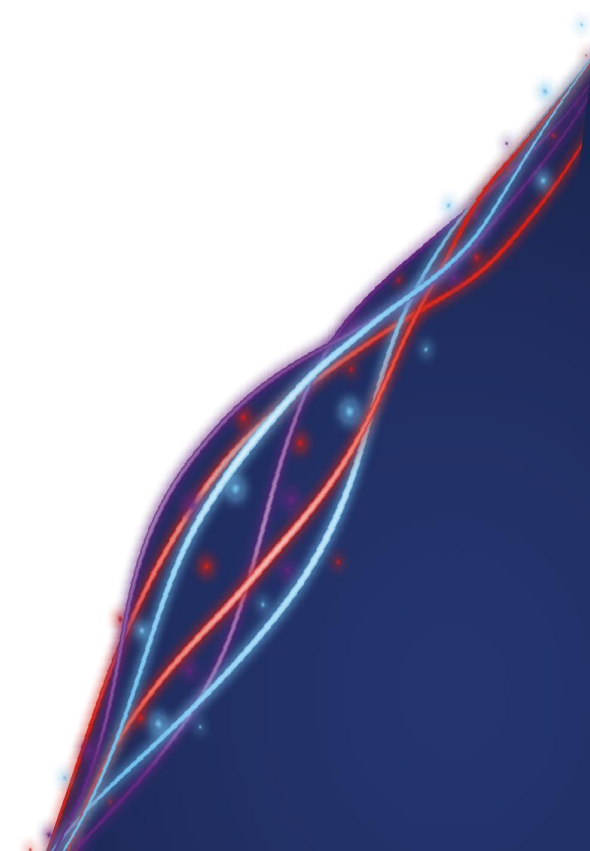




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***General overview of TIG, TETRA and
broadband TCCA Roadmap summary***



TETRA Industry Group



➤ What is TIG?

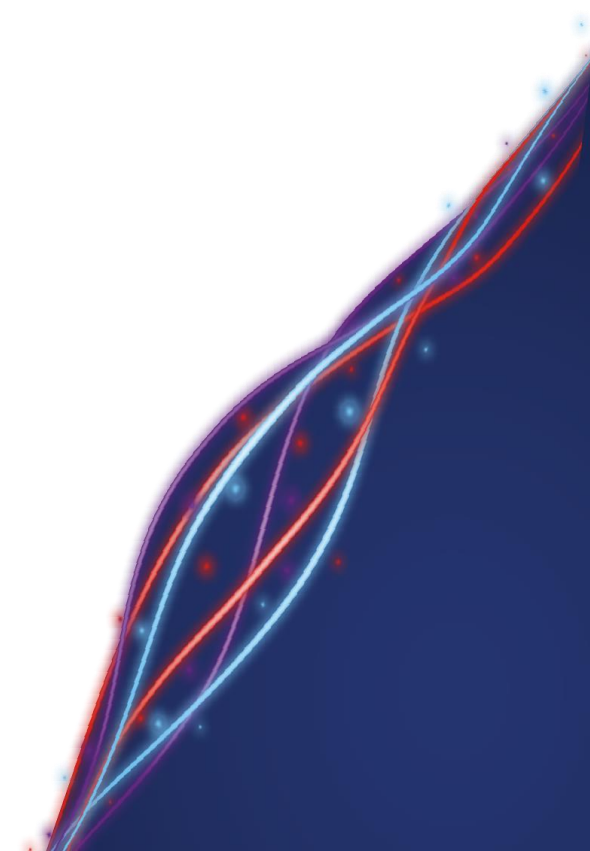
- Business and strategic expert group focused on TETRA
- Collects TETRA Core manufacturers (currently 9)

➤ What does it do?

- Act as reference point in TCCA for TETRA related strategic aspects
- Propose TETRA related strategic guidelines to the TCCA Board
- Co-operate with other TCCA WG such as MKT and TF
- Coordinate TETRA promotion (e.g. through conference/exhibitions)

➤ How do I join?

