

PRIVATE 5G

TRENDS, CHALLENGES, OPPORTUNITIES

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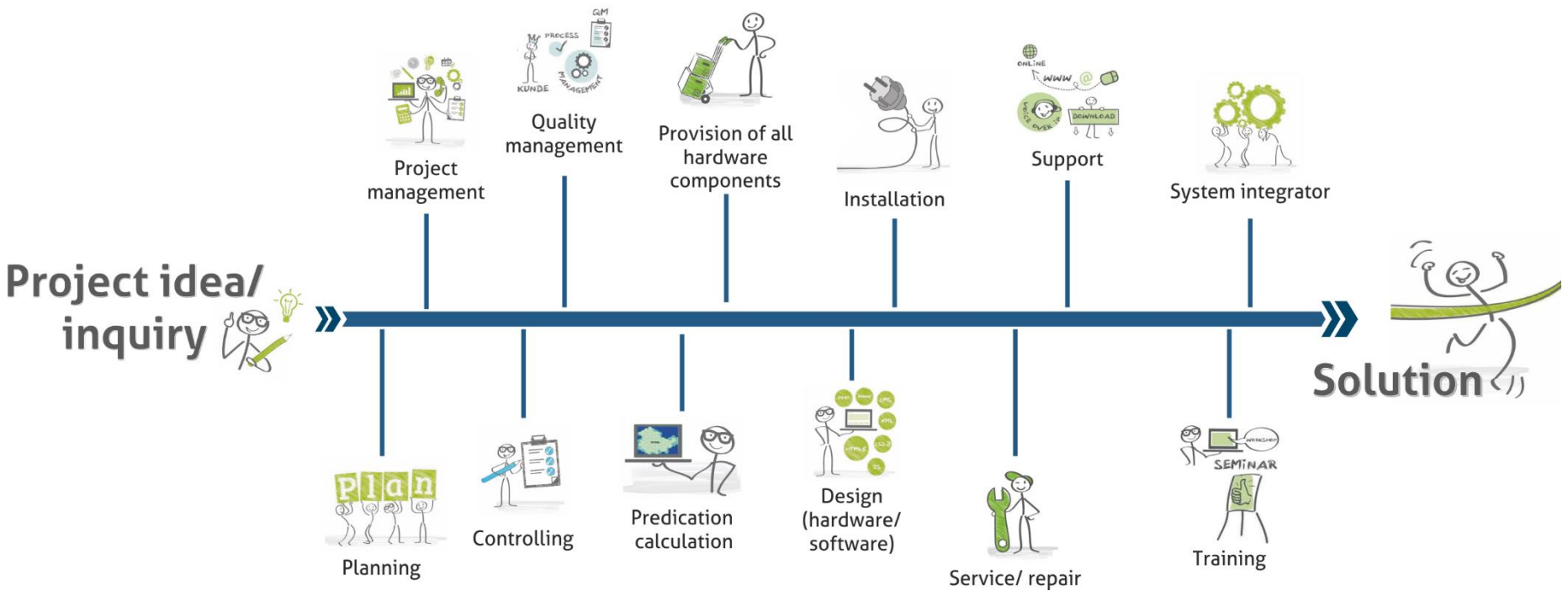
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ABOUT US

- Founded in 1989 by Andreas and Gerald Schroth
- located in Wunstorf, near Hanover, Germany
- approx. 60 employees
- Athonet channel partner for three years



ABOUT US



WHERE WE STARTED

- TETRA and DMR radio communication
- Business areas:
 - Ports and airports
 - Utilities (onshore and offshore)
 - Steel and chemical industry
 - Mining
 - Military
 - Authorities and public safety organizations
 - Security guard services
 - Lone worker protection



CURRENT TRENDS

- New opportunities and customer requirements through 5G technology
- Since 2020: Possibility to reserve campus licenses for companies in Germany
- Focus on 3.7 GHz to 3.8 GHz (322 license allocations) [1]
- Estimates result in 5000 to 10000 campus networks in Germany [2]
- Challenge for system integrators: expansion of competencies of the employees
- Challenge for customers: Invest although TETRA networks are still new
- Availability of national and European funding programs for testing 5G use cases

KOPA_45 PROJECT - FUNDING PROGRAM AND BROADBAND DEVELOPMENT ENVIRONMENT

- Procurement and provision of a broadband development environment for BDBOS (The Federal Agency for Public Safety Digital Radio)
- Stationary and mobile-hybrid LTE/5G campus network
- Goals: Promotion of application development, research-related development, testing and trials of future BOS broadband services
- Contract awarded in May 2023 (ATS Elektronik GmbH with Athonet 5G-core)



5G-USE-CASES (TELEMEDICINE IN AN OFFSHORE WIND PARK)

Why telemedicine?

- Challenges due to bad weather conditions, long distances, etc.
- Rekommandation of the „German Social Accident Insurance (DGUV)“ [3]
- Shortening of the therapy-free interval [4]



https://www.w2m-net.de/bsk-downloads/bsk11/11bsk_ws_offshore_overheu.pdf

5G-USE-CASES (OFFSHORE WIND PARK)

- Project goals: e. g. telemedicine, office work, video streaming
- More than 200 radio units
- 2 georedundant Athonet 5G-cores
- > 60 locations
- Indoor and outdoor coverage

CONCLUSION

- Many more broadband projects in the future
- Great opportunities for new services like telemedicine, AR/VR applications, smart farming, smart logistics, smart manufacturing
- Saving frequencies asap („First come, first serve“)

REFERENCES AND FURTHER INFORMATION

[1]	Bundesnetzagentur für Elektrizität, Gas, Telekommunikation, Post und Eisenbahnen: „Übersicht der Zuteilungsinhaber für Frequenzzuteilungen für lokale Frequenznutzungen im Frequenzbereich 3.700-3.800 MHz“, Berlin, 2023.
[2]	Bundesministerium für Wirtschaft und Energie (BMWi): „Leitfaden 5G-Campusnetze – Orientierungshilfe für kleine und mittelständische Unternehmen“, Berlin, 2020.
[3]	Deutsche Gesetzliche Unfallversicherung e.V. (DGUV): „DGUV Information 204-041 - Erweiterte Erste Hilfe in Windenergieanlagen und -parks“, Berlin, 2021. https://publikationen.dguv.de/widgets/pdf/download/article/3752
[4]	Dr. Daniel Overheu Ärztl. Leiter: „Telemedizin Offshore: Ist-Stand und Perspektiven“, https://www.w2m-net.de/bsk-downloads/bsk11/11bsk_ws_offshore_overheu.pdf .



Thank you for your
attention!

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