



# Spectrum and public safety

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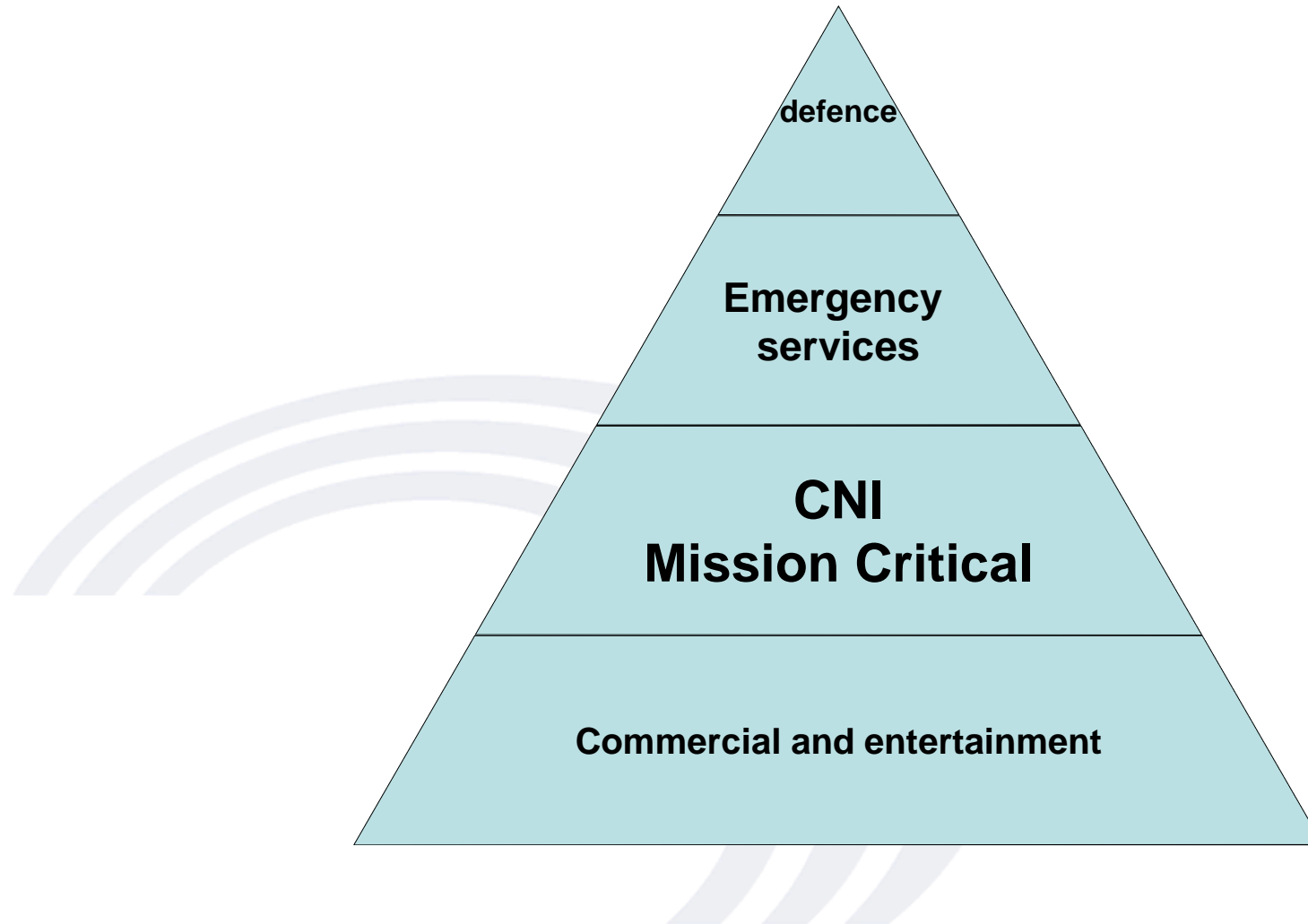


UK Trade Association for the communication  
services industry

Products and services delivered by wireless,  
fixed, IP, mobile

[www.fcs.org.uk](http://www.fcs.org.uk)

Business Radio and Critical National  
Infrastructure



## Thesis

- CNI- utilities, transport, emergency services- form part of Public Safety
- CNI and mission critical services are essential to society and need certain access to spectrum
- Spectrum is a secondary but essential input to the effective functioning of these parts of the economy
- CNI systems need high resilience self provided services- not matched by commercial services

# Impact of loss of CNI services

Example: New York Power outage August 2003

- 3 reported deaths
- 3000 fires from use of candles
- 80,000 calls to 911
- 300 arrested for looting
- Shut down of cellular coverage
- 400 flights cancelled
- Cost estimated at over £5bn

(Source: St Andrews Management Institute: SAMI Consulting)

**CNI incidents can affect every single person**

## Cave Spectrum Review 2002

“An explicit duty on Ofcom to manage spectrum with the objective of maximising the benefits derived by UK society from spectrum use

This would put the onus on Ofcom to quantify, where feasible, these societal benefits.

It would not imply reducing all Ofcom spectrum decisions to monetary cost benefit analyses of competing allocations, as it would also recognise the unquantifiable social benefits derived from spectrum”

## Limitations of the spectrum market

- Auctions are uncertain- CNI bids in UHF and 1.5 GHz auctions unsuccessful
- CNI requirements are definite and specific- cannot risk failure
- Auction blocks –wrong size, wrong place; CNI footprints are specific
- Would have to raise finance for more spectrum than need- no guarantee that excess could be traded
- WT Register-risk in identifying all frequencies, base station locations of CNI sites

## Not the spectrum market

- Why should there be a level playing field to enable non-commercial spectrum users to compete with commercial users?
- Accept the national strategic importance of CNI
- Recognise the difference and treat societal users of spectrum differently from commercial
- Allocate spectrum in relevant frequency bands for ES, CNI and Mission Critical where they need it



## UK-Look at Canada

- Industry Canada: 30 MHz of bandwidth below 2 GHz (1800-1830 MHz) being allocated for use to benefit the electric grid
- Acknowledgment that the electric industry is the foundation for the national economy and warrants a spectrum allocation to ensure the public welfare of Canadian citizens
- See <http://www.ic.gc.ca/epic/site/smt-gst.nsf/en/sf08971e.html> for more information

## Spectrum and public safety

- Competing on a level playing field with commercial uses- **NO**
- Should ES spectrum be separated from the auction system?- **YES**
- Sharing spectrum- **ES and CNI PROBABLY**
- Which frequencies for public safety?- **THOSE SUITABLE FOR SERVICES AND HARMONISED PRODUCTS**