# The Domain of Vacuum Electronic Devices

VED Industry Partnership Project Leadership Panel

#### EW Europe 2019 Stockholm, Sweden





## **About the VED IPP**

- The Vacuum Electronic Devices Industry Partnership Project (VED IPP) explores how the US Department of Defense, foreign military partners, and the global defense industrial base are in a strong and cooperative position to advance VED technology, including:
  - Traveling Wave Tubes (TWTs)
  - TWT amplifiers (TWTAs)
  - Microwave Power Modules (MPMs)
- Deliverables
  - Meeting with DoD Microwave Technologies Executive Agent
  - Issue Brief: "Rethinking What We Know About VEDs"
  - Technical Briefs on TWT Reliability & Efficiency (Summer 2019)



#### **VED IPP Partners**











### Panel

- Mr. Malcom Carruthers, Vice President, Power & Microwaves
- Mr. Nigel Hann, Head of Sales, TMD Technologies
- Mr. John Knowles, Editor-in-Chief, Journal of Electronic Defense
- Mr. Ken Miller, Director, Advocacy & Outreach, AOC (Moderator)



## Discussion

- Defense and industry leaders must rethink *outdated* and *disproven* assumptions that hold back investment in VEDs, especially TWTs and TWTAs.
- Overall advances in VED technology and ongoing research, most notably in *reliability* and *efficiency* of devices, have opened doors to new opportunities.
- Major **obstacles** in the way of progress for VEDs include:
  - Industry capacity
  - Supply chain
  - Intellectual capital



#### **Download VED IPP Issue Brief at:**

#### https://www.crows.org/page/VEDIPP

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