# P3

### P3 Score evaluates mobile networks around the globe

#### Measurement scope technically to include crowdsourced based data.

Aachen, January 9, 2018 – Today, more than 180 mobile networks in 65 countries are being evaluated by P3's unique scoring methodology – thus setting the global de-facto industry standard. The independent framework, developed by P3, leader in network benchmarking, is the basis for measuring the actual customer experience as well as mobile network performance and capability.

This score allows a technical analysis that is unprecedented in its level of detail, thus, enabling comparisons to be drawn between the network performance and capability of each mobile network. The public benchmark as well as the certificate benchmarks by P3 help network operators to demonstrate how well they are delivering wireless connections to consumers, business users and enterprises. Operators, management and supervisory boards know where they stand in international comparison.

#### Top scores in Switzerland and the Netherlands

In the overall ranking of this year's benchmark series, the top three scores have been achieved by the two Swiss networks Sunrise and Swisscom managing both to score the all-time high of 973 points (out of a 1000 points), supplanting last year's top rank of T-Mobile in the Netherlands which scores 956 points and achieves the third rank. All three networks have been awarded the grade "outstanding".

P3 regularly adjusts the testing methodology and scoring models to the progressing technical development by increasing the thresholds and requirements to ensure it meets the expectation of industry experts. Still, most operators manage to improve their performance – including top level performers. This clearly demonstrates that P3's challenging network tests contribute to the improvement of the networks. In short: Transparency drives quality.

P3 will continue to apply its methodology to even more countries and mobile networks worldwide covering all continents.

Also, P3 plans to extend the use of crowdsourced data as complement to the benchmark measurements conducting drive tests and walk tests. The crowdsourced data will deliver more real-time feedback on operator performance. In addition, it will allow extending the reach of evaluation of the tested networks in time and geography – data is continuously collected all year, 24/7 and all across the respective countries, way beyond the few weeks and the planned route of a dedicated drive test. Starting in 2017, the crowd-sourced assessment of service availability has already been included in several public benchmarks as part of the score or in an additional case study.

"We have extended our testing schedule with a crowdsourced component from now on and rolling out metrics for coverage, connectivity, latency, speed and performance. Over the top

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content services, technologies like carrier aggregation or voice over LTE and IoT will become more important in the coming year as well. This will make the future benchmark results even more exciting", says Hakan Ekmen, Co-Founder at P3 group.

In 2017 alone, P3's mobile network benchmarking activities included, among others, benchmarks in Albania, Australia, Austria, Bahrain, Croatia, Czech Republic, Denmark, Germany, Greece, Hungary, Ireland, Italy, Kenya, Macedonia, Malta, Moldova, Montenegro, the Netherlands, New Zealand, Poland, Portugal, Romania, Slovakia, Spain, Sweden, Switzerland, the UK and Qatar, as well as numerous dedicated benchmarks for network operators and equipment suppliers.

Caption 1: 16 of the 23 benchmark winners in 2017 show "very good" or even "outstanding" results.

Caption 2: The majority of networks measured in public benchmarks scores more than 800 points which emphasises again that the network tests contribute to the improvement of the networks.

Caption 3: The crowdsourcing assessment enables P3 to collect insights on operator performance for their benchmarks, besides fixed measurement routes and timelines. The US plot shows coverage data from a 30-day period, green indicating good coverage and red bad coverage.

Caption 4: The plots show coverage data from Argentina (180-day period), Germany (30-day period), UK (30-day period) and Malaysia (180-day period), green indicating good coverage and red bad coverage.

Caption 5: The plots show coverage data from Australia (30-day period) and South Africa (30-day period), green indicating good coverage and red bad coverage.

#### About P3

P3 is a leading international consulting, engineering and testing services company with a rapidly growing team of more than 3,000 consultants and engineers working to develop and implement innovative solutions to today's complex technology challenges. P3 posts a turnover of more than €300 million. Offering a broad portfolio of services and proprietary tools to the automotive, aerospace, telecommunications and energy industries, P3 adds tangible value that helps clients succeed at every stage, from innovation to implementation. In the telecommunications sector, P3 communications provides independent technical and management consulting services including network planning, end-to-end optimization, security, QoS and QoE testing, international benchmarking, device testing and acceptance services. P3's clients include network operators, equipment vendors, device manufacturers, public safety organizations and regulatory authorities around the world. For more information, please visit www.p3-group.com.