



Prevention and Deterrence Expert User Group (P&D EUG)



P&D EUG Agenda

- Welcome and introductions
- P&D EUG priorities
- LEA EUG workstreams
- EUG member presentations
 - UK Power Networks
 - Church of England
 - IOM³
 - BIR
- Country profiles
 - Bulgaria
 - Greece
- Collaborating with national strategies
- Open forum – Q&A
- AOB, summary and close



P&D EUG agreed priorities

- Share good practice to leave a legacy for EU Member States
- Enhance collaboration between LEA's and the Private Sector
- Improve knowledge of the movement of stolen scrap metal throughout Europe
- Engage with government representatives to raise awareness of the impact of metal theft



P&D EUG agreed research activities

- EU directives and national legislation on registration / regulation of scrap metal dealers
- EU directives and national legislation on shipment of scrap metal
- Establish the amount of metal theft at each level of criminality
- Offender profiling, sentencing of offenders and re-offending trends
- Threats and impact of metal theft



P&D EUG agreed activities

- P&D EUG members to participate in research activities
- Participate in European 'Days of Action' both operational and political
- Consider media strategies to deter criminals
- Establish the feasibility of a system that informs scrap metal dealers where metal they are handling has come from



LEA EUG workstreams

- Involve relevant LEAs in partner countries e.g.:
 - Police
 - Border control and customs agencies
 - Environment agencies
 - Prosecution and judiciary
- Develop a training package for front line officers
- Develop a European good practice guide for LEAs
- Research existing intelligence gaps relating to serious and organised criminal involvement in metal theft
- European 'Days of Action'
- Develop a European MetalWatch database





New EUG members





David Shepherd





Metal Theft and Church Buildings



**THE CHURCH
OF ENGLAND**

**Ben Greener - Historic Churches Officer
Church Buildings Council, Church of England**



The Problem

- In 2010 Ecclesiastical had 1,763 claims for metal theft, costing £3,310,488
- £23m in past five years
- Damage during and after the crime
- Total UK cost of metal theft £770m



The victims

- Volunteers caring for churches
- Communities served by the churches
- Multiple thefts are common
- Takes finance from other work as claims capped

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12 June 2011 Last updated at 17:05 Share f t e

St John the Divine church closes after lead thefts

A church in Lancashire has been forced to close after years of repeated lead thefts left it unfit for use and with a £400,000 repair bill.

St John the Divine in Clingfer near Burnley is riddled with dry rot after damp seeped in through areas where protective lead was stolen.

The rot has also damaged its 15th Century seating and Victorian organ.

The church holds the grave of General James Scarlett, who led the charge of the Heavy Brigade in the Crimean War.

"Wetter walls"

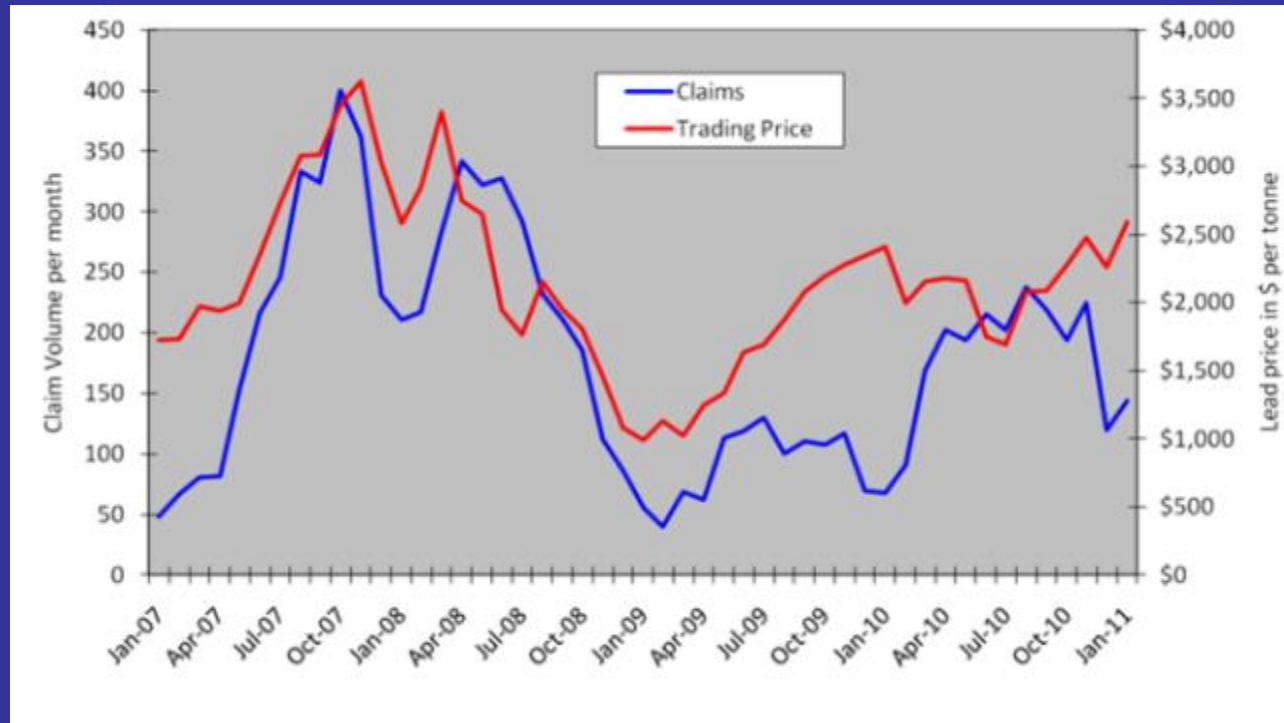
The vicar, Father Keith Henshall, said: "Over the past five or six years



Father Henshall says some thefts went unnoticed which allowed rain damage to persist



