Climate Action Support Centre
Green Development Standards:
A Toolkit for Municipal Practitioners

Clean Air Partnership

Climate Action Support Centre- GDS Project

- FCM funded project
- 8 municipalities worked together to develop a Toolkit for municipal staff to develop or improve their Green Development Standards (GDS)

Purpose of the CASC project

- Increase municipal capacity to communicate about GDS, develop GDS, and implement GDS in their communities
- Provide training and resources to support municipal staff

The GDS Toolkit Will

- **Help municipal staff:**
  - Communicate to decision makers the value of GDS
  - Understand the legislative authority for creating GDS
- **Provide:**
  - A milestone framework for tracking your progress with GDS
  - Resources, education for staff and stakeholders
  - Sample metrics to be used in developing your own GDS

Toolkit Contents

- The Benefits of GDS
- Legislative Framework for GDS
- Background on Third Party Green Building Standards
- Jurisdictional Scan of Ontario GDS
- Milestone Framework for Tracking your GDS progress
- Sample GDS metrics
- Best Practices and Training Materials

What are Green Development Standards (GDS)?

- **Voluntary or mandatory measures implemented by municipalities to encourage sustainable community design**
- **Metrics to guide development at a level of planning and design that focuses on the community as a whole**
- **Goals:**
  i. Minimize GHG emissions
  ii. Preserve the natural environment
  iii. Create thriving, connected communities
  iv. Improve public health

Why Green Development Standards?

- **Ontario's population is projected to grow by 30.2 per cent (4.3 million) between 2017 to 2041.**
- **In order to reach GHG targets, new buildings need to be built to minimize GHG emissions (net zero)**
  - This is easier and cheaper than retrofitting them later
- **Opportunity for municipality to ensure that new development considers public health, climate change, energy, and resource use.**

What do Green Development Standards cover?