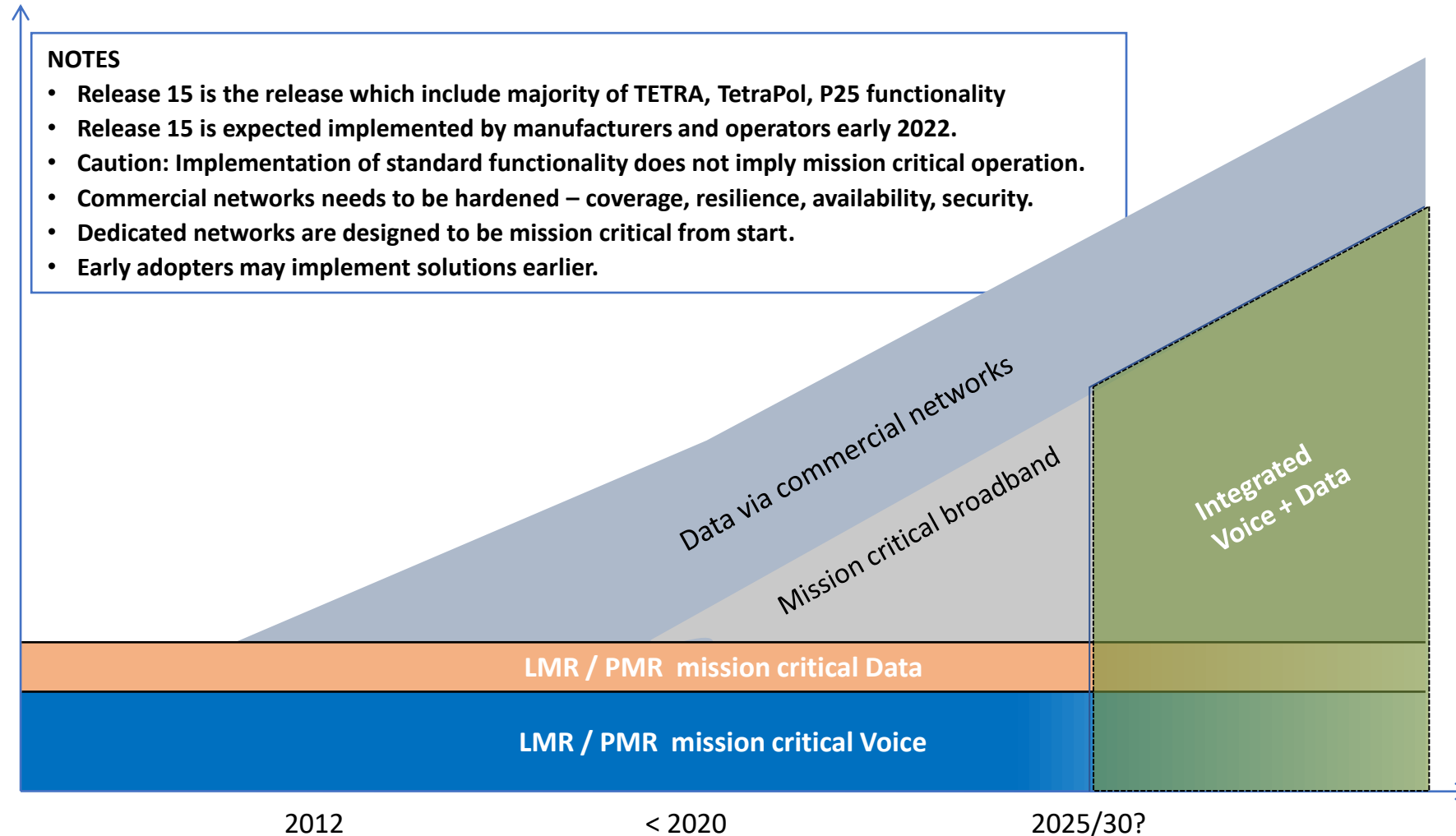
- First joining the TCCA
- Contacting the TIG Chair