Planned crime



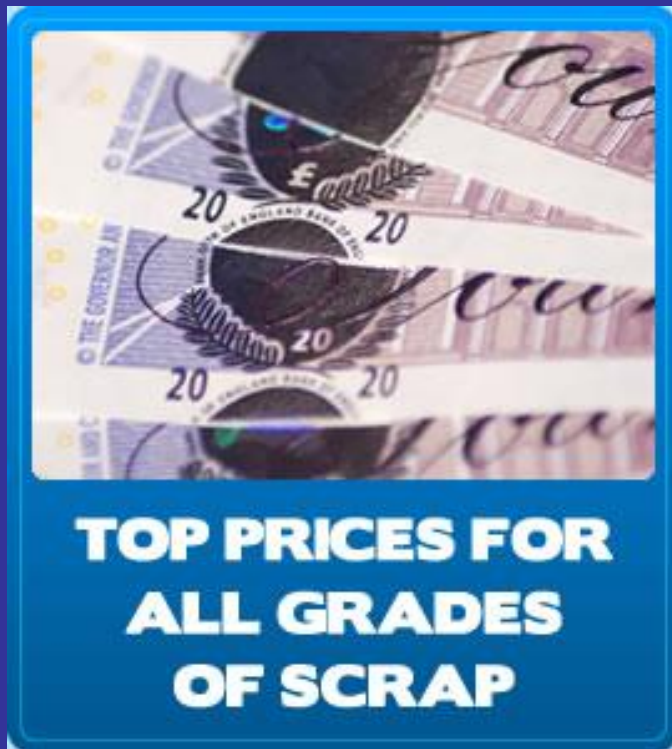


Response

- CBC Working group
- Report to Home Office
- Meetings with government
- In line with others



Regulation of scrap yards



- Remove easy access to cash
- Make anonymous sale illegal
- Record details of each vehicle entering the yard
- Licensing for dealing in scrap lead



Policing

- Perception of indifference
- Make the police work for you
- Alert local force to risks on their patch
- Make use of crime prevention advice
- Become part of community networks
- ARCH



Church and insurers

- Advice on crime prevention
- Forensic marking
- Alarms
- Good practice
- Neighbours



Alternative materials

- Sometimes continued use of lead is not realistic
- CBC preparing guidance on alternative materials – revision in hand following recent consultation with the DACs



Terne coated stainless steel





Stolen copper – Stretford, All Saints (unlisted)





Example – Sarnafil – Stretford, All Saints (unlisted)





Ubiflex flashing – Ringley, St Saviour, Grade II*





Summary

- This is a massive problem for churches – but we are part of a bigger issue
- Regulation of scrap yards is key – no easy cash and more accountability
- We need good advice from police and insurers – coherent and linked up
- Advice and reports added to Churchcare.co.uk – remaining up to date and on the ball



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www.churchcare.co.uk



THE CHURCH
OF ENGLAND

Theft of Copper

Innovation involving Materials and Product Design through the Materials KTN

Stuart Preston

**Head of Knowledge Exchange
Institute of Materials, Minerals & Mining**





What is the Materials KTN?

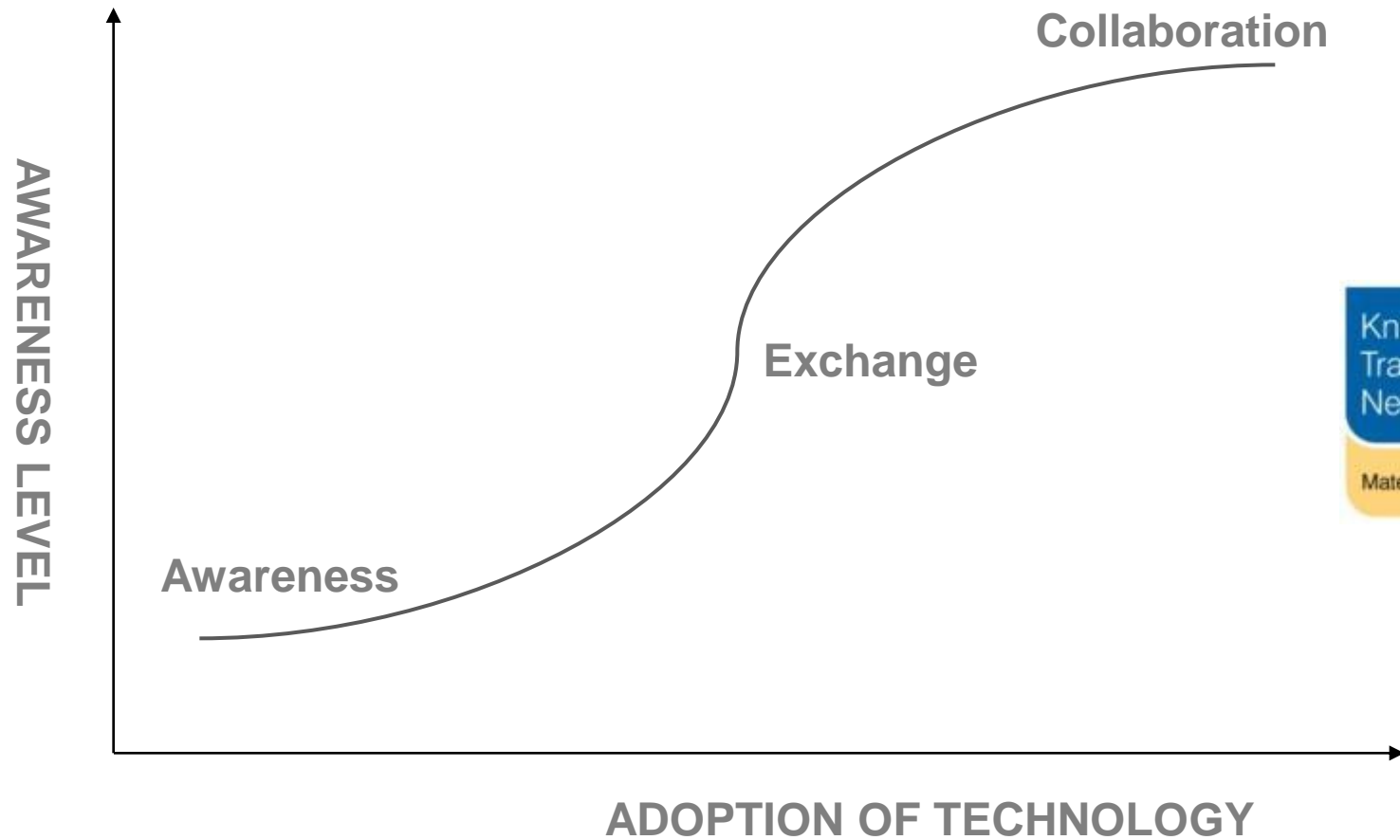
- Composites
- Smart Materials
- Transport (air, train, marine, auto)
- Technical Textiles
- Metals and alloys
- Polymers
- Powder technology (processing)
- Packaging
- **Design Exchange (July 2006)**

