

CREATING RESILIENCE IN THE PRIVATE SECTOR

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- ❖ **Mike Chalmers-Hunt – Head of Security Services, Network Crime,**
- ❖ **Ian Hetherington – Director General BMRA**





Our network security policy

In place since 1994 –
revised annually.

links into the Network Planning policy document

Two key elements

- **Re-active Security Measures**
- **Pro-active Security Measures. For all new work**
 - BT Exchange Buildings + computer centres
 - Critical Sites (
 - Next Generation Access (Fibre Cabinets)
 - Business Parks
 - New development Sites
 - CCTV (CCTV Cabinets and CCTV monitoring centres).
- **Vulnerable Area Locator (VAL) Tool**
 - Postcode based tool -provides an initial assessment of the need for additional security based on level of previous attacks.

Our network

FACTS

- Circa 2 million underground access points
- The need for enhanced lockdown

ASSUMPTIONS

- Not all boxes would need to have enhanced security solutions
- We could target locations based on available crime hotspot data

PROS

- Provides an increased level of defence and increased attack time
- Reduce potential for consequential impact on the fibre network

CONS

- Criminals are obtaining high capability attack tools.
- Hard to build a compelling / quantifiable business case.
- Magnitude of programme -would take years to conclude.
- In future - less copper and more fibre in the network

Cable theft

- Nature of criminals is such that we are now facing determined and organised gangs rather than a larger number of opportunists
- Government funding [£5m] for the Police Metal Theft Taskforce has ceased with no new money available, unless industry provides funds
- General Police funding cuts are inevitable and will reduce ongoing proactive operations against thieves as well as central metal theft operations
- New legislation will be enforced by local authorities and policing will be driven by PCC's [Police Crime Commissioners] on identified issues only
- With reduced police visibility SMDs are likely to start taking cable again or we see a shift to other granulation methods e.g. farms, car-breakers.
- Export of stolen cable as a disposal route will continue and increase
- Attacks against the Live network are going to remain a feature for the next 12 months
- New wave products attacks e.g. TV Services will leave us vulnerable to serious reputational and financial damage if there are significant network outages
- Continuing significant media focus on issues affecting BT

Risk assessment output: focus for the next 3 years

- **Network pinch points** - where there is the potential for a serious impact to service and reduce the likelihood of attack.
- **Live cable theft** - maintain the current focus on cable theft.
- **High dependency sites** - focus on moderate impact sites to reduce likelihood of successful attack.

Mitigation identified

On-going programme to enhanced security on network pinch points and critical routes/sites.

Extend programme to lower bandwidth pinch points.

Improvements to RABiT

Mitigation identified

PIRs detection on network pressurisations alarms

Review / Increase security of network records

Other programmes of work - Smartwater, Crimestoppers / targeted compliance checks and improved Police engagement.

Improved intelligence / analysis of crime trends and network vulnerability

Introduction of new products e.g. SEAL device.

Investigations into resilience on core and NGA network routes.

Network Crime prevention

Reactive

- Cable theft/cut Incident Investigation. CCTV evidence and forensic retrieval, door to door enquiries. Intelligence gathering & reporting to BT Security
- RABit [network alarm] activations responses.
- First response -assistance for Police requests for BT attendance at theft sites.
- Rapid deployment of overt/covert mobile CCTV equipment at theft & attack locations.
- Support national UK law enforcement / Police led operations,
- Support British Transport Police led Days Of Action
- Crimestoppers leaflets distribution in areas of risk
- Attend Metal theft regional and National security meetings with Police and Enforcement agencies
- Producing Police statements & crime impact information to support arrests/convictions.
- Magistrates & Crown Court expert witness representing Openreach/BT

Proactive

- Deployment of tactical security devices, including Smartwater, to deter Network attacks
- Overt patrols in hotspot areas to deter criminal activity and recover intelligence.
- Proactive and reactive scrap metal dealers visits, recover Openreach/BT stolen metals & educate scrap dealers on cable identification.
- Train local operational teams on proactive SmartWater deployment.
- Conduct targeted security compliance checks on individuals/ 3rd parties (Contractor and Direct Labour) working in the Access and Core Networks.
- Coach/train Police & other enforcement agencies on network attacks & criminal modus operandi
- Conduct security compliance and behavioural audits at TECs / exchanges, to prevent theft of stored cable assets, includes security behavioural and risk assessments, building relationships with engineers and with all levels of management to improve behaviours and, management of action plans developed from audit.
- Installation of NGA Head End cabinets Locks in exchanges

Network Delivery

Resource Profile

Cable recovery

1 X SOM-Band 2

3 X Regional Managers (OM) Band 1

19 X C2 Field based.

1 x C2 Office based.
Reporting/performance metrics.

