

Toronto Region Sustainability Program



**Presentation for the Great Lakes Pollution
Prevention Roundtable – August 28, 2002
By Fred Granek, OCETA**



Environment
Canada

Environnement
Canada




Ontario
Ministry of the
Environment Ministère de
l'Environnement

TORONTO Economic Development



Toronto Sustainability Priorities: Triple Bottom Line




- Environment Canada
 - **Sustainable Development Strategy**
 - **Pollution Prevention Planning: Canadian Environmental Protection Act (CEPA)**
 - **National Pollutant Release Inventory (NPRI)**
 - City of Toronto
 - **Sewer Use Bylaw**
 - **Clean Green and Healthy: Plan for an Environmentally Sustainable Toronto**
 - Ontario Ministry of the Environment
 - **Smog and Climate Change Reduction**
 - **Mandatory Emissions Reporting (O. Reg. 127)**
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Toronto Sustainability: SME Manufacturing Focus




- Initial focus on achieving success with SME manufacturers: toxics, smog precursors, climate change gases, hazardous wastes
 - Downstream program expansion to include:
 - ✓ **Transportation**
 - ✓ **Federal facilities**
 - ✓ **Institutions (e.g. Hospitals)**
 - ✓ **Commercial**
 - ✓ **Domestic**
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Barriers Facing Small & Medium Manufacturers




- Difficulty in accessing financing
 - Existing financial burden (debt to equity/balance sheet)
 - Concerns regarding return-on-investment/payback
 - Capital used elsewhere (production, expansion)
 - Focus on short-term priorities
 - Limited time & expertise to consider process & operational efficiency improvements
 - Limited ability to withstand interruption of production to implement changes to production design and processes
 - Overall risk avoidance
 - Lack of technical knowledge of opportunity
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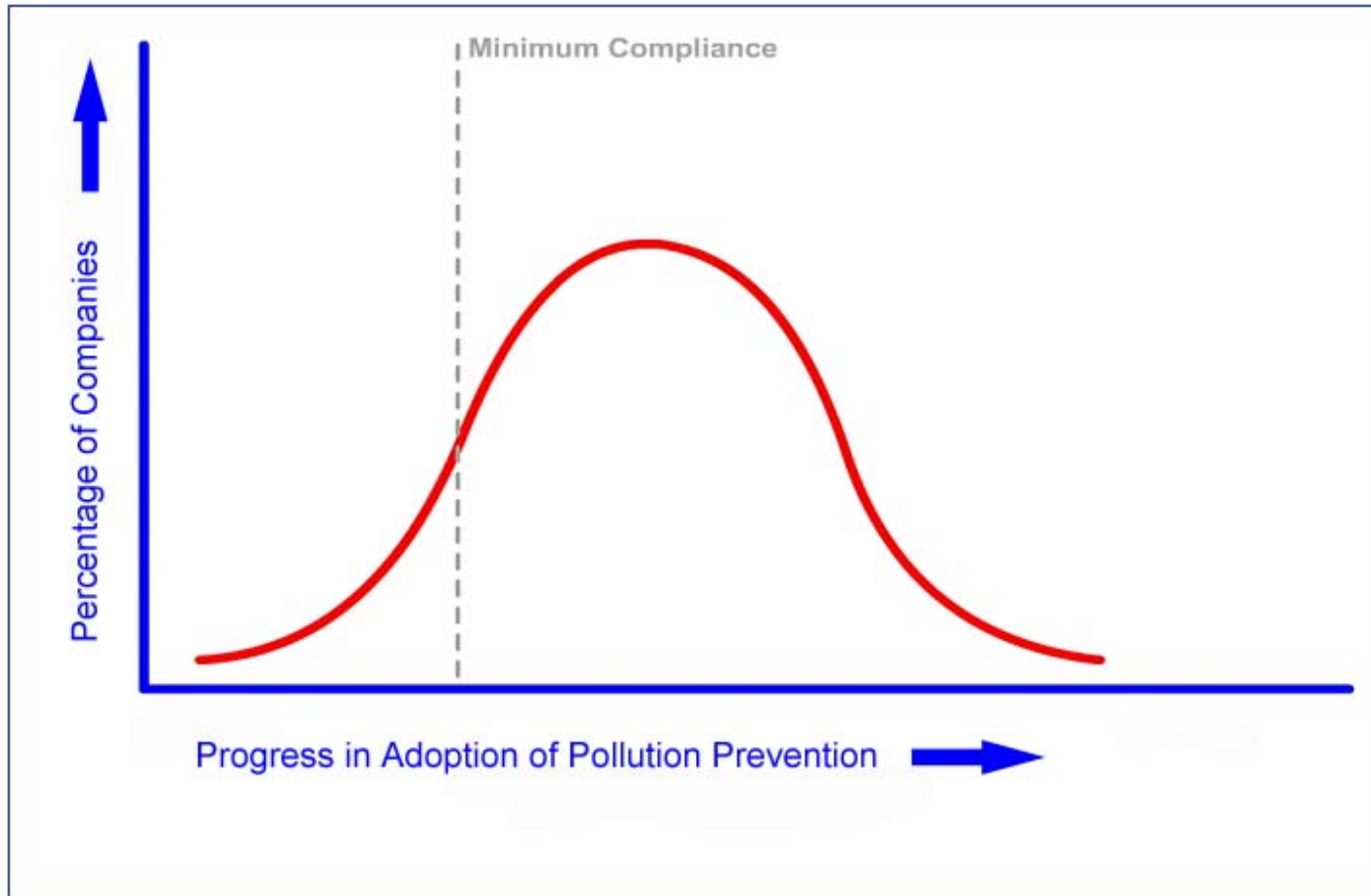
Toronto Sustainability: Program Delivery