Energy Efficiency

Bird Friendly Design

Proximity to Transit

Street Amenities

Compact, mixed-use development

Soil Health

Active Transportation

Stormwater

Proximity to School/ Amenities/Parks

Electric Vehicle Charging

Tree Canopy

Green space/ Parks

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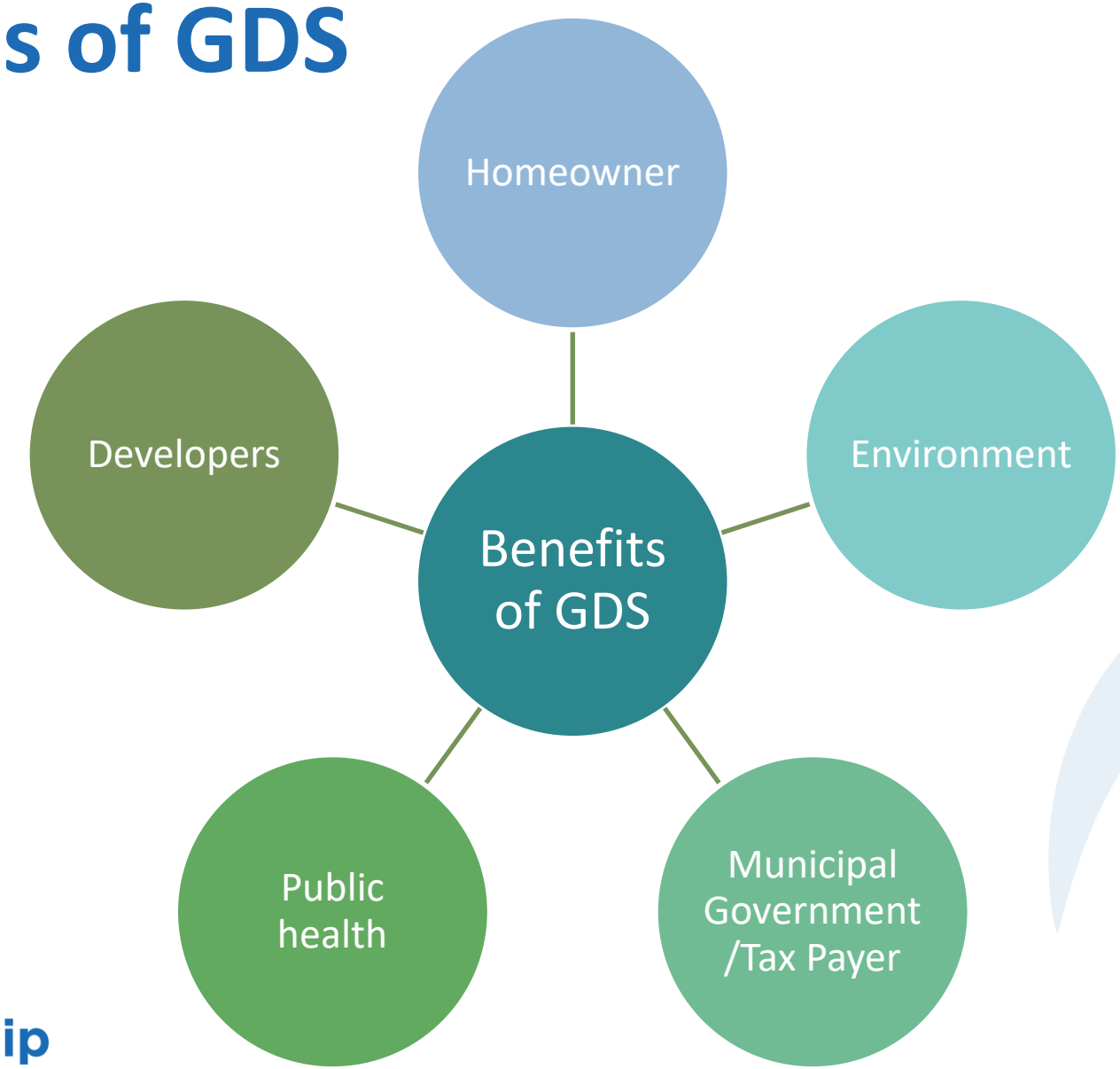
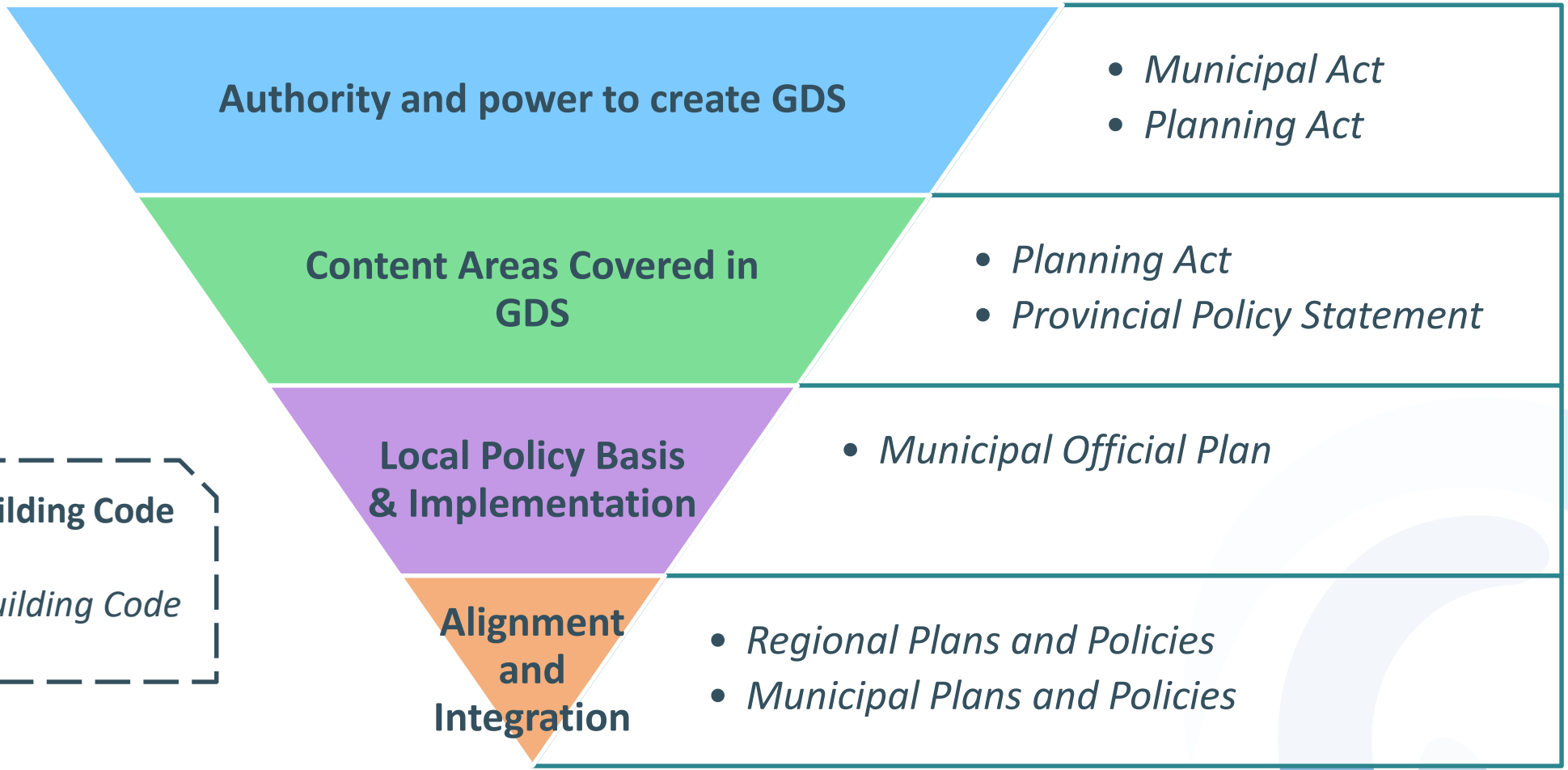
The Benefits of GDS