3 X C2 CMA from BLH5.
Support increased workload due to HCR Audits.

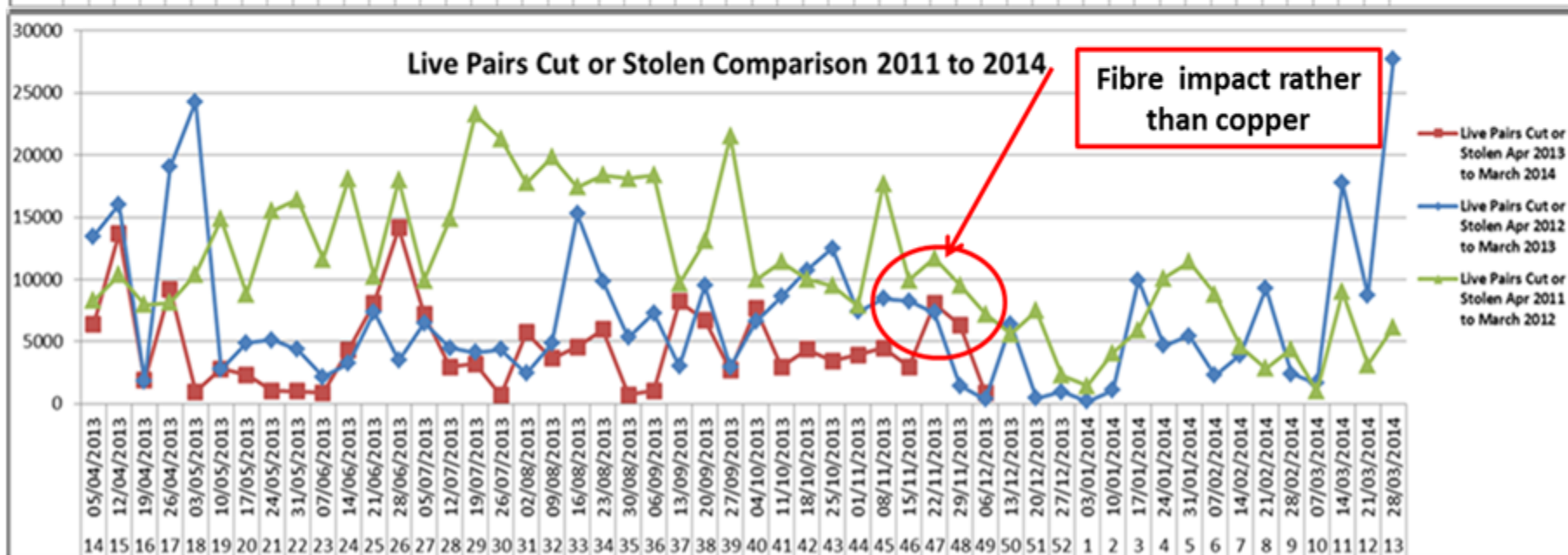
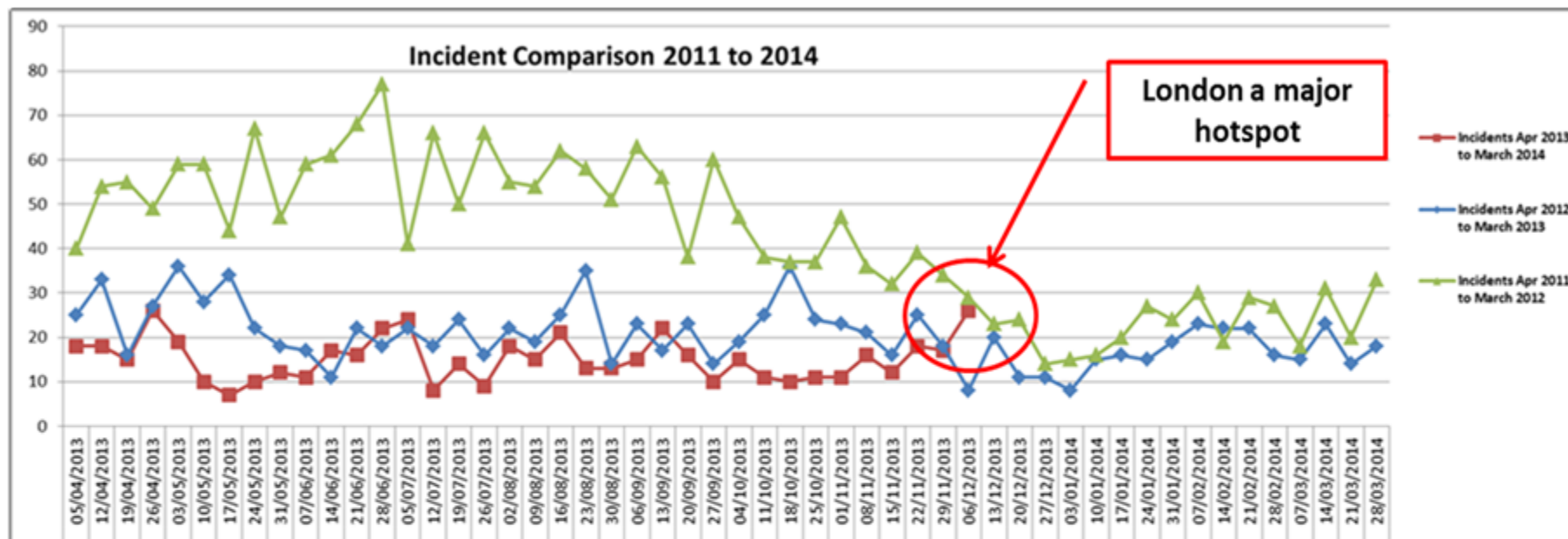
NIU Proactive engagement