TCCA view on Broadband roadmap

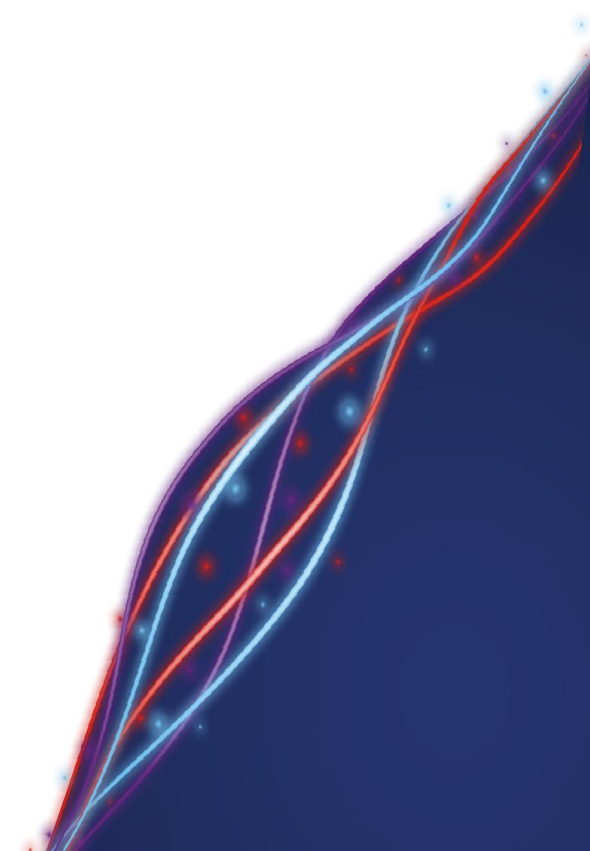


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NOTES

- Release 15 is the release which include majority of TETRA, TetraPol, P25 functionality
- Release 15 is expected implemented by manufacturers and operators early 2022.
- Caution: Implementation of standard functionality does not imply mission critical operation.
- Commercial networks needs to be hardened – coverage, resilience, availability, security.
- Dedicated networks are designed to be mission critical from start.
- Early adopters may implement solutions earlier.

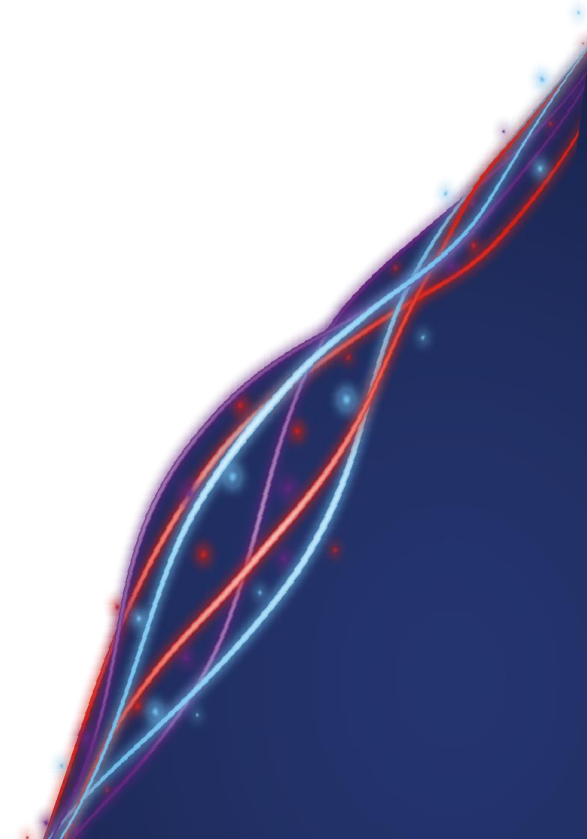


TETRA-LTE co-existence



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- TETRA and LTE as complementary technology
 - ❑ TETRA for mission critical voice and narrowband data
 - ❑ LTE for broadband data (e.g. video and HQ image transmission)
- Heterogeneous multi-technology eco-system
 - ❑ TETRA and LTE deeply integrated in a single system architecture
 - ❑ Unified provisioning
 - ❑ Unified network management
 - ❑ Unified communications (e.g. mixed multi-technology talkgroups)
- Business model
 - ❑ Mission Critical Operator
 - ❑ TETRA + Commercial LTE + Dedicated LTE + Tactical LTE