What are the benefits of Green Development Standards?

- Building better quality buildings
- Reducing operating costs through decreased need for heating and cooling
- Increasing resilience to extreme weather and power disruptions
- Reduce GHG emissions
- Improve air quality and reduce the urban heat island effect
- Reduce storm water runoff and potable water consumption while improving the quality of storm water draining to water bodies
- Protect and enhance ecological functions, integrate landscapes and habitats and decrease building-related bird collisions and mortalities
- Divert household and construction waste from going to landfill sites.

Legislative and Policy Context for GDS

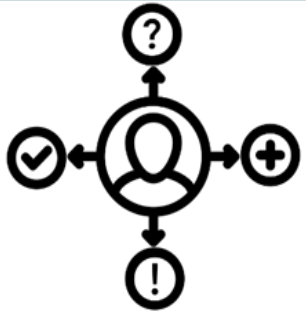


Ontario Building Code

National Building Code

GDS Milestone Framework

1. Declaration Phase



2. Metric Development and Consultation

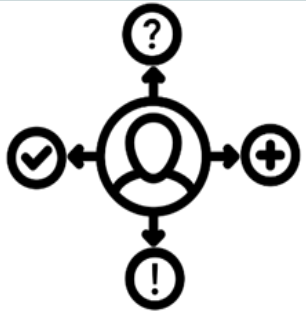
3. Implementation

4. Monitoring and Reviewing

Milestone 1: Declaration Phase

1

Declaration Phase



- Step 1: Establish a working team and build the value proposition for GDS in your municipality

- Step 2: Identify the objectives for your project and ensure alignment with other policies

Milestone 2:

2

Metric Development and Consultation

- Step 1: Conduct analysis of best practices and a jurisdictional scan of programs
- Step 2: Develop metrics
- Step 3: Develop an Internal and External Consultation Plan

Milestone 3:

3

Implementation

- Step 1: Update and Review internal planning application review processes
- Step 2: Communicate GDS project to stakeholders
- Step 3: Train staff and applicants