Design Exchange Partners



- Royal College of Art
- Institute of Materials, Minerals & Mining
- Design Council
- Institution of Engineering Designers
- Engineering Employers' Federation

Key Stages of Knowledge Transfer to generate Awareness, Innovation and Wealth



“Whitewater for Copper” – 4 November 2010



Scene Setting



“Cutting Cables” –
Practical Theft



Innovative Ideas
Design + Material + Applicational
User + Manufacturer

0



Delphic Analysis



100 Score

“Prioritisation of Ideas”

AT THE CRIME SCENE

Ideas in priority order following Delphic Analysis

Priority Ranking	Orig No	IDEA
1	14	Introduce a mid cable expanding bung which activates when the cable is cut and does not allow cable to be withdrawn from underground pipeways (expanding pig/bung).
2	6	Introduce a "foam bomb" which fills the cavity when a manhole or cover is opened without authorisation. This might include a siren going off as well.
3	16	Introduce a low cost alarm on each cable run reporting to a national address server to monitor signature recognition change when the cable is tampered with.
joint	3	Why Copper? – why not wireless at least for signalling?
5	3	Use a Smart material sheath which reacts aggressively on being cut.
6	4	Introduce Dopant trace elements to the copper to clearly identify its origin (ie similar activity to platinum materials).
7	9	Introduce a tracker system into the cable sheath or strap this tracker to the outside of the bundle.
8	17	Create a chemical clamp around existing material when broken this creates a chemical change to the cable material.
9	18	Introduce a poison to the Copper bundle – if this is not removed and melted or burnt then it reduces the value of the base copper.
10	10	Change the colour of the cable sheath for ease of identification, or change a colour of a wire set to identify a particular owner for cable.

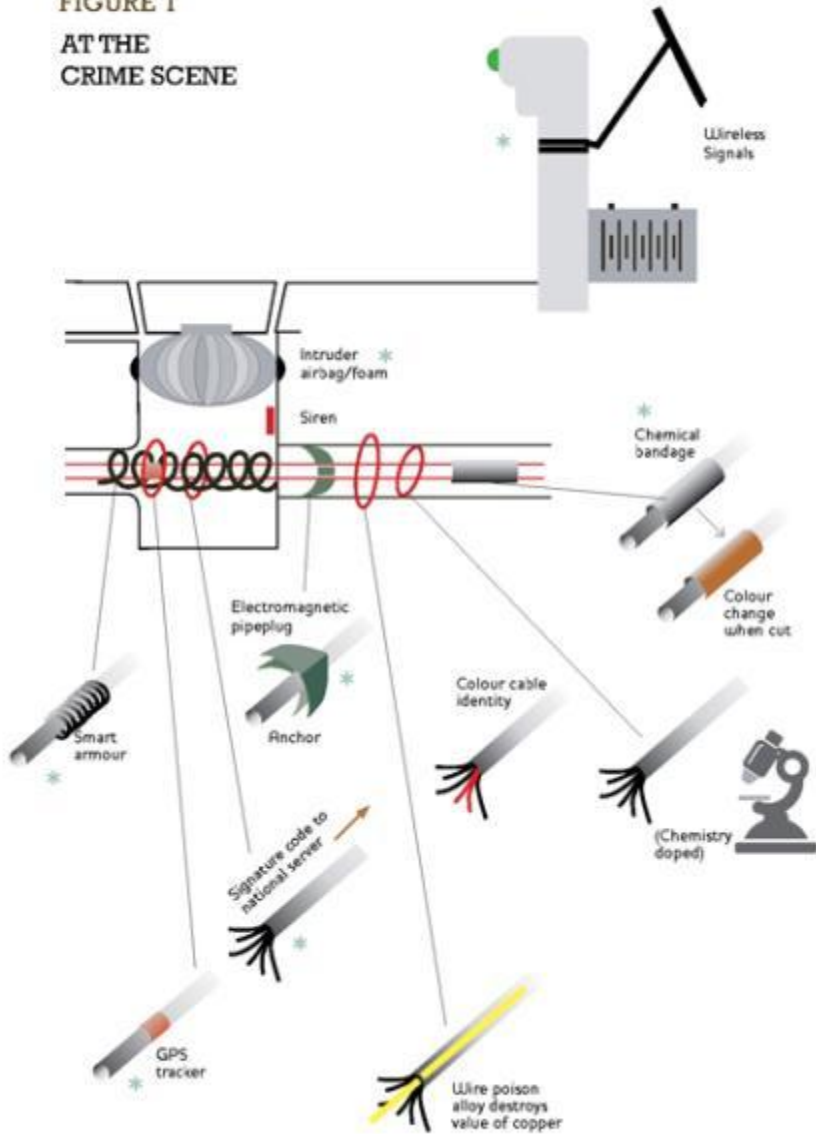
LIST 6B

BEYOND THE CRIME SCENE

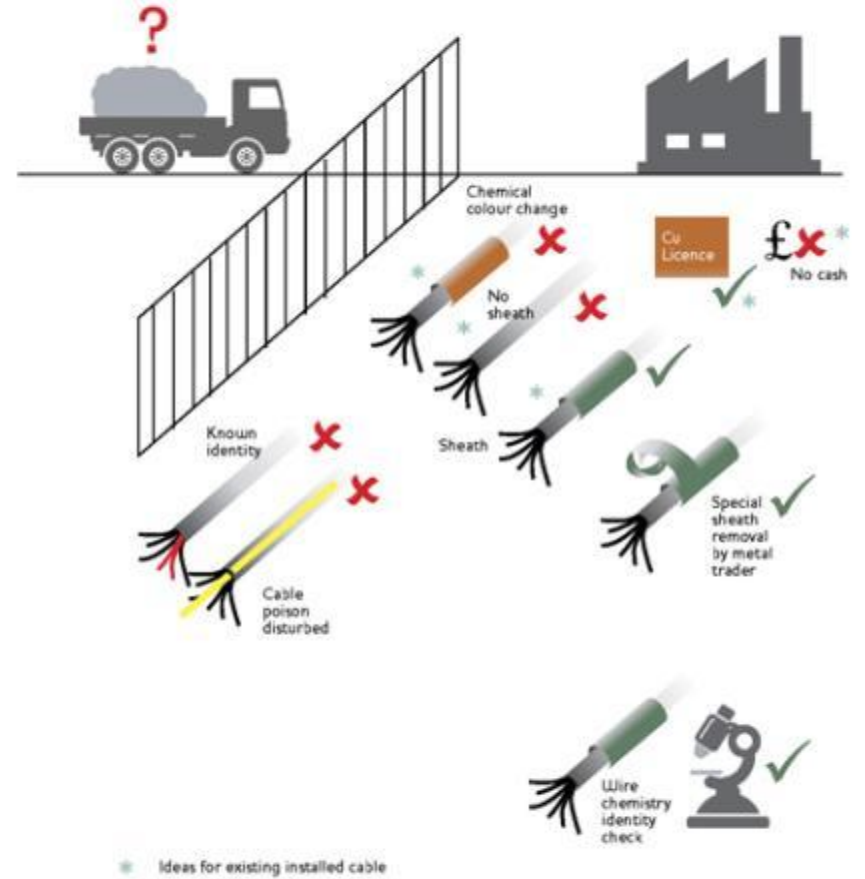
Ideas in priority order following Delphic Analysis