- 42 Police forces nationally
- Welsh Assembly.
- Scottish National business crime centre.
- Borders agency
- The Scottish Commercial Crime Group
- G.A.I.N.
- Industry -Network rail, Highways Agency, Power Utilities
- Safer neighbourhood policing.
- Openreach - GMs/SOM / Controls / Ops Managers.
- Parish Councils
- Fire brigade

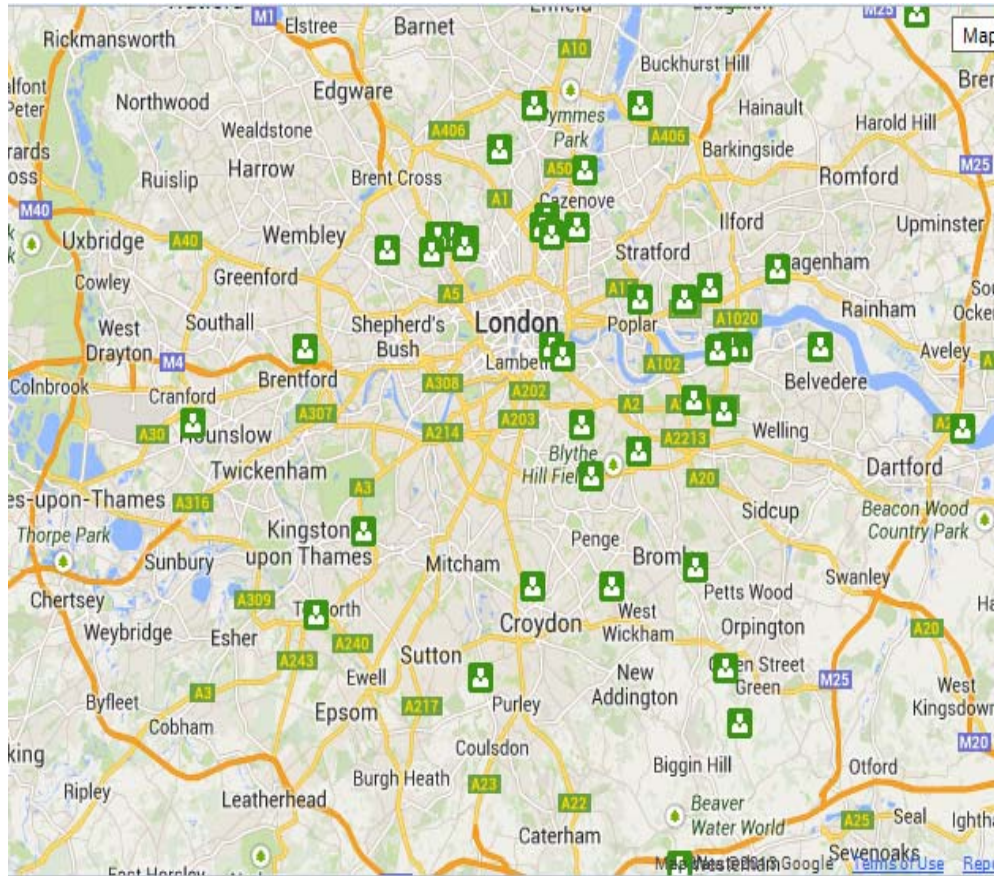
HCR specific - Compliance checks



The current Impact



Our Hotspots



SATURN illustration – 18 months of network cable thefts within M25 area



SATURN illustration – April 13 – Oct 13 u/g cable cuts

Creating Resilience to attacks

Protective measures	Where deployed in network	When used
PLATES PLANT PROTECTION	Nationally core and access	Following attacks and in vulnerable areas
RABiT	Nationally Access network	Reactive following attack
NETWORK COMPLIANCE CHECKS & VEHICLE CAMERAS	Nationally core and access	Proactive
PIR ALARMS	Nationally reactive	Following attacks
SMARTWATER DEVICES / SOLUTIONS	National Proactive and Reactive	Following attacks and in invulnerable areas
MOBILE CCTV	Nationally reactive	Following attacks and in vulnerable areas
CRIMESTOPPERS	Nationally	24/7 Intel
SEAL UNITS	Nationally	Reactive & proactive