Leverage is the Key

- Government Partners
 - ✓ Sustainability performance goals & core program funding
 - OCETA
 - ✓ 3rd party program manager and delivery agent
 - Consultants
 - ✓ Conduct facility pollution prevention (P2) assessments
 - ✓ Client generation
 - Industry Associations
 - ✓ Promotion
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Toronto Sustainability: Behaviour Change by Sector





Elements of OCETA Model




- Financial incentive to share 50% of \$8000 Pollution Prevention (P2) Assessment cost
 - P2 Assessment conducted by pre-qualified consultant
 - Customized work plan that meets client needs and satisfies program objectives
 - Action-oriented “how to” report
 - Follow-up P2 training for clients
 - Dedicated OCETA program management
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Toronto Sustainability: Targeted Marketing



- Top Sectors Having Multiple Risk Factors
 - Top Facilities Discharge & Emitting
 - ✓ **Air toxics - MOE's Toronto District Air Initiative**
 - ✓ **Toxics to the Sewers - Toronto Sewer Use Bylaw**
 - ✓ **Smog Precursors - NO_x, VOCs, and PM**
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Toronto Sustainability:

Case Study - Metal Finisher



Process	Pollutants	P2 Options
Degreasing	Trichloroethylene	<ul style="list-style-type: none">✓ Reduce evaporative losses – tank size & cooling✓ Use caustic bath for cleaning✓ Use non-chlorinated or water based cleaners
Plating	Cooper, Zinc, Cyanide	<ul style="list-style-type: none">✓ Improve rinsing✓ Use drip trays✓ Operator training
Painting	Toluene, Xylene	<ul style="list-style-type: none">✓ Use HVLP spray guns✓ Replace spray paint with dip paint process✓ Use water-based paints



Toronto Sustainability:

Case Study - Printer



Process	Pollutants/ Process Waste	P2 Options
Pre-Press: Computer-to-Plate Processor	Processor Wastes (phenols, polymers) & wash water	<ul style="list-style-type: none"> ✓ Install developer recirculating system ✓ Install a wash water recirculating unit
Pressroom: Fountain Solution	Isopropyl Alcohol	<ul style="list-style-type: none"> ✓ Install reverse osmosis system ✓ Eliminate use of isopropyl alcohol
Pressroom: Blanket Wash	Spent Fountain Solution & Waste Press Wash	<ul style="list-style-type: none"> ✓ Membrane filtration of waste fountain solution ✓ Vacuum distillation of spent blanket wash ✓ Reuse & recycle solvents

Toronto Sustainability: Case Study - Hospital



Process	Pollutants/ Process Waste	P2 Options
Environmental Services (Maintenance & Housekeeping)	Alkyl & Nonyl Phenol Ethoxylates (Cleansers), Zinc (Floor Wax), Mercury (Lights)	<ul style="list-style-type: none"> ✓ Product substitution ✓ Purchasing practices
Laboratory	Xylene (Solvent), Chloroform (Preservative), Chromium, Zinc (Lab Tests)	<ul style="list-style-type: none"> ✓ Product substitution ✓ Purchasing practices
Physical Plant	Dichlorobenzene (Cleaner), Monochlorotoluene (Degreaser)	<ul style="list-style-type: none"> ✓ Product substitution ✓ Purchasing practices



Toronto Sustainability: Client Activity



- P2 Assessments Completed or In Progress 20
- Proposals Pending 7
- Good Prospects 1
- Direct Business Contacts 42






Toronto Sustainability: Environmental Results




P2 Reductions Expected (Annual)

- **Volatile Organic Compounds
(VOCs)** **340 tonnes**
 - **Metals** **15 kilograms**
 - **Process Wastes** **170 tonnes**
 - **Water** **2000 tonnes**
 - **Green House Gases** **7 tonnes**
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Toronto Sustainability: Lessons Learned



- Broad priority base improves program success
 - ✓ **Binational & CEPA toxics, Smog precursors, hazardous wastes**
 - Small and Medium manufacturers are not homogeneous
 - ✓ **Variability of waste streams, cultures, behaviours within & between sectors**
 - Delivery mechanism is critical
 - **Use trusted business networks to gain market access & a mix of regulatory and non-regulatory drivers to promote behaviour change**
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