Priority Ranking	Orig No	IDEA
1	25	Control the market for reprocessing by <ul style="list-style-type: none"> • Licensing of dealers for copper cable. • Only accept sheathed cable. • Only possible to remove sheath with special reprocessing equipment. • Remove cash payment, - credit card payment/bank only.
2	23	Make it only possible for licensed dealers to remove the sheathing and accept material for recycling only with the sheath intact. <ol style="list-style-type: none"> a) Create a mechanical or chemical blocker to make it hard to remove sheath. b) Introduce microfibers into the sheath to make it hard to remove. c) Introduce a smart powder which makes it messy to remove sheath.
3	21	Use of a GPS tracker on cables installed in targeted, sensitive areas.
4	27	Make the security of metal theft the responsibility of the prime contractor for new installation work.
5	19	Provide high levels of traceability to the cable bundles by: <ol style="list-style-type: none"> a) Tracker in the sheath b) Unique sheath material easily identified both visually/chemically c) Unique coating on the surface of the copper d) Unique alloying of the copper

FIGURE 1
AT THE
CRIME SCENE



WITHIN THE
DISPOSAL CHAIN



Steps on the journey

Nov 4 2010

Whitewater Innovation Event



Jan 18 2011

Discussion with Insurers



Feb 8 2011

Issue 1st report



March 2 2011

“MADE on a Bus” – Involvement of
Cable Makers and Scrap Metal Dealers



April/May/June

2nd Report and media release
Small group discussions (Plunge Pools)
Dissemination Event in London?
Development of Feasibility projects –
CASE KTP and Spark Awards



**Work in
progress**

MaDE on a Bus for Copper Theft – 2 March 2011

On and Off the Bus in the North West Region



Scene setting – the story so far



Cable manufacturing at B3 Cables, Manchester



Wire drawing and cable assembly



Cable theft on the Railway Network



At the Crime Scene
(Altrincham)



Dealing with scrap
recovery



At the sharp end –
scrap metal dealing
Crossley Evans
(Shipley)



Dealing with the problem.
“Forensics” and help in the future



Exhaustion !





Immediate impacts from the event (cont'd)

- Understanding of the “real problem” at track side
- Understanding as to the value of Materials Forensics
- Understanding of the ease by which actual report ideas could be integrated into the supply chain
- Understanding of the suitability of a “cashless model”

Immediate impacts from the event – cont'd

- **Understanding of the “transfer time” in handling scrap metal sales**
- **Security issues for the scrap industry**
- **Problems as well as solutions with Smart Water**
- **Confirmation of the loss of UK resources for recycling**
- **Size and scale of the problem**
- **Understanding of possible partnership with Europe (People united against Crime)**

Steps on the journey

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**Work in
progress**

Ross Bartley



POI-PRIMETT



Tackling Metal Theft

Refreshments





The problem with ferrous and non-ferrous metals in Bulgaria

Mrs Lubov Panayotova

West Yorkshire Police Training Centre, Bishopgarth,
Wakefield, 29 - 30 June, 2011



- ❑ Ordinance on licensing commercial activity with waste and fragments of ferrous and non-ferrous metals and their alloys – adopted by means of Council of Ministers' Ordinance № 289 of 1994.
- ❑ Initiation of the improvement of the legislative framework: 1995 – 1997



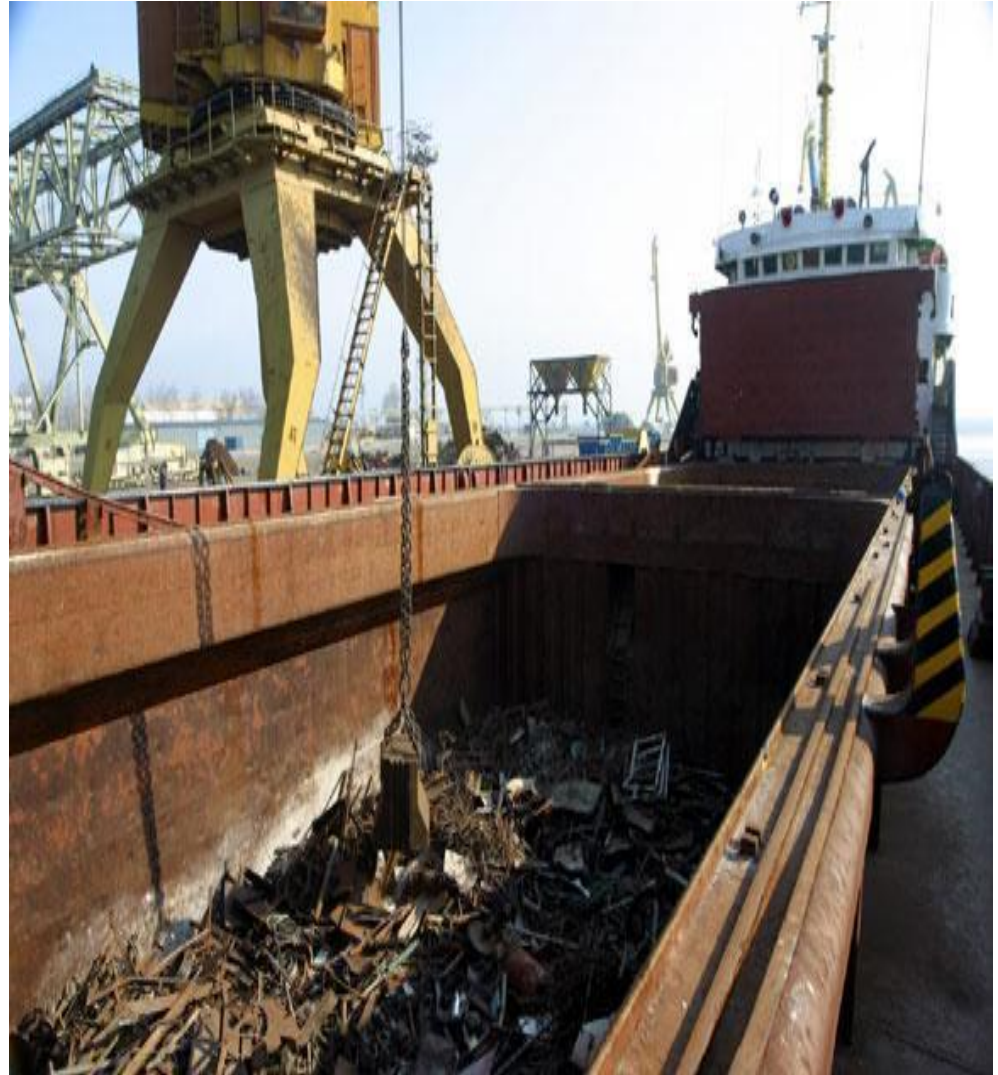
- ❑ Under the PHARE programme in 1996 works on an assignment related to the issues of developing the legal framework in Bulgaria in respect of collection and realization of metal scrap and bringing it into line with European norms and standards
- ❑ **Objective:** development of an efficient system for collection and preliminary processing of metal scrap
- ❑ **Recommendation:** adoption of a law on licensing of trade with metal scrap



