Practise what we preach

How technology can help training and education

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Outline

- British Army Doctrine
  - Integrated Action

- Training and Force Preparation
  - Shortfalls

- Possible solutions
  - Immediate: 2018
  - Short-term: 2019-2020
  - Longer-term: 2020-2025

Today's Latin Lesson…….

"Si vis pacem, para bellum"

If you wish for peace, prepare for war

(Multiple Roman authors)

Why does Doctrine even matter?

Futures
- Long-term, trends-based forecasting; out to 30 years
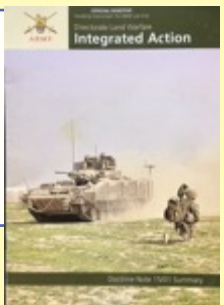- Suggesting possible Capability Development (CAPDEV)

Concepts
- Medium-term requirements definition; 20 years out
- Driving CAPDEV

Doctrine
- What needs to be done now
- Directing Warfare Development (WARDEV)

Integrated Action

- Unifying doctrine
  - Land adaptation of Joint Doctrine

- Overview
  - 4 high-level Actions, 18 supporting training activities:
    - **Land Manoeuvre**
      - Ground Manoeuvre; Air Manoeuvre; Manoeuvre Support; Sustainment.
    - **Joint Fires**
      - Land Artillery; Air Fires; Maritime Fires; Combat Arms Direct Fire; Cyber and Electromagnetic Activities.
    - **Information Activities**
      - Psychological Operations; Deception; Operations Security; Key Leader Engagement; Media Operations.
    - **Capacity Building**
      - Security Sector Reform; Security Force Assistance; Civil-Military Cooperation; and Infrastructure Projects.

Training and Force Preparation - Shortfalls

- Joint Fires
  - Land Artillery;
  - Air Fires;
  - Maritime Fires;
  - Air Defence

Training and Force Preparation - Shortfalls

- **Urban**
  - Scale;
  - Mass;
  - Density;
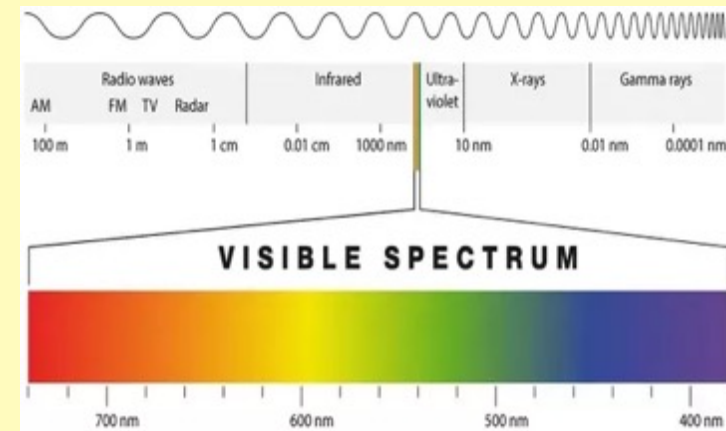 - Complexity
  - Megacities……

Training and Force Preparation - Shortfalls

- Littoral
  - Maritime fires
  - Littoral real-estate

Training and Force Preparation - Shortfalls

- Cyber and Electromagnetic Activities
  - Joint activity
  - Other Government Departments
  - Education and Training

Training and Force Preparation - Shortfalls

- Counter UAS
  - Single platform
  - Armed platform
  - Massed

Training and Force Preparation - Shortfalls

- ## Media Operations
  - ### Social media
  - ### Rolling news

Possible Solutions – Immediate (2018)

- Review current training
  - Educate training designers and deliverers
    - Teach them their doctrine if necessary!
  - Review training delivery to close current gaps

- Enhance training with current available capabilities
  - Eg EW; media etc

- Establish cross-functional team to rapidly identify and develop options
  - Include industry, academia and soldiers
  - Look at what allies and partners are doing

Possible Solutions – Short-term (2019-2020)

- Enhance Virtual and Constructive training:
  - Improved Synthetic Operating Environment
  - Improved, more numerous, reconfigurable Roleplayer Stations
  - Continue and broaden integration of COTS options into all environments:
    - Rina Consulting Ltd - PreeCEPT
    - NSC – UBVT
  - Prime lead; subsidiary SMEs
    - Eg Boeing and Tapestry Solutions on Dynamic Front 18 Joint Fires Integration

- Review balance of training environment use:
  - Centralised or distributed? Fixed or mobile?
  - Evidence for the 'need' to train Live is often lacking

- Confirm investment and procurement of longer-term solutions
  - How can Industry help?
  - Challenge procurement processes; embrace opportunity

Possible Solutions – Longer-term (2020-2025)

- Develop a comprehensive landscape of augmented reality
  - Fully integrated Live, Virtual, Constructive and Gaming technologies
  - Compelling Virtual experiences

- Open architectures
  - Interoperable; intuitive
  - Common application interfaces

Conclusions

- It's not all broken…..but…..

- More can be done

- Many current assumptions must be challenged

- Evolution can lead to revolution

- Technology holds some, but not all, the answers