TETRA: Fit for MC comms



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TETRA delivers proven mission critical communications

TRUSTED

Control
Longevity
Expertise

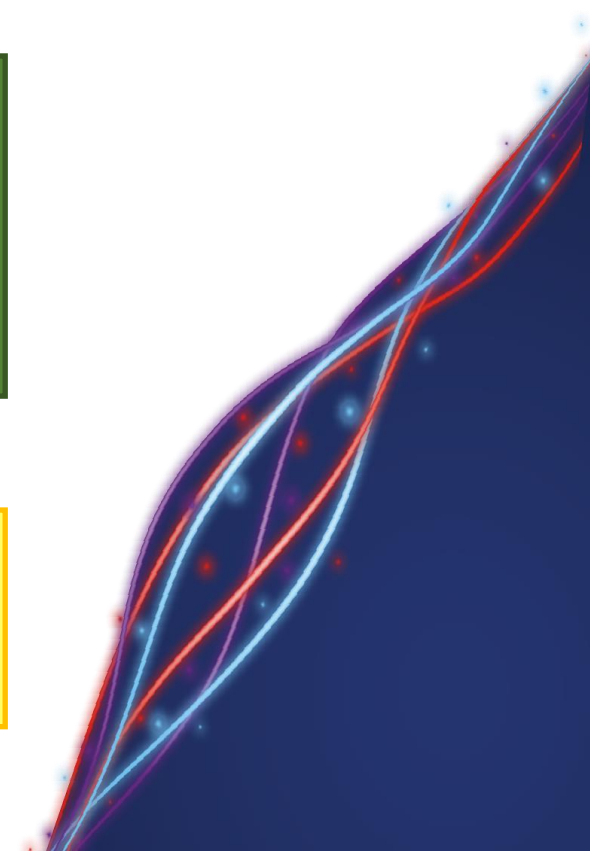
ALWAYS

Available
Instant
Secure

EVERYWHERE

Customised coverage
Variety of devices
Off network

TETRA delivers all this, cost effectively



TETRA is ***TRUSTED***



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➤ **CONTROL**

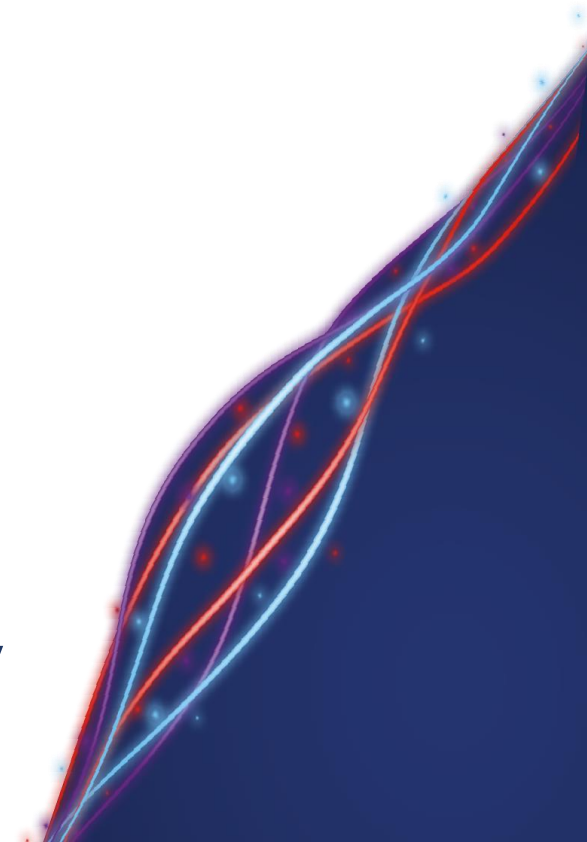
- Service availability
- Quality of Service
- Flexible operational management
- Cost of communications

➤ **LONGEVITY**

- Long equipment lifetime
- TETRA standard continuously maintained and improved
- Multi-vendor interoperable and evolving products

➤ **EXPERTISE**

- Specific knowledge of mission critical operational needs and necessary technical and design solutions



TETRA is **ALWAYS**...