Since the pan BT Metal theft taskforce was formed

What have we achieved

- Year on year [FY12-13 / FY13-14] comparison
 - YTD Malicious faults reduced by 44% compared to last year
 - YTD Incidents down by 35%
 - A number of significant arrests and convictions – BT have provided evidence in court to help secure sentencing
- Very much a team effort working across the BT business and externally with law enforcement and other external agencies,

{THERE IS MORE TO DO}



Corporate Investigations

Network Crime Team

Mike Chalmers-Hunt



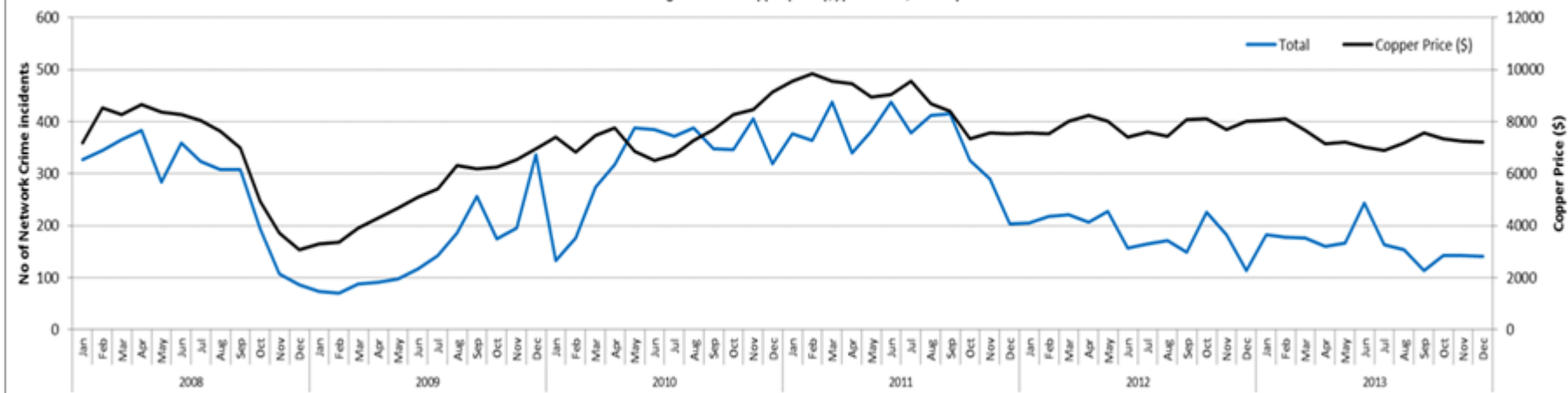
Network Crime Team



- ✓ 'task force' –collaborative business approach (probably unique!)
- ✓ Responsible for police liaison –strategic and operational
- ✓ Intelligence led approach –intelligence development and information sharing
- ✓ Crime investigation –including joint operations with law enforcement
- ✓ Financial recoveries



Total Network Crime incidents against BT vs copper price (\$ per month, January 2008 to December 2013



23.4% down on Dec13
40.7% down on Jan 13
REPORTED INCIDENTS

18.2% down on Dec13
36.4% down on Jan 13
REPORTED FAULTS

Significant contributory factors:

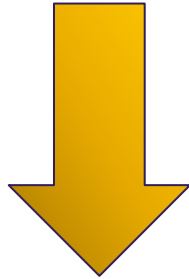
- Change in Scrap Metal Dealer legislation
 - No longer a cash-based industry
 - Increased sentencing severity
 - Restricting outlet for disposal of stolen material through regular compliance checks with SMDs
- Introduction of RABiT technology to protect the BT network
- Intelligence-led focus – targeting offenders and hotspots
- Targeted network protection
- Partnership working with British Transport Police and other affected industries through Fusion.



How the landscape has changed

2011

High volume of low level incidents, widespread problem



2013

Low level incidents reduced. Activity by organised crime groups remain prominent



Offender profile

'typical level 1'

- small groups males
- some organisation
- steal small amounts at a time
- often opportunistic
- localised
- often to feed other habits

now seeing 'level 2' offending

- more organised in planning
- use of larger resource in terms of equipment etc
- travel further distances
- steal large amounts
- clear disposal route (s)



Challenges ahead.....or opportunities?