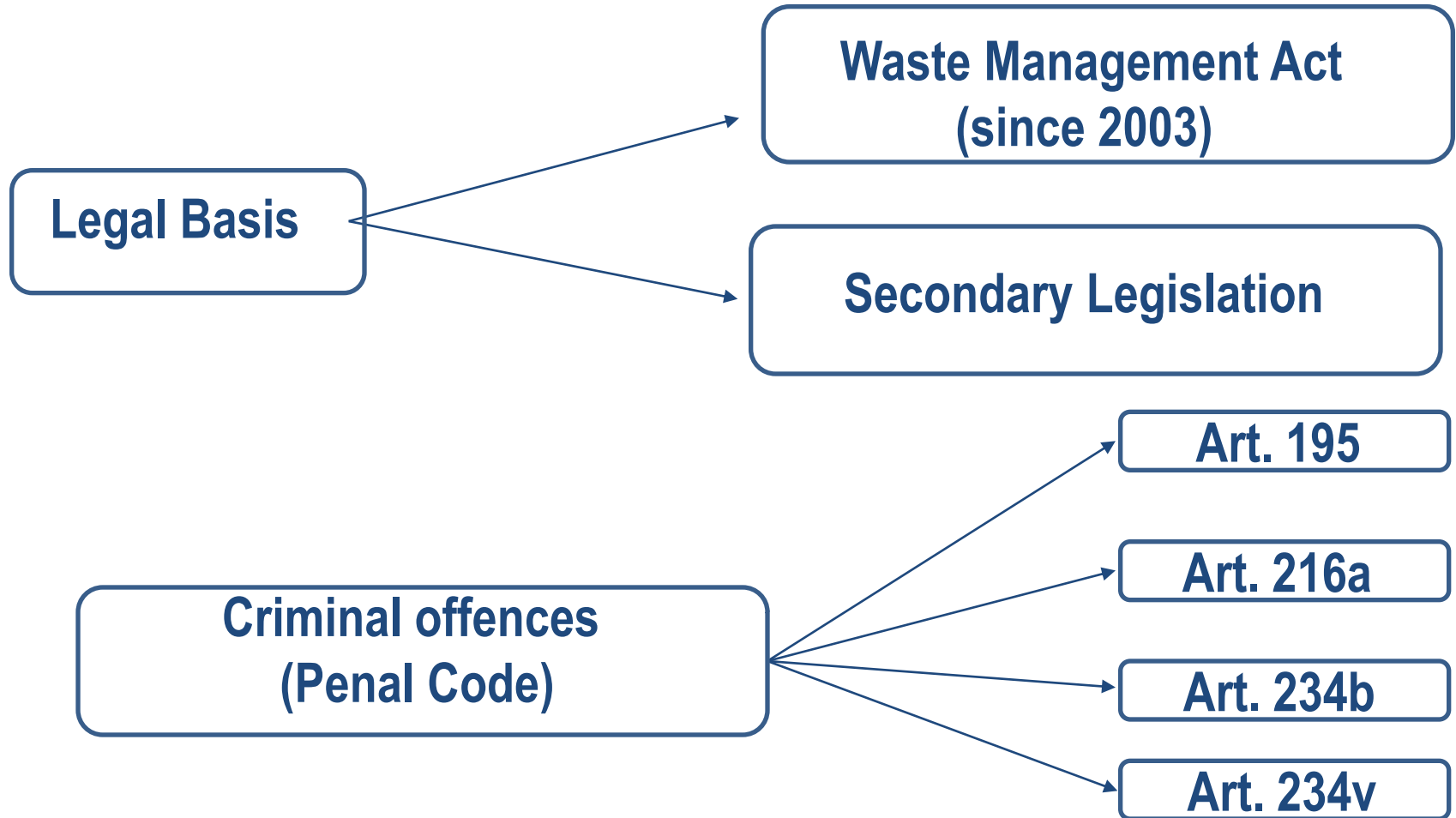
- ❑ Council of Ministers Regulation № 19/ 2001 – interim restriction
- ❑ **Ban** on the purchase and trading with certain types of goods as per the nomenclature
- ❑ **Distortion** of the regular materials supply
- ❑ Council of Ministers Regulation № 113 / 2001 – the interim measure has been **repealed**



- ❑ 1996 - 1000 licensed companies
- ❑ 1997 – new registration, licensing and control regime
- ❑ 2000 - 240 licensed companies
- ❑ 2001 - over 300 licensed companies
- ❑ 2003 - 450 licensed companies
- ❑ 2005 - 650 licensed companies
- ❑ 2011 - 1023 licensed companies - number of sites - 2390 for the whole country



