

WHAT IS Green Neighbourhood Development?



I'm going to **start** by summarizing GND at a very high level, using **LEED ND** as an **organizing framework**

For those who **aren't familiar** with Leadership in Energy and Environmental Design for Neighbourhood Development (or LEED ND) it's considered **the** comprehensive and globally recognized measurement and verification system for GND

but GND can be realized w/out LEED ND, just as green buildings can be realized w/out LEED certification

That said, **LEED ND provides one approach** to understanding the fundamentals of GND, **organized around three key themes**, and while there is a lot to GND that we can't fully describe today, these themes are generally **SLL, NPD, GBI**:

Smart locations and "linkages" (connectivity) is a "**community level**" consideration of GND - as a planner, this is the area of GND that impacts my work every day

Focus on **contiguous and infill sites** (avoiding "leapfrogging"), **serviced sites**

Highly connected with a "**permeable**" mobility network (for all modes) – often a grid

Well served by **transit** – existing or planned (and funded)

Walkable to a variety of daily services and amenities – food, retail, professional services, education, recreation, health care – **and thank you all for missing Jason Hardy's discussion of amenity rich communities happening next door**

Avoiding impacts to **imperilled species** of animals and plants, **wetlands and waterbodies** – or planning to manage impacts (or even address previous impacts) – **Marissa’s wetlands presentation yesterday is relevant to this theme**

Minimizing loss of prime **agricultural lands**

Avoiding **hazard lands**, prone to flooding and erosion

Neighbourhood Pattern and Design is the next key theme

This brings GND to the **“site” level** guiding **building / parking / access** locations and orientations and design to mitigate **urban heat island effects** and provide for **passive energy** – this is often where there is a need to

“tamper” with the market, presenting significant challenges from a

Developer’s perspective

emphasis on **walkable design** and **mixed land uses** to creating complete / diverse / connected / equitable communities – **Chris and Bard this afternoon**

finally **Green Buildings and Infrastructure**

Focusses on **materials** and performance of **energy and water systems** –

Jonathan and Michael will discuss aspects of this more deeply



What are some of the challenges associated with realizing GND?

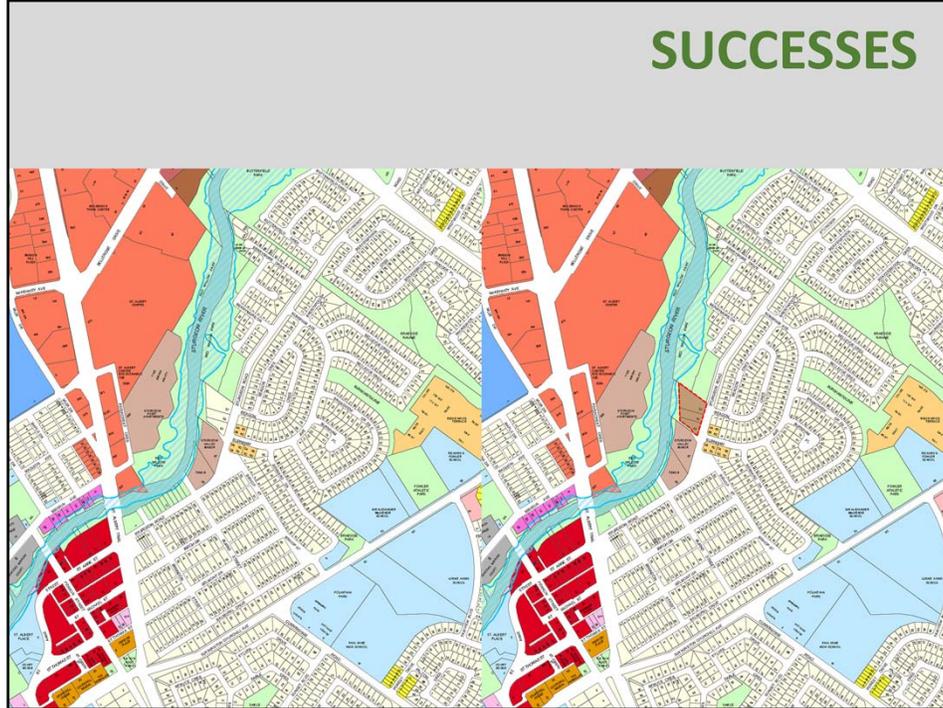
Inertia is, from my perspective, is the key challenge to realizing GND

Our **market and our industry are well established, efficient, sensibly adverse to risk**

uncertainty in terms of **return on investment** and complications to relatively well understood **processes** is concerning

That said, **knowledge and understanding** of GND among all stakeholders in the industry (**consultants, developers, builders, government and the public**) is growing – and **value of GND** (real and perceived) is more well understood with time

In regional, competitive, environments – without policy or legislative requirements for GND – comprehensive up take is voluntary, and limited to date (market advantage hasn't been generally realized - yet)



Where have GND approaches been successfully employed?

From a land use perspective, I've found success in GND and the ability to leverage LEED ND "brand"

Where projects I've been involved with have registered for LEED ND project certification, we've been able to effectively and efficiently tell our GND story (avoiding a complicated discussion of all GND approaches)