- ✓ Risk of loss or service disruption “an ever present threat”
- ✓ Maintain ‘traction’-law enforcement engagement
- ✓ Disposal route –intelligence gap
- ✓ Collateral
 - fibre cuts
 - BT estate
- ✓ Collaboration –we all get to see the bigger picture





Ian Hetherington

Scrap Metal Dealers Act 2013

British Metals Recycling Association
01480 455249
ian.hetherington@recyclemetals.org



The UK Metal Recycling Industry

- £5.6 billion UK industry
- The most advanced recycling sector
- Processes some 13 million tonnes of scrap into secondary raw material to produce new metal every year
- £3.7bn contribution to UK balance of trade
- Directly employs over 8,000 people



British Metals Recycling Association

- Trade association representing the UK metal recycling sector
- 300 member companies
 - 500 sites
 - Together process over 95% of the metallic scrap in the UK

Scrap Metal Dealers' Act 2013

- Modernizes 1964 legislation
- Restricts the payment for scrap metal to a cheque or an electronic transfer
- Adds requirement to do a photo-identity check on all **providers** of scrap metal.
- Introduces two classes of licence:
 - Site licences
 - **Mobile Collector licenses**

Scrap Metal Dealers' Act 2013

- Improves police rights of access to unlicensed premises buying scrap metal
- Licencing Authorities have to apply a “suitable person” test on licensees,
- Creates a national register of scrap metal dealers,
- Adds requirement to display licences, including mobile collectors.

Scrap Metal Dealers' Act 2013

- National register:
 - Police and local authorities should have no excuse for not knowing whether a merchant is properly licensed
 - Customers can check whether they are dealing with a registered scrap metal dealer
 - Scrap metal dealers will also be able to tell whether their own customers are licensed ...

Scrap Metal Dealers' Act 2013

- Penalties:
 - Failure to have a license: fine = £5,000
 - Breach of closure order: fine = £5,000
 - Failure to check ID: fine = £1,000
 - Giving false name or address: fine = £1,000
 - Pay cash for scrap: fine = £5,000
 - Fail to keep proper records: fine = £5,000

Scrap Metal Dealers' Act 2013 – implementation issues

- Commencement date 1st October 2013
- Licencing Authorities slow to issue licences
- National register needs bulk of licences issued to “go live”
- Guidance & regulations:
 - Many details not completely clear in main Act but be set in secondary regulations

Scrap Metal Dealers' Act 2013 – implementation issues

- We want:
 - Priority for enforcement to go on those currently unlicensed
 - Effective enforcement from Day 1
 - Consistent and proper local authority licensing decisions
 - Consistent & reasonable local authority fees.

Scrap Metal Dealers' Act 2013

What's in it for us.....?

- Act welcomed by the industry
- Licensing protects against unfair competition **if robustly implemented**
- Embeds lessons on I/D of scrap sellers
- Provides powers to close illegal operations
- National register central to success
- A central role for Licensing Authorities



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Scrap Metal Dealers Act 2013

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INTERNATIONAL UNION
OF RAILWAYS

unity, solidarity, universality

POI-PRIMETT II First Expert User Group meeting.

Workshop 2

Creating resilience within the private sector.

Jacques Colliard

Head of Security Division-UIC

José Pires

Rail Security Senior Advisor - UIC

London 12th February 2014

Agenda

1. Metal theft, the railway context.
2. The scale of the problem; an example.
3. Effects of metal theft on the railway system.
4. Impacts of metal theft on the railway system.
5. Managing the metal theft consequences.
6. A collaborative mitigation effort.
7. UIC Metal Theft WG Framework 2013/14
8. Conclusion

UIC SECURITY PLATFORM

METAL THEFT ON THE RAILWAYS

Protection and surveillance
Swift detection of theft
Recognition of stolen material
Deterrents
Partnerships
International aspects
Contact with other «victims»
Communication

“Metal thefts on the railways cause increasing disruption to passengers and freight services, escalating costs to the rail industry and have dramatically killed people within the past years”

Quelque chose de suspect?



Aidez-nous à combattre les vols de cuivre!
 Les vols de câbles ont causé en 2013 plus de 50000 heures de retard des trains en Belgique.
 Visitez www.infrabel.be/fr/velocite/velocite pour plus d'informations.

APPELEZ LE 0800/30 230

INFRABEL

Network Rail

The greatest train robbery yet.

Over the past three years cable theft cost the taxpayer more than £43 million, and the problem is growing. But it also costs passengers thousands of hours of their time through signal failure caused by stolen and damaged cables. We're working with British Transport Police and train operators to stop cable thieves stealing even more of your time and money.



Report cable theft by calling British Transport Police on 0800 40 50 40



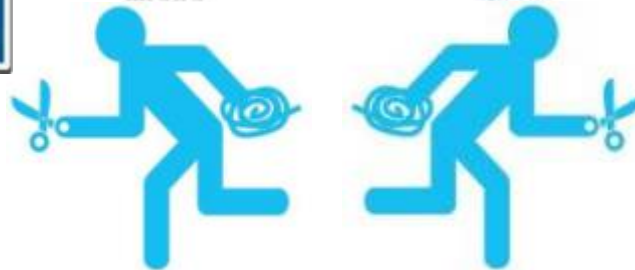
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INFRABEL



1- Metal theft, the railway context

Metal theft continues to grow, costing railways hundreds of millions of Euros per year in direct costs and causing tens of thousands of hours of delay to its citizens.