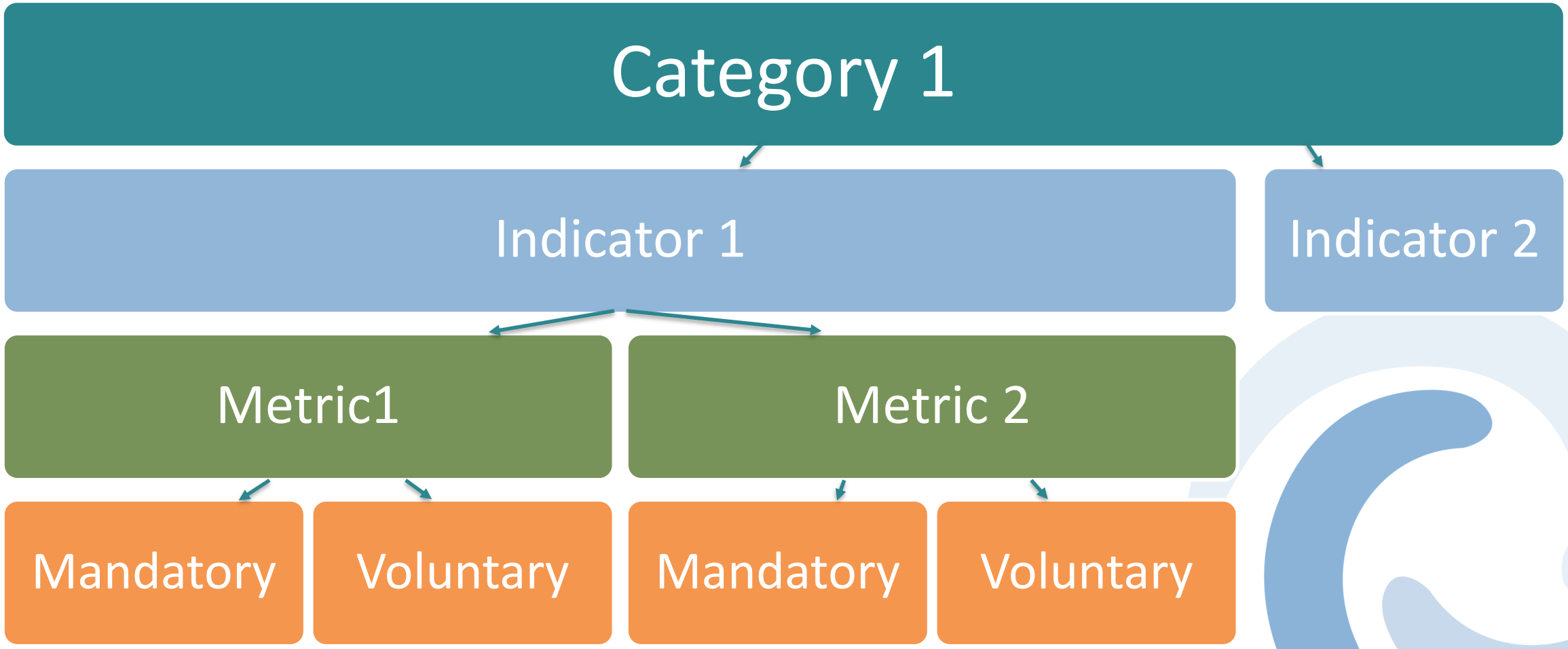
Milestone 4:

