MISSION 2030
Zero Waste: You Can IF You Plan

CRI COUNCIL
Eliminating the Concept of Building Waste
Construction Resource Initiatives Council:

• **ABOUT**
  • The Construction Resource Initiatives Council is a non-profit, non-partisan building industry led organization, founded to create an integrated body of knowledge and drive change in the way we view and deal with building resources and waste. We are self-motivated and pragmatic thinkers, whose actions are fuelled by passion, and inspiring passion in others.

• **Our Vision:** Zero waste communities

• **Our Mission:** Supporting, developing and implementing initiatives, eliminating the concept of building waste.

• **Our First Zero Waste Initiative:** Mission 2030 aims to eliminate the construction, renovation and demolition waste to landfill by 2030
Construction Resource Initiatives Council:

- **2009/10**: Construction Recycling Initiatives Task Group (CRI Task Group)
- **2011 - INITIATED**: Construction Resource Initiatives Council
  - Incorporated Non-profit + Non-partisan
  - Adopted Architecture 2030
- **2012 – INspiration** workshop – a 2 day leaders retreat in Wakefield QC
  - UNEP (UN Environment Programme) Partner
- **2013 - Officially calling all stakeholders to Join IN the ACTION**
  - Launched Mission 2030
  - CRI C. Founder Advisor/now Director National Zero Waste Council
  - MIT Centre for Collective Intelligence – Climate CoLab Waste Management Contest Winner
  - CTV Ottawa 2012-13 Amazing People Award Nominee
Remarkable Change

Conventional Path

Change Strategy
Communication
Integration & Education
Tools & Support
Research & Technology

HOW

Great Leaders Inspire Everyone to Take Action

HOW

Resource Efficiency

WHAT

Initiatives – i.e.: Mission 2030

Regulations
Standards
Certifications
Ratings

http://www.cricouncil.com/?page_id=246
WHY: The purpose, cause or belief, the driving motivation for action
Our Inefficient Use of Resources/Wasted resources

http://www.cricouncil.com/?page_id=12
WHY: The purpose, cause or belief, the driving motivation for action
Inefficient use of building/construction resources

- Buildings use ≈ 40% of global resources
- Construction waste is ≈ 20-40% of municipal waste stream in North America
  - while 95% is theoretically recoverable
- Industrial, Commercial & Institutional (IC&I) waste is privately managed
  - a resource covered under NAFTA
  - While recovery services, rating systems, regulations, etc. are increasing, IC&I diversion is decreasing; impacting environmental, social and economical conditions

1. Defining the direction of change
2. Overcome inertia
3. Taking the 1st steps:

- MISSION 2030 PLEDGE
- Partnerships
- Engage with the Public
  - Scrap-to-Art Contest
  - Student Projects
  - Museum Kiosks

AWARENESS – DESIRE – KNOWLEDGE – ABILITY – REINFORCEMENT
WHAT: MISSION 2030
Calling ALL Building Stakeholders

http://www.cricouncil.com/?page_id=2079
Communication

✓ www.cricouncil.com
✓ Linkedin Groups
✓ Twitter & Facebook
✓ Site Communication Package for Builders/Developers
✓ OPIN online engagement tool – to harness the energy of all those supporting the objective of Mission 2030; giving control of the products (initiative) & the result over to the users

http://www.cricouncil.com/?page_id=259

"The best way to have a good idea, is to have a lot of ideas”

Linus Pauling
Integration and Education

- Waves of Change, Train-the-Trainer
- Resource Planning & Waste Management
- Resource Efficiency & Rating Systems
- Lean Manufacturing & Lean Supply Chain
- Lean Healthcare
- Lean Design & Construction
- Greenwashing Monsters
- Waste Management Planning
- Design for Disassembly and Adaptability
- Deconstruction

Tell me, I may forget,
Show me, I may remember;
Include me and I will understand;
Chinese Proverb

http://www.cricouncil.com/?page_id=259
CRI Council Education Program aligned w/UNEP-SBCI (United Nations Environment Programme-Sustainable Built and Climate Initiatives) Guidelines on Education Policy for Sustainable Built Environment

- Key Sustainability Education Principles
- Sustainable Design Values & Precepts
- Generic Teaching & Learning Strategies for Targeted Stakeholder Group
- Appropriate Pedagogies
- Best Practice Teaching / Learning Programs
- Case Studies & Exemplary Curricula

http://www.cricouncil.com/?page_id=259
The Water Centre – LEED Silver

95 per cent recycling of excess construction material
Architectural design is followed by the creative design of the specification, where in lies the ability for architects to truly affect change in use and reuse of resource management.

There are many elements in a construction specification – being able to implement a Construction Waste management plan is one. Dictating material criteria is another.
Construction Waste Management Plan

If a project is attempting LEED, the buy in is built in

If not,

We believe it is the architecture teams’ responsibility to work with the client to achieve the highest sustainability goals in a waste management plan
Construction Waste Management Plan

What is it?
Just like at home,
But on a much larger scale.
Construction Waste Management Plan

What waste can be diverted from landfill?
Construction Waste Management Plan

What waste can be diverted from landfill?
Construction Waste Management Plan

What *resources* can be *reclaimed* from landfill?
Construction Waste Management Plan

What *resources* can be *reclaimed* from landfill?