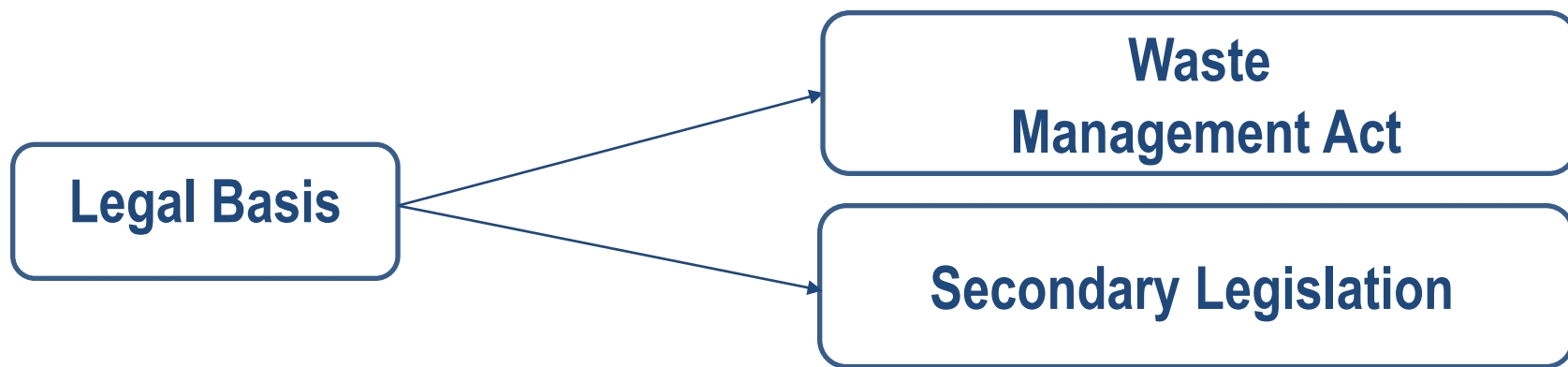
FERROUS AND NON-FERROUS METALS - TRADE



Metal waste that does not fall within the ferrous and non-ferrous metals



- Deserted vehicles;
- Discarded electrical and electronic equipment;
- Spent batteries and accumulators;
- Cans



FERROUS AND NON-FERROUS METALS - TRADE



- Procedure for license issue:
 - *interdepartmental committee*
 - *ministry of economy, energy and tourism*
 - *ministry of environment and waters*
 - *ministry of internal affairs*
 - *representatives of non-governmental organisations*

- A statement to be made within 3 months of submission of the documents

INFORMATION CONTAINED IN THE LICENSE:



- Number and issue date
- Company name
- Headquarters and management address
- Number of company file
- Volume and batch number
- BULSTAT
- List with descriptions of the sites where the activity is carried out



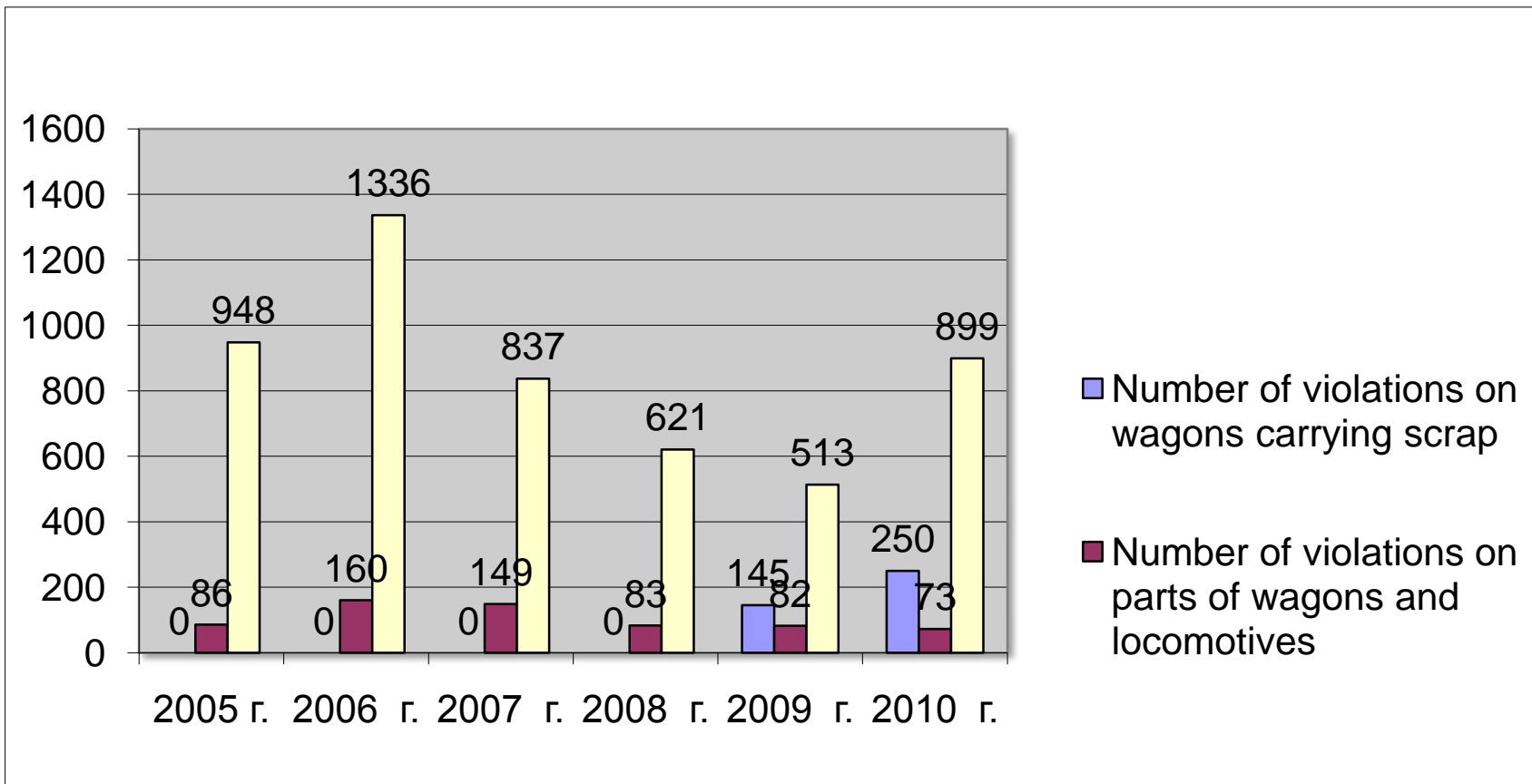
- ❑ MINISTRY OF ECONOMY, ENERGY and TOURISM
- ❑ MINISTRY OF ENVIRONMENT AND WATERS
- ❑ MINISTRY OF INTERNAL AFFAIRS
- ❑ MUNICIPAL ADMINISTRATIONS BY LOCATION OF THE RESPECTIVE SITES

