SMARTER WASTE REGULATION AND POLLUTION CRIME ENFORCEMENT

12-14 November 2019 | Brussels, Belgium
Initiatives to Understand and reduce waste crime

Prepared with the contribution of the LIFE financial instrument of the European Union
We cannot solve our problems with the same thinking we used when we created them.

Albert Einstein
Approach

STRATEGY

TACTICS

Understand Waste Crime
- Open Source
- Remote sensing
- Financial investigations
- Waste crime indicators
- Competitive behaviours

Future Waste Crime Threats
- Horizon scanning

Design Effective Interventions

INTERVENTION ACTIONS
When to use the tools
Horizon scanning
1980

- Rubik's Cube
- Pac-Man
Horizon scanning

1980
China began importing secondary raw materials & became world’s largest importer of recyclables.

2013
Reduction plastic waste accepted - Chinese Green Fence campaign - shipments turned away and sent back to the source countries. Little infrastructure exists elsewhere to manage the rejected waste.

2014
2014 Announcement No. 80 of 2014 – Adjustments and revisions to what cannot be imported

2018
In January scrap items prohibited Announcement No. 39 of 2017
In April another import ban 16 waste types by end 2018 and further 16 by end 2019
Horizon scanning: 9-Step Model

Horizon Scanning Toolkit
Horizon scanning Workshop
Competitive behaviours toolkit

- Horizon scanning
- Competitive behaviours
- Intervention design
Competitive behaviour toolkit

1. Simple Systems Modelling
2. PESTELLO Analysis
3. Five Forces Analysis
4. SWOT Analysis
5. Strategic Group Analysis
6. Relationship Assessment
Life cycle - continuous improvement

Key Question → Review our current insight → Does our insight answer the question?
- Yes → Check Information Assurance → Issue Insights Product
- No → Refresh insight → Generate structured analysis
    → Gather raw data and information
        → Select & use tools
            → Measure Effectiveness
            → Use Insights Product
            → Disseminate Insights Product
            → Modify Approach
## Tool selection framework

<table>
<thead>
<tr>
<th>To do this</th>
<th>Use this tool</th>
</tr>
</thead>
<tbody>
<tr>
<td>Visually describe our understanding of events and the patterns of</td>
<td>Simple Systems Modelling</td>
</tr>
<tr>
<td>behaviour resulting in the events, and also to help us see the</td>
<td></td>
</tr>
<tr>
<td>underlying structure responsible for the patterns of behaviour.</td>
<td></td>
</tr>
<tr>
<td>Identify and understand the key external drivers of change in an</td>
<td>PESTELLO Analysis</td>
</tr>
<tr>
<td>industry, market or sector.</td>
<td></td>
</tr>
<tr>
<td>Identify and understand the competitive forces which influence</td>
<td>Five Forces Analysis</td>
</tr>
<tr>
<td>the patterns of behaviour of a particular organisation, business or</td>
<td></td>
</tr>
<tr>
<td>activity.</td>
<td></td>
</tr>
<tr>
<td>Identify how external opportunities and threats might be</td>
<td>SWOT Analysis</td>
</tr>
<tr>
<td>addressed, taking in to account the strengths and weaknesses of the</td>
<td></td>
</tr>
<tr>
<td>organisation.</td>
<td></td>
</tr>
<tr>
<td>Analyse, classify and understand the evolving structure of an industry,</td>
<td>Strategic Group Analysis</td>
</tr>
<tr>
<td>market or sector.</td>
<td></td>
</tr>
<tr>
<td>Analyse, classify &amp; understand evolving organisational</td>
<td>Relationship Assessment</td>
</tr>
<tr>
<td>relationships with operators and industry sectors.</td>
<td></td>
</tr>
</tbody>
</table>
Key Questions - examples

- **Waste brokers**
  - “How is the waste brokers sector vulnerable to non-compliance and waste crime?”

- **Tyres**
  - “How is the waste tyres sector vulnerable to non-compliance and waste crime?”