Rail Networks Metal Theft Triangle

Motivated Offenders

- Organized Thieves
- Opportunistic Thieves

Places

- Rail Energy Substations
- Signaling Boxes
- Over Head lines - Catenaries
- Telecommunications facilities
- Maintenance Worksites



Targets

- Electric Substations cables and utilities
- Copper and aluminum cables (signaling and telecommunications)
- Metal scrap (rails, rolling stock, AC equipment, etc)

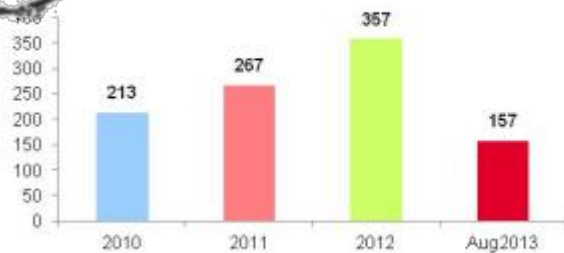
2- The scale of the problem; an example.



ÖBB

Hotspots predominantly in the eastern region

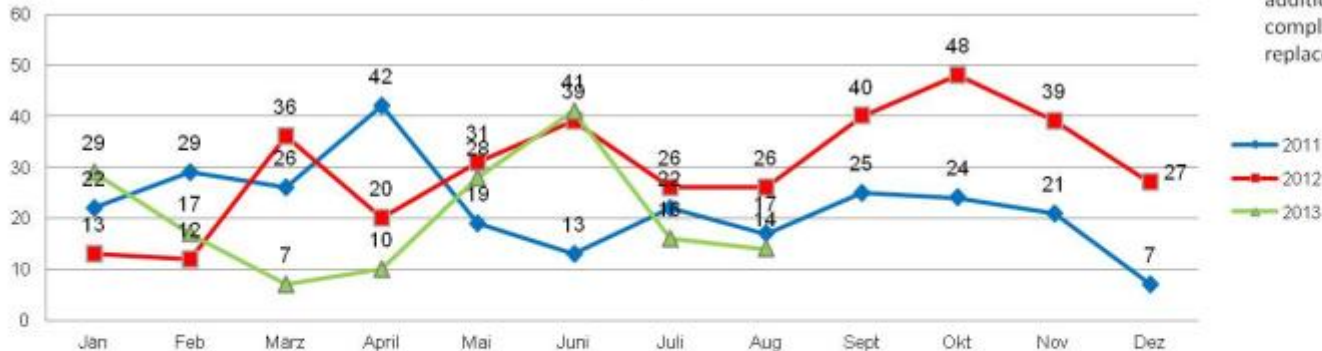
Number of reported incidents



Total losses*)



Number of reported incidents



*) usually only material value – without recovery costs and / or additional operating costs due to complications (e.g. rail replacement buses etc ...)

Registered train delay minutes due to copper theft

2012 – 25,000 train delay minutes
 2013 30th Jan - 30th June – 12,000 train delay minutes

Source : Austrian Railways - ÖBB Group Security / Security Management 1

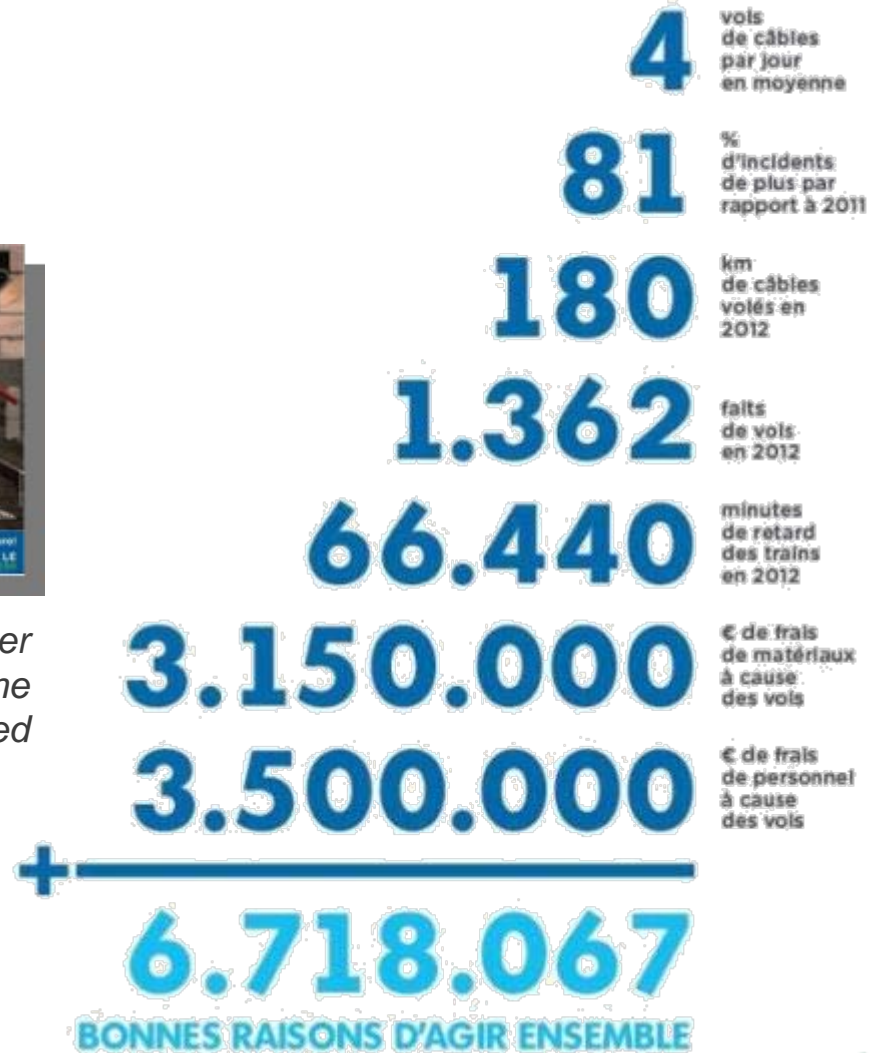
2- The scale of the problem; an example.