FERROUS AND NON-FERROUS METALS: INTERNATIONAL EXPERIENCE

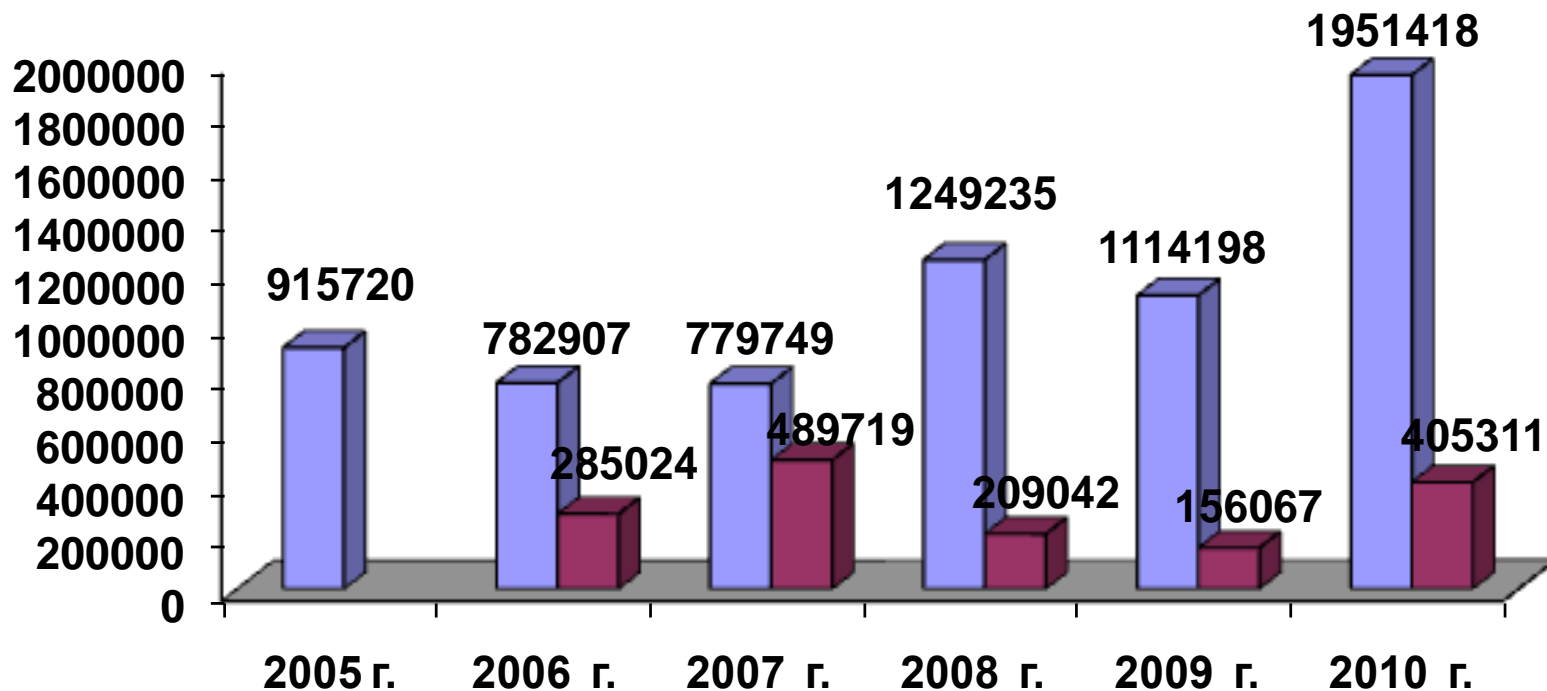


- ❑ The problem with the theft of ferrous and non-ferrous metals is also a problem of the EU; it is **not only** a typical Bulgarian problem.
- ❑ The legislation in regards to scrap metal is **different** in the EU member states:
- ❑ The majority of EU countries do not have special regimes for the purchase of scrap metal, as their legislation focuses on ecology as a whole;
- ❑ Identical to our special regime for the purchase of waste of ferrous and non-ferrous metals have Poland and Belgium.

Comparative chart of theft in the railway sector for the period: 2005-2010



Comparative Diagram of the values of the theft in the CEZ and EVN (2005-2010)



- Value of the stolen equipment from the system of CEZ (in BGN)
- Value of the stolen equipment from the system of EVN (in BGN)



- ❑ **BAN** for individuals to sell waste of ferrous and non-ferrous metals, which are not of domestic character;
- ❑ **PERMISSION** to trade with waste of ferrous and non-ferrous metals of non-domestic nature, including risk nomenclature (*cables and electric cables of all types and sizes, of elements and parts of rolling stock, track, security systems and any installations to them, of all elements and parts of the road infrastructure, such as road signs, crash barriers, metal lids from shafts, parts of street lighting or irrigation systems and equipment, and metal-containing monuments or parts or components of such*) shall be allowed if there is:
 - **Availability of certificate of origin;**
 - **Formation of a written contract;**



- Non-cash purchase of scrap;
- Bank guarantee of BGN 100 000 for companies;
- BGN 50 000 per site to operate;
- Or over BGN 233 bln. in open deposit



- ❑ Reducing the number of sites for trading waste of ferrous and non-ferrous metals, by placing them in areas defined by the structural plans for production and storage activities:
 - **Transitional period- 3(6) months;**
- ❑ Separate storage for ferrous and non-ferrous metal wastes, from other waste containing metal;
- ❑ Introduction of 24-hour surveillance on sites (**Ordinance for the procedures of trade activities with ferrous and non-ferrous metal waste**);
- ❑ Increase in penalties for committed 3 types of crimes under the Penal Code.

Thank you for your attention!

METAL THEFT IN GREECE



Presented by ERFC

Thursday 30/6/2011

P&D EUG Meeting, Bishopgarth, UK

Greece and its mining production



Greece is an important producer of bauxite and also produces nickel, lead and zinc.

Greece will soon become a gold producer, with the development of several projects in the northern part of the country.

Greece's industrial mineral sector has become an important part of the country's revenue earnings.

