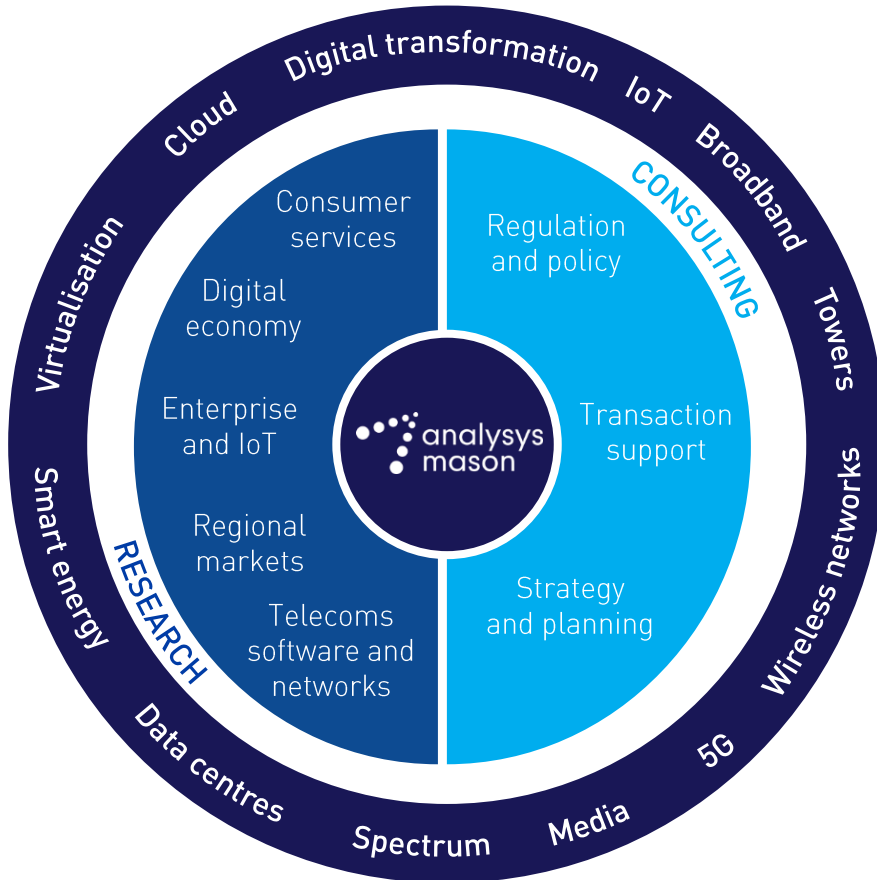
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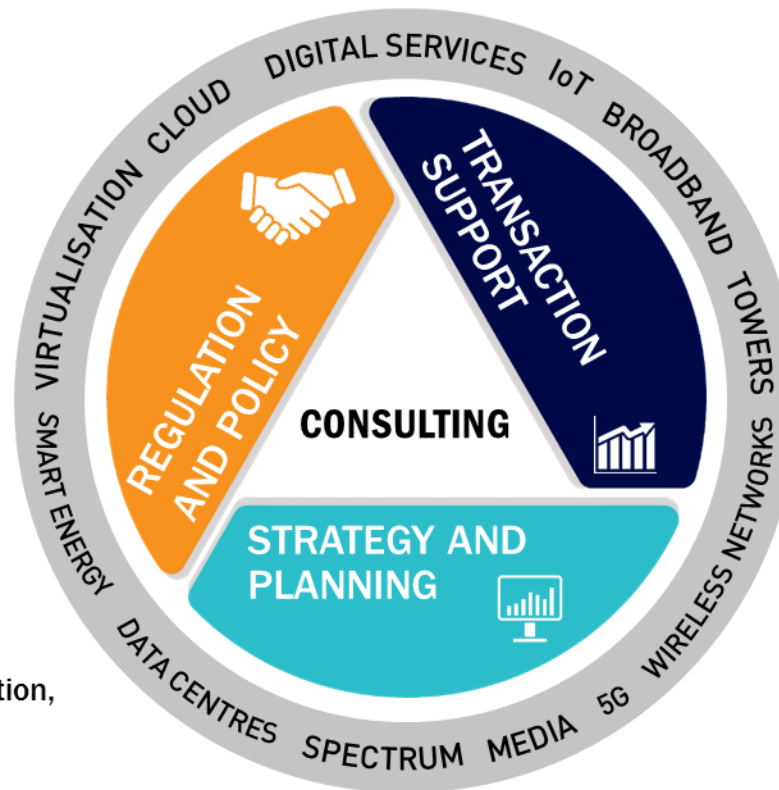
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