INFR/ABEL



“The metal theft numbers are heavier each year, between 2009 and 2012, the number of events has been multiplied by four.”



3- Effects of metal theft on the railway system.

On rail passenger services

It is estimated that **a million passenger journeys** were delayed or cancelled as a result of metal thefts having caused thousands of minutes of delay.

On rail freight services

Rail freight undertakings have experienced **thousands of minutes** of delay due to metal theft over the past years.

On rail safety and security

On 11 January 2011, an ICE train derailed near the Dutch city of Zevenaar. The cause of the accident was the theft of **300 metres of copper cable**.

On maintenance

If delays attributable to railways infrastructure managers exceed a certain threshold, it is required **to compensate** train operating companies for the disruption.



4- Impacts of metal theft on the railway system.

Operational impact

Metal theft is impacting on the railways operational performance causing thousands minutes delay and cancellations/significant rail services disruptions.

Financial impact

- a) Direct cost from loss of metals;
- b) Fines from regulating bodies/government;
- c) Compensation paid to train/freight operating companies;
- d) Revenue loss due to loss of customers etc;



Reputation impact

How metal theft is impacting on government, regulating bodies, public, customers and business partners' confidence in how the railway is run and what is being done to combat metal theft.



5- Managing the metal theft consequences.

Managing the metal theft consequences is currently one of railway security's main focuses and it is time to set some sustainable solutions. Only a structured common approach can provide a wide and extended set of solutions!

The problem **needs to be tackled by a collaborative mitigation effort by all relevant stakeholders** including the general public.



6- A collaborative mitigation effort.

UIC Metal Theft WG

The UIC Metal Theft WG is the Single Rail Forum:

- With the **representation of all** the railway collective bodies, authorities and its members;
- Technically **support the liaison/lobbying** bodies (CER/EIM) activities into European Commission;
- An **information sharing platform** for railways/authorities on metal theft issues;
- The centre for **best practices** in combating metal theft;



6- A collaborative mitigation effort.

Law enforcement and Security forces involvement in transport activities/training

Discuss with law enforcement entities from EU Member States and representatives from the private sector on the framework of the European project on Mobile Organised Crime Groups.



Support a harmonisation of the “Metal Theft in the railway context/concept” at a European level that can:

1. **Recognise** this specific crime and strongly **punish** those involved;
2. Support/facilitate the **control** and **monitoring** of the **railways scrap metal**;
3. To seek greater **compliance with existing regulation** of the scrap metal dealer industry, by providing enhanced deterrents and more effective law enforcement.

6- A collaborative mitigation effort.

Partnerships

1. Develop partnerships with the authorities and the legal institutions to introduce and take into account all the metal theft impacts:

- a) repairs and replacement of stolen materials,
- b) costs of operational delays, damage the image of railways and,
- c) technical consequences (obstructing trains, endangering the lives of others in some cases ...), in their prosecutions;



6- A collaborative mitigation effort.

Partnerships

2. **Research and Innovation Projects** in designing security solutions for the use of metals or alternatives for metals in railways; Look into the H2020 opportunities together with researchers and industry towards an enhancement of the Metal Theft future mitigation tools.

Horizon 2020 is the biggest EU Research and Innovation programme ever with nearly €80 billion of funding available over 7 years (2014 to 2020).



6- A collaborative mitigation effort.

