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## RESOLUTION 453

on

### MAINTAINING THE SCIENCE & TECHNOLOGY EDGE AND ENHANCING ALLIANCE AGILITY\*

The Assembly,

1. **Recognising** that the Alliance finds itself in a new and dynamic strategic reality, marked by growing uncertainty, instability and risks;
2. **Facing** an era of rapid technological change with a shifting science and technology (S&T) landscape and emerging technologies with the potential to disrupt the global strategic balance;
3. **Recalling** NATO's most staunch commitment to stand united to deter any potential aggression and, if deterrence fails, to collectively defend themselves;
4. **Underlining** the critical importance of cutting-edge capabilities to meet NATO's level of ambition and fulfil its core missions;
5. **Stressing** that NATO's unrivalled S&T edge is the lifeblood of current and future capabilities;
6. **Concerned** that NATO's S&T edge is eroding, resulting in increased risks for Alliance credibility and freedom of action;
7. **Emphasising** that effective defence S&T relies on vigorous sustained investment and continuous organisational adaptation;
8. **Welcoming** recent defence budget increases in the Alliance, but **apprehensive** about continued stagnation in defence S&T and research and development (R&D) budgets;
9. **Noting** that NATO S&T is a critical enabler of maintaining the S&T edge in the Alliance, adding significant value to defence S&T in individual Allied nations, notably in burden sharing, capacity building, interoperability and standardisation;
10. **Highly valuing** the crucial role played by the Science and Technology Organization (STO) and the other members of the NATO S&T Community;
11. **Applauding** the significant strides in making NATO S&T more effective, affordable and coherent since the 2012 NATO S&T Reform;

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12. **Noting** the highly productive interaction between the NATO Parliamentary Assembly's Science and Technology Committee and the NATO S&T Community, notably through the Letters of Intent with the Chief Scientist and the NATO Industrial Advisory Group (NIAG) Chairman;
13. **Recognising** the need for increased parliamentary S&T knowledge and expertise;
14. **URGES** member Allied governments and parliaments of the North Atlantic Alliance and the NATO S&T Community:
  - a. to redouble national efforts to reach the 2% benchmark for defence spending by 2024 as all Allies agreed at the 2014 Wales Summit and allocate at least 20% of their total defence spending toward new equipment purchases and research and development;
  - b. to continue adaptation at the national and the NATO level to the changing strategic and S&T realities;
  - c. to unleash the full potential of the NATO S&T community by a) improving NATO S&T's military relevance, coherence, resource exploitation and synergies; b) making the NATO Defence Planning process a focal point; c) enhancing active, early and systematic engagement with all NATO S&T stakeholders, in particular with the military community and Defence industry; and d) increasing parliamentary engagement in national parliaments and through the NATO PA;
  - d. to nurture a more diverse NATO S&T community by a) improving the age and gender balance in the NATO S&T expert network and b) developing new networks in emerging S&T areas;
  - e. to enhance the agility of NATO S&T by a) developing a more strategic S&T approach and b) making available the highest quality scientists and engineers for NATO S&T; c) fostering an agile, innovative and risk-tolerant mindset through, inter alia, sharing best practices across the NATO S&T community; d) developing new policy tools to exploit emerging technologies; e) exploring financial tools for 'seed money' in support of technology demonstrations and rapid studies; f) developing an improved information management system, including at higher classification levels; and g) fostering communities of interest and boosting activities focused on autonomy, big data and artificial intelligence, and operations in contested urban environments;
  - f. to demonstrate the value of S&T to the military community by a) increasing the quantity and quality of prototyping, demonstrations, tests and experimentation and b) elaborating better processes and tools to facilitate insertion of S&T into operational settings;
  - g. to improve strategic engagement and communications by a) conveying meaningful, timely and targeted support and advice to NATO entities and leadership; and b) showcasing NATO S&T's impact and importance to NATO entities and leadership;
  - h. to reinforce the Science and Technology Organization by a) conducting a complete review of workload, requirements, manpower and organisation in light of the new strategic and S&T realities and increased demand for NATO S&T activities and b) conducting a thorough analysis of the organisational and financial model of the Centre for Maritime Research and Experimentation to make it fit for purpose at a time when NATO must strengthen its maritime capabilities;
  - i. to evaluate NATO S&T on mission delivery by a) building on the 2018 NATO S&T Strategy, Priorities, Targets of Emphasis and the NATO Defence Planning Process and b) regularly analysing NATO S&T programmes of work to identify gaps and improve programme health;

- j. to increase transparency on defence S&T and R&D investment trends by a) making these trends more visible among Allies and NATO entities at the classified level and b) engaging in a serious discussion on publicly publishing statistics on Allied defence S&T and R&D spending.
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