- Metal
- Concrete / Brick
- Wood
- Cardboard & Paper
- Glass
- Drywall
Construction Waste Management Plan

What *resources* can be *reclaimed* from landfill?

*Slightly trickier reclamations*

- Fluorescent tubes and ballasts
- Rooftop Units
- Ceiling tiles
- Carpet and carpet tiles
Construction Waste Management Plan

What resources can be *reclaimed* from landfill?

75% - 80% should be minimum target.
Construction Waste Management Plan

What resources can be reclaimed from landfill?

75% - 80% should be minimum target.

Over 95% is achievable, especially if there is demolition in the project.
Construction Waste Management Plan

What resources can be *reclaimed* from landfill?

- Metal
- Concrete / Brick
- Wood
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- Glass
- Drywall
Construction Materials in the Specification

In order to make resource recovery accessible to all, we need to create a demand for the recovered resources.
Construction Materials in the Specification

Recycled Content and Regional Materials

- Steel
- Concrete
- Drywall
- Ceiling Tiles
- Metal Roofing
- Masonry
- Insulation
Construction Materials in the Specification

Material Reuse

✓ Reusing a material as it was manufactured to be used

✓ Reuse a material as it was not originally meant to be used
Construction Materials in the Specification

Material Reuse

✓ Barn board as flooring
✓ Old doors as tables
✓ Interior Windows as room dividers
Oxfam National Headquarters – Ottawa, ON
Oxfam National Headquarters – Ottawa, ON
Oxfam National Headquarters – Ottawa, ON
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Waves of Change Workshop Series

Starting with

How Responsible Design Can Help Win More Business

- Waves of Change represent both a danger – and an opportunity. Find out what the coming change tsunami in the building industry is and how you can take advantage of it.

- Responsible Design – Beyond Energy Efficiency: What is it and is it valuable?

- Defining its Value: To you and your customer

- Using Responsible Design to Increase Your Business: An easy-to-implement messaging template
Tools and Support

✓ Waste Management Planning
✓ Waste Saver Mobile APP
✓ Mission 2030 Reference Guide
✓ Virtual Green Product Library
✓ BIM (Building Information Modeling)
✓ Online Waste Management Planning, Tracking & Reporting
✓ Support Line/System

http://www.cricouncil.com/?page_id=1780
WASTE SAVER Mobile APP for iOS and androids to start

Find Recovery Facilities
- Concrete
- Masonry
- Metals
- Wood, Plastics, Composites
- Thermal and Moisture Protection
- Openings
- Finishes

Find Location
- Nearest to Me
- By Postal Code or Address

Tomlinson Ltd, R.W.
5597 Power Rd 354.27 Km

Tomlinson Environmental Servicing
7722 Springhill 354.33 Km

Carl's Waste Services
5001 Herbert Drive 372.79 Km
Tomlinson Ltd, R.W.

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<th>Street</th>
<th>5597 Power Rd</th>
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<tr>
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<td>K1G 3N4</td>
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<tr>
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Mission 2030 Guide:
A thought provoking document on:
• Why Zero Waste
• How Zero Waste is Possible
• What Can You Do

Addressing
• Lexicon and Semantics
• Best Practice Approach
• Debates, Challenges, Opportunities
• Study Case and Other References
• Evaluating Products and Systems
• Policies. Standards, Guidelines and Initiatives
• Material Consumption and Production Patterns Facts
• Waste/Resource Minimization Planning/Management
• Big Questions – Straight Answers on Practices in various sectors
• Nanotechnologies and Hazardous Chemicals.

Research and Technology

- Construction Waste Management
- Life Cycle Assessments (LCA) – Precast Concrete
- Research on Natural Resources & Building Materials
  - Drywall Recycling in NCR
  - Drywall Recycling in Agricultural Sector
  - Interior Retrofits for Health, Safety and Zero Waste Impact Growth
  - Other materials, including Cement, Wood, PVC, Aluminum, Gravel, Potash, Roofing, Insulation…

- Emerging Technologies
  - [http://www.cricouncil.com/?page_id=1778](http://www.cricouncil.com/?page_id=1778)
Do You Know…

- How much waste YOUR decisions and actions generate?
- Where does that waste go?
- If you do, how can you help change the way industry views and deals with resources, starting with waste?
- If you don’t, why are you waiting to take the first steps to find out?

- Where does resource/waste management start?
- Who is responsible for the building or demo permit?
In the words of Winston Churchill: “I never worry about action, only inaction”

For More Information on the CRI Council and Mission 2030:
Visit www.cricouncil
E-mail info@cricouncil.com
Or, call 613-795-4632

Please help us help others take action and walk the talk...