Greece and scrap processing

In Greece, there are about 32 officially registered companies that specialize in ferrous & non-ferrous metal scrap processing and trade.





A major problem for National Railways (1)

According to the Greek Police, during 2009-2010, an amount of 43,505 meters of cables were stolen, as well as 20 tonnes of copper and metal objects by the National Rail Organisation (OSE).



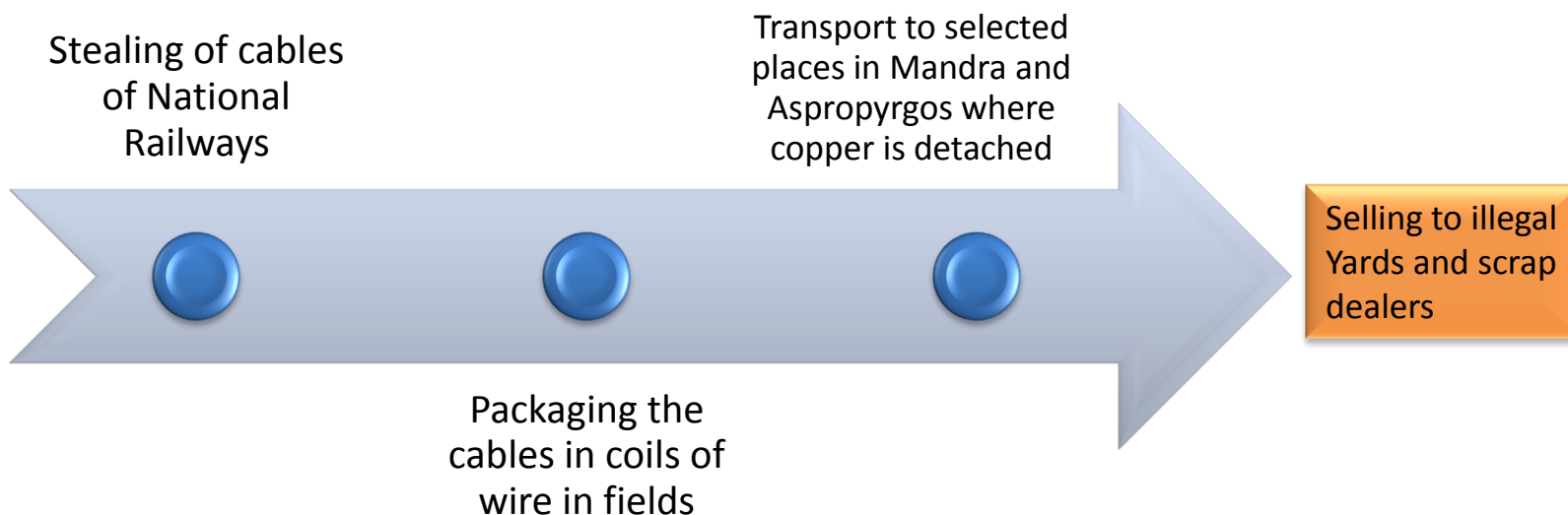
A major problem for National Railways (2)



The last 5 years, 195 Greeks and foreigners were caught for metal theft and taken to court, while 7 gangs were dismantled, the so-called "Mafia Bronze" as well as their branch that operated in Boeotia and Attica.

Only the first 3 months of 2011 the financial damage in National Railways has exceeded 1,5 mil Euros.

An example of the roadmap of metal theft



Profile of metal theft offenders

Northern Greece : Mainly Bulgarians and Roma

Southern Greece :

Organized crime (mainly stealing OSE and big organizations/companies)

Small scale damages mainly from Pakistans & Roma of Albanian Origin.



Further Implications

- Public sentiment (increase of insecurity among businesses)
- Safety issues (mainly for the trains and the electricity network)
- Health issues (dioxides coming from the burning of cables – possibility of cancer emergence)



Prevention and Deterrence

Very Recently, the Greek Minister of Citizen Protection has given instructions to the Greek Police to prevent, deter and combat the phenomenon of stolen metals.



Prevention and Deterrence (2)

It is also been ordered, unexpected and regular raids by the Police on steel processing companies, and processing plants of copper products.



Prevention and Deterrence (3)

There are constant patrols to the national rail network and controls on scrap yards to identify quantities of copper.

Meanwhile, the Police Authorities of the Regions where a Network of Ose is operating, have assigned special officers to whom the National Railways shall address in case of theft incidents.



Prevention and Deterrence (4)

In Greece, there is no legal framework devoted specifically to the metal theft issue.

In addition, there is no dedicated service in National Police Organization or the Ministry of Citizen Protection to address the problem.



Thank you for your kind attention!

Nikolas Petropoulos
petropoulos@otenet.gr





Collaborating with national strategies

**UK Home Office – ACPO
Conductive Metal Theft Working Group**



Aim - Increase the effort required to steal metal

- Identify and share existing metal theft prevention techniques relating to the keeping, distribution and holding of metals
- Establish a crime reduction ethos in the planning stages of construction projects
- Utility companies to document and share internal disposal procedures for scrap metal to avoid vulnerability to internal / sub-contractor theft



Aim - Increase the effort required to steal metal

- Utility companies to ensure contractors / sub-contractors are contractually accountable for metals used in jobs and that waste materials are disposed through correct routes
- Identify sustainable methods for designing out metal theft
- Encourage the expansion of the SIRS database to include more industries and accurate reporting to all members



Aim - Reduce the ease and reward of metal theft

- Establish a baseline operating standard for scrap metal dealers (at least in line with the BMRA's Voluntary Code of Practice)
- Develop a voluntary code of practice for scrap metal dealers:
 - ✓ Clear record keeping requirements
 - ✓ Customer identification requirements
 - ✓ Reporting of suspicious persons/activity to the police
 - ✓ Encourage CCTV installation
 - ✓ Place the responsibility on the scrap metal dealer to ensure the metals they are purchasing are legitimate
 - ✓ Adoption of a cashless business operating model



Aim - Reduce the ease and reward of metal theft

- Share information with scrap metal dealers to help identify stolen metal
- Establish the feasibility of a dealer ‘kite’ mark relating to operational standards and crime reduction measures
- Encourage LEA’s to work in partnership with the scrap metal industry
- Closure powers in Italy



PoI-PRIMETT



Tackling Metal Theft



Future actions



PoI-PRIMETT



Tackling Metal Theft

Thank you for your participation