4

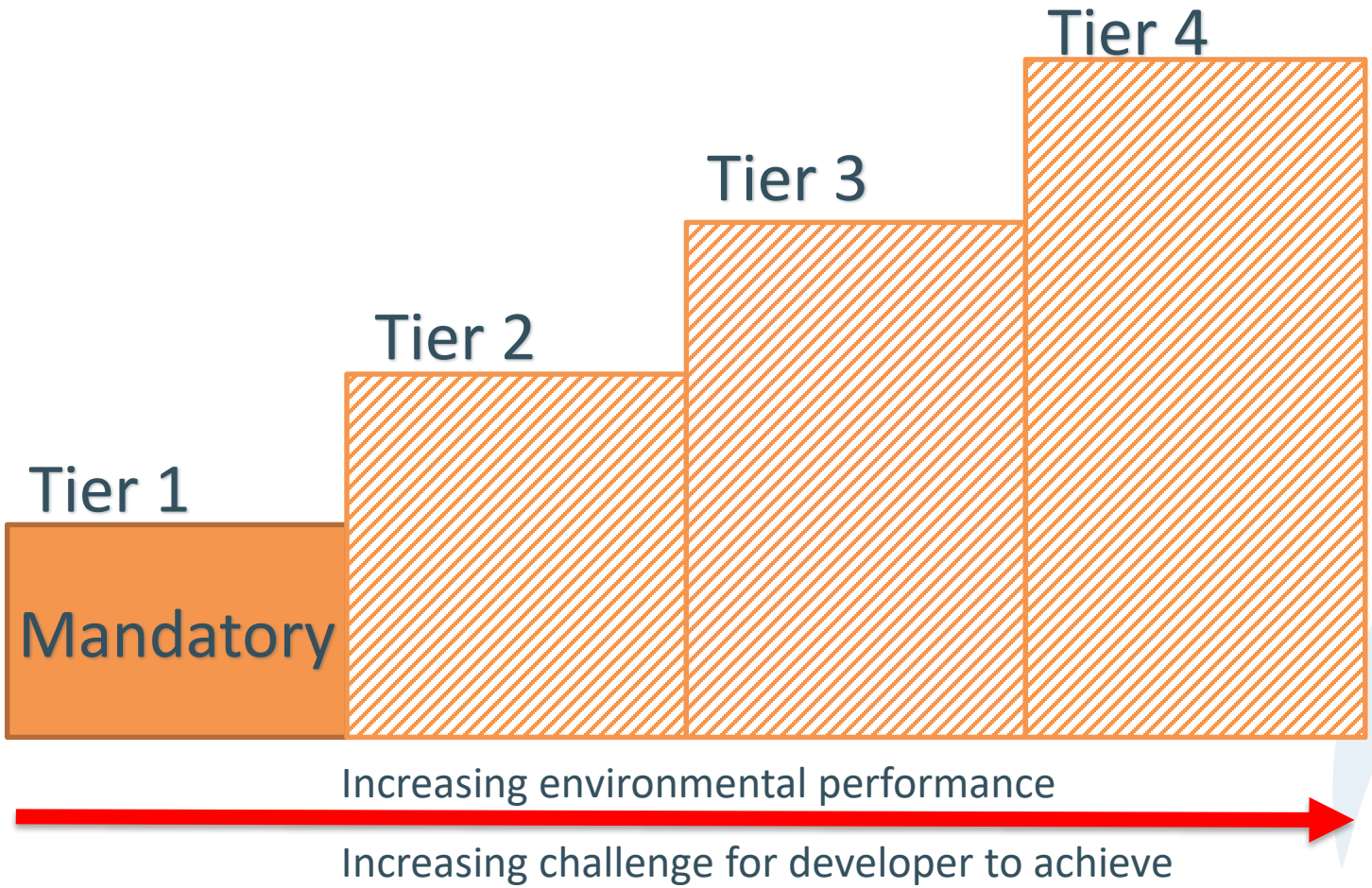
Monitoring and Reviewing

- **Step 1: Develop a continuous process to track and monitor the uptake of the various sustainability metrics**

What do Green Development Standards look like?



Tiered, Prescriptive Approach to GDS



Tiered Approach to GDS (Toronto Green Standard)

Example metrics from Toronto Green Standard version 3 for Low Rise Residential

Increasing environmental performance

Development Feature	Water Balance (Stormwater Retention): Capture and manage rainfall to improve water quality and aquatic ecosystem health while enhancing the resilience of infrastructure to extreme rainfall events.
TIER 1	**WQ 2.1 Stormwater Retention & Reuse** — Retain runoff generated from a minimum of 5 mm depth of rainfall from all site surfaces through infiltration, evapotranspiration and water harvesting and reuse.
TIER 2	**WQ 2.2 Advanced Stormwater Retention & Reuse (Core)** — Retain runoff generated from a minimum of 10 mm depth of rainfall from all site surfaces through infiltration, evapotranspiration and water harvesting and reuse.
TIER 3	**WQ 2.3 High Performance Stormwater Retention & Reuse (Core)** — Retain runoff generated from a minimum of 25 mm depth of rainfall from all site surfaces through infiltration, evapotranspiration and water harvesting and reuse.

Menu Approach to GDS (example)

Category	Points
Infrastructure and Buildings	25 Points available
Built environment	25 Points available
Mobility	25 Points available
Natural environment and open space	25 Points available
Total Points Available	**100**
Minimum Points Required	**70**

8 metrics in this category

Menu Approach to GDS (example)

Category 1 (i.e Infrastrucutre and Buildings)	
Metric 1	
Mandatory	0 points
Recommended Minimum Target	2 points
Aspirational Target	2 points
Metric 2	
Mandatory	0 points
Recommended Minimum Target	2 points
Aspirational Target	2 points
Point Total	

Menu approach (Vaughan example)

Planning Act, PPS provide broad areas to cover

Building Types

Third Party Systems (eg. LEED)
Other GDS
Regional Plans/Policies

Site (S) Metrics											
Category	Indicator	Metric	Mandatory Target	Recommended Minimum Target			Aspirational Target			Precedent	Points	Implementation
				Single Family	Multi	Commercial / Retail/Inst	Single Family	Multi	Commercial			
Infrastructure and Buildings	Energy conservation	Building energy efficiency	OBC	EnerGuide 83 2 POINTS	35% improvement 3 POINTS		EnerGuide 85 2 POINTS	35% improvement or more 11 POINTS		LEED ND GIBp2 TGS TIER I & TIER II	21	Demonstrated at time of: Building Permit Secured by: Subdivision or Site Plan agreement