- **Aquaculture**
  - “What are the competitive dynamics and potential vulnerabilities in the fin fish aquaculture feed production supply chain?”

- **Shipping**
  - “What are the vulnerabilities leading to environmental and health and safety non-compliance and illegality in beaching of end-of-life ships”
Remote Sensing: Detecting (illegal) waste materials within complex environments

Samantha Lavendar, Pixalytics Ltd
Remote Sensing

www.lifesmartwaste.com
Intervention Design

Adrian Evans
Natural Resources Wales
Find out more

Web
www.lifecarestems.com

E-mail
lifesmartwaste@sepa.org.uk
Acknowledgements

Ewing, Alison, Walker, Gary, Calder, Graham, Burke, Rosaleen, Bunten, Lin, Habron, Austin, Macmillan, Jacqueline, Marsden, Martin, McIver, Lorna, Ridgway, Ian, Birrell, Peter, Fleming, Allan, Cochrane, Lesley, Kenny, John, MacDonald, Calum, Guthrie, Robert, Wells, Mark, Campbell, Gillian, Buchanan, Craig, MacTaggart, Fiona, Ferguson, Robin, Morris, Jonathan, Crookall, David, Strain, Eleanor, Doody, Hilary, Rowatt, Archibald, David, Carolyn, Hill, Anneli, McRory, Eric, Rose Barry, Johnston, Kirsty, Sullivan, Andrew, Preston, Catherine, Allan, Fraser, Erber, Claudia, Fowler, Gillian, Blackburn, Matthew, Welsh, Jennifer, Gallagher, Lorraine, McGowan, Yvonne, Wilson, Katrina Wilson, William Alexander, Stewart, Lucie, Stevens, Susan, Hill, Philip, Collins, Jacqueline, McDowall, Kathleen, Ferguson, James, Juskovia, Ben, Wilson, William, Buchan, Michael, Best, Jennifer, Mair, Angus, Sinnott, Richard, Hanson, Vivienne, McMullan, Andrew, Hope, George, Lee, Fraser, Park, Matthew, Murray, James, MacEachern, Erik, Irimes, Stuart, Brodie, lain, Wright, John, Kerzhaw, Colin, Orabcova, Juzana, Thomson, Lynne, Farrell, Adrian, Haynes, Richard, Stasiak, Aaskadieu, MacPherson, Alison, McLaughlin, Fiona, Brown, Rosaline, Brown, Thomas, Scott, Fiona, Rankin, Gillian, Sharp, Edward, O’Shea, Padraig, McWhiter, Jennifer, Wallace, Margaret, Reid, Laurie, Howard, Lorraine, Kerr, Marcelline, McLean, Margaret, Van Nickerk, Melanie, Sarbiet, Peter, Cassels, John, Bryson, David, Cocchiglia, Letizia, Reilly, Frank, Cain, Kelly, Berry, Katie, Wilson, Lynne, Feltham, Hannah, Sallop, Adam, Ferguson, Lorraine, Kennedy, Anne Marie, Copland, Jane, Robson, Marianne, McSorliack, Jacqueline, Say, Margaret, Murray, Lisa, Ferguson, Jane, Wallace, James, Quin, Samuel, Anderson, Alasdair, McAlpine, Lisa, Fuller, Lauren, Burke, Claire, Pike, Nairn, Udughezi, Ikhide, Grant, Lynda, Muir, Victoria, McKnight, Connor, Evans, Adrian, Evans, Emily, Williams, Michelle Griffiths, Rodolphe Paternostre, Barbara Devullf, Virginie Schmitz, Celine Rigole, Laetitia Domb, Philippe Micheaux, Francesco Lembo, Saelle Colas, Francoise Bonnet, Konopski Kelene, Giulia Marrazzo
SMARTER WASTE REGULATION AND POLLUTION CRIME ENFORCEMENT

12-14 November 2019 | Brussels, Belgium
UK Waste Tracking Project

Cindy Lee
SEPA

Prepared with the contribution of the LIFE financial instrument of the European Union