1/2



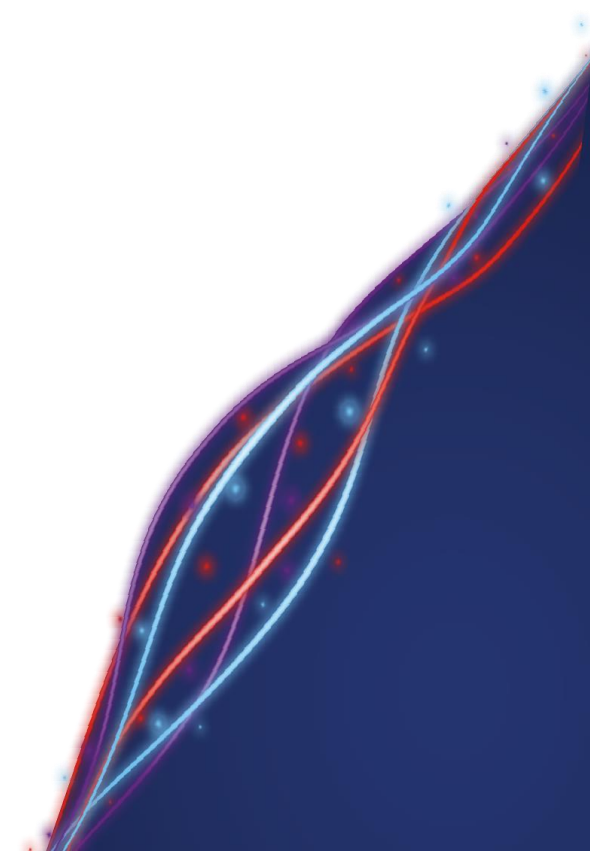
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➤ AVAILABLE

- Redundant equipment with automatic and instant changeover
- Resilient network architecture with redundant links
- Battery backup for Base Stations
- Rich BS Fallback and Off-network communications
- Redundant coverage

➤ INSTANT

- Immediate and pre-emptive call set up
- Instant positioning and dynamic re-grouping information delivery
- Fast changeover to hot stand-by components (graceful degradation)
- Immediate playback of recorded voice and CDR consultation



TETRA is **ALWAYS**...

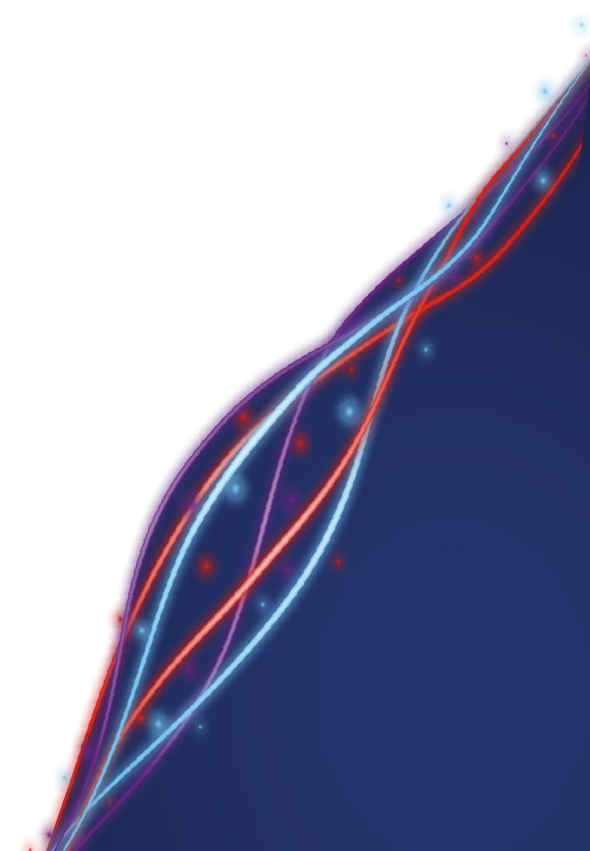
2/2



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➤ SECURE

- Comprehensive set of authentication and encryption features
- Instant enable/disable for stolen or lost mobile radio terminals
- Efficient Security Management suite
- IP Networks secured by design
- User devices secured by close and hardened OS