Partnerships

3. **Mobilise other economic victims** of similar phenomena to find common responses;
4. Support the initiative to **prohibit scrap metal transaction cash payments** by:
 - a) Pushing the payment of scrap metal transactions by electronic transfer, direct debits, credit transfers, on-line, phone and mobile banking only as they are made from the payer's account to the payee's account.
 - b) Requiring identification from all suppliers of scrap metal material - Presentation of Passport or original passport of any nationality.



7- UIC Metal Theft WG Framework 2013/14

UIC Metal Theft WG meeting in Berlin May 2013 and Bratislava October 2013 :

- Metal Theft Position Paper (Published in November 2013 at world UIC Security Congress) - **DONE**
- Railways Single Forum: have website/ virtual forum for all relevant papers etc. as single point of information for any information – **DONE/ONGOING**
- Participation at the LANDSEC meetings presenting the metal theft technical concerns jointly with CER and EIM that promote the policy/political railways views. **DONE December 2013**
- Closer contact with PoI-PRIMETT; Follow and collaborate with PoI-PRIMETT II towards the creation of synergies in particular regarding a wider MT communications strategy (for Railways and other sectors) – **DONE/ONGOING**

7- UIC Metal Theft WG Framework 2013/14

Currents ongoing actions:

1. European/International Level

- a) Collaborative and cooperation activities on Railways Metal Theft mitigation (with CER/EIM/UITP/RAILPOL/Pol-Primett)

2. EU/Regional Level

- a) Regional Meetings on Border-crossing Metal Theft Hot spots
 - i. 1st Meeting 23rd January 2014 **DONE** – OBB (Austria); DB (Germany); FS/RFI (Italy).
 - ii. 2nd Meeting 20th February 2014 Frankfurt (Oder) – Planned - DB (Germany); PKP-PLK (Poland); With Local German and Polish authorities.
 - iii. 3rd Meeting March 2014 under planning – SNCF (France); SNCB/INFRABEL (Belgium), Network Rail (UK);



7- UIC Metal Theft WG Framework 2013/14

Currents ongoing actions:

3. Technical Level

- a) Global costs of Metal theft on the railways
 - i. Cost evaluation and development of a EU Metal Theft on the Railways Facts & Figures Database.
 - ii. Collection of the current technical solutions against metal theft implemented by the railways.
 - iii. Border-crossing railways cables/metals catalogue
 - iv. Railways European cartographic Map of the Metal Theft hot-stops.

4. Information and Dissemination level

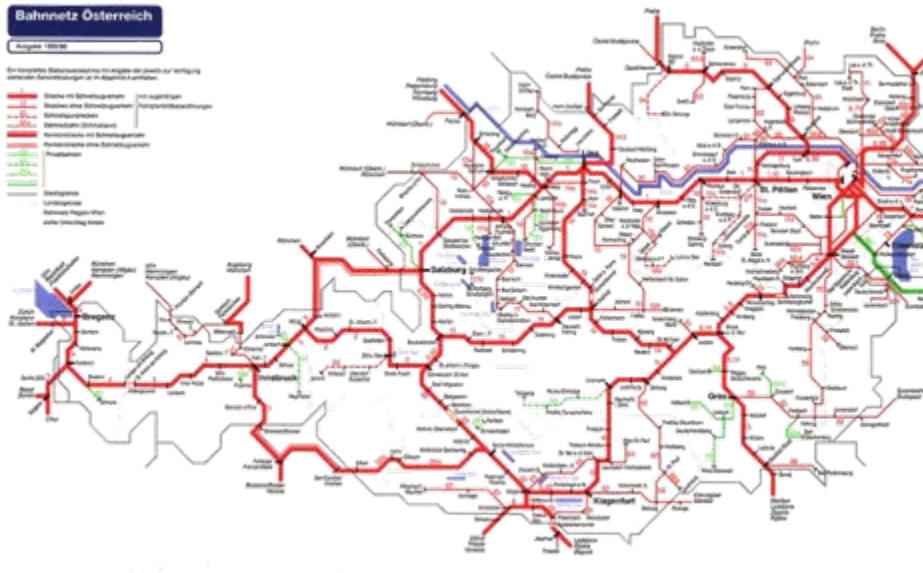
- a) UIC Metal Theft Position Paper (revision/2°Edition)



7- UIC Metal Theft WG Framework 2013/14

SAVE THE DATE

6th UIC Metal Theft WG meeting in Vienna 14-15 May 2014
kindly hosted by Austrian Railways - ÖBB Group Security.



8- Conclusion

Metal theft is far from being mitigated and it is in fact affecting multiple industries and by consequence society. Railways in particular cannot afford to be passive and wait for others to take action on their behalf. Railways' response to this problem can and must be consistent across Europe having as a common and single objective **“Mitigate metal theft and its impacts on railway users.”**



- ■ ■ **Thank you for your kind attention and we will be happy to answer any questions.**

For more information please visit us @ the UIC website on security activities
<http://www.uic.org/security>