Mandatory Measures

Voluntary Measures

Can be adjusted to reflect cost/effort/municipal priorities

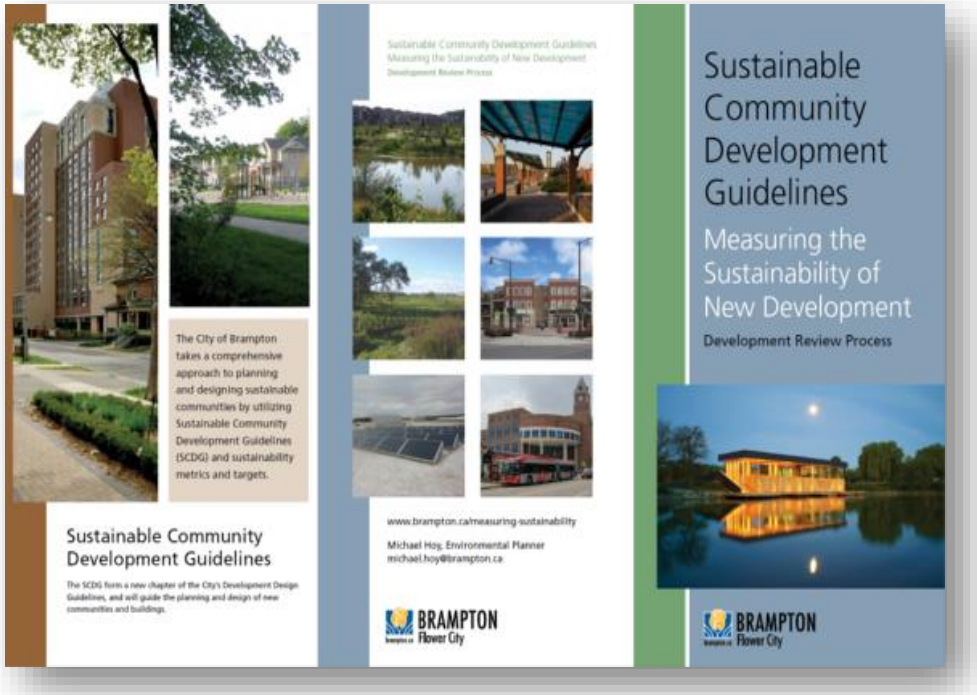
Example: CASC Team developed Sample Metrics

Metric	Tree Canopy- Maintaining existing trees and Soil Fertility
Applies to	Draft and Site Plans
Mandatory	Arborist Report provided that identifies and evaluates where onsite healthy mature trees will be protected (in-situ or moved) or removed. Where healthy mature trees must be removed, new trees (not including street trees) are provided on site or as determined by the municipality to mitigate the lost canopy coverage of the trees removed.
Voluntary	75% of healthy mature trees greater than 20 cm. DBH are preserved in situ on site.
How It is Demonstrated	Arborist Report that clearly reports total number of trees removed, to be protected, and to be moved. Also include percentages of tree health.
Who is Responsible for Reviewing	Parks/Natural Heritage Planning
Rationale	As part of the urban forest, street trees provide a range of ecosystem services including: cleaning air; intercepting rainfall that helps to mediate storm flows; evaporative cooling and summer shade to reduce building cooling loads; wind breaks; and carbon sequestration. As community amenities, street trees promote active transportation by providing a more walkable pedestrian environment.

Potential Incentives for Green Development

1. Community Improvement Plans
2. Development Charge Rebates
3. Tax Increment Based Grants
4. Expedited Approval Process
5. Recognition Program
6. Density/Height Increases
7. LIC Financing

Training and Education Tools



- Internal training and engagement plans
- External presentations for developers and builders
- List and links to example GDS Guidebooks

Best Practices

- Find your Champions/Success Stories
- Build on an Existing Process and Enshrine in Official Plan
- Building of Metrics through internal workshops
- Set Quantifiable, Measurable Metrics
- Allow for Flexibility
- Test Real Applications with the Development Industry

Toolkit Next Steps

- Final edits are being completed
- Finished product will be made public in November 2019
- Past webinars are available by request

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