TETRA is **EVERYWHERE**



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➤ **CUSTOMISED COVERAGE**

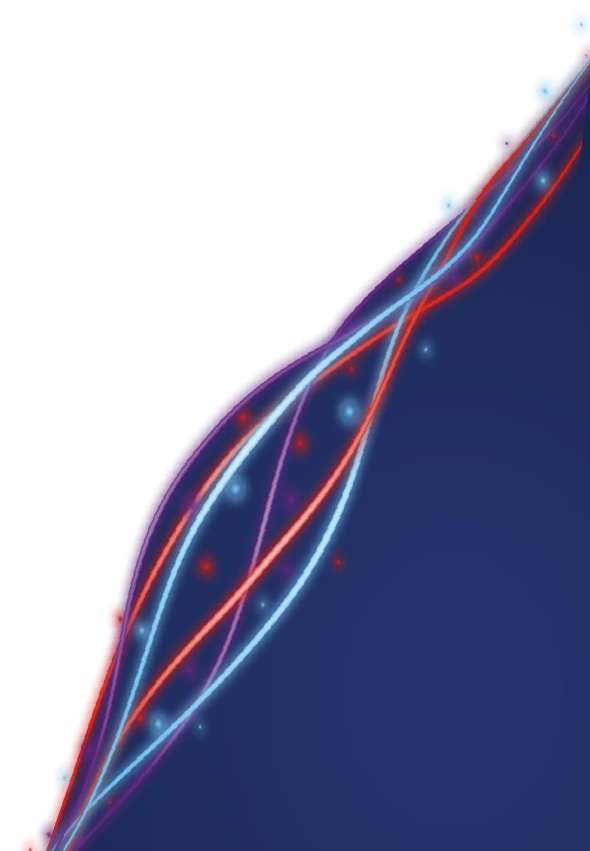
- Operationally vs business driven coverage (dedicated network)
- Natively designed for cost effectiveness (UHF bands)
- Further improved affordability thanks to optimised receiver capabilities
- Off-network communications

➤ **VARIETY OF DEVICES**

- Mission critical and secure by design
- Long-term ruggedness and maintainability
- Vast range of fit-for-purpose devices, all interoperable

➤ **OFF-NETWORK**

- Long range communications (over 3 Km for HH, longer for mobiles)
- Comprehensive set of secure services
- Back-to-back, repeater and gateway operations



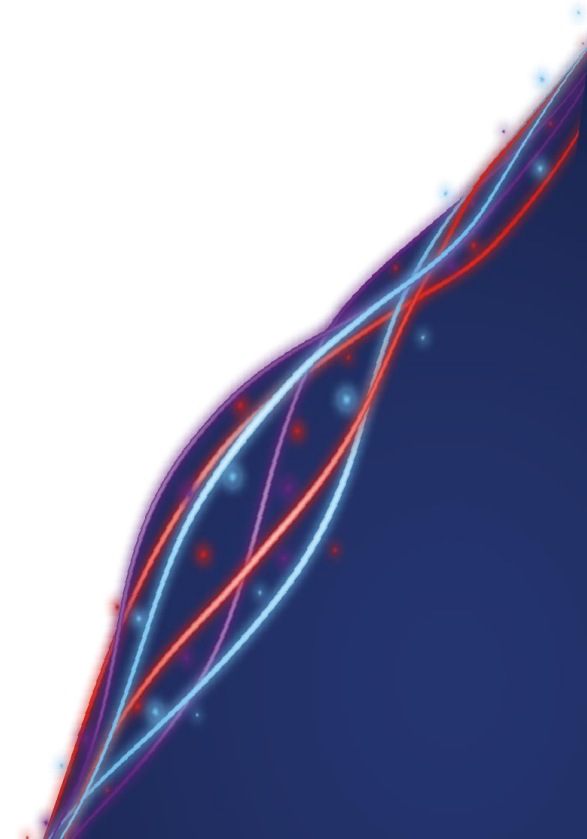
...simply the best choice!



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Thanks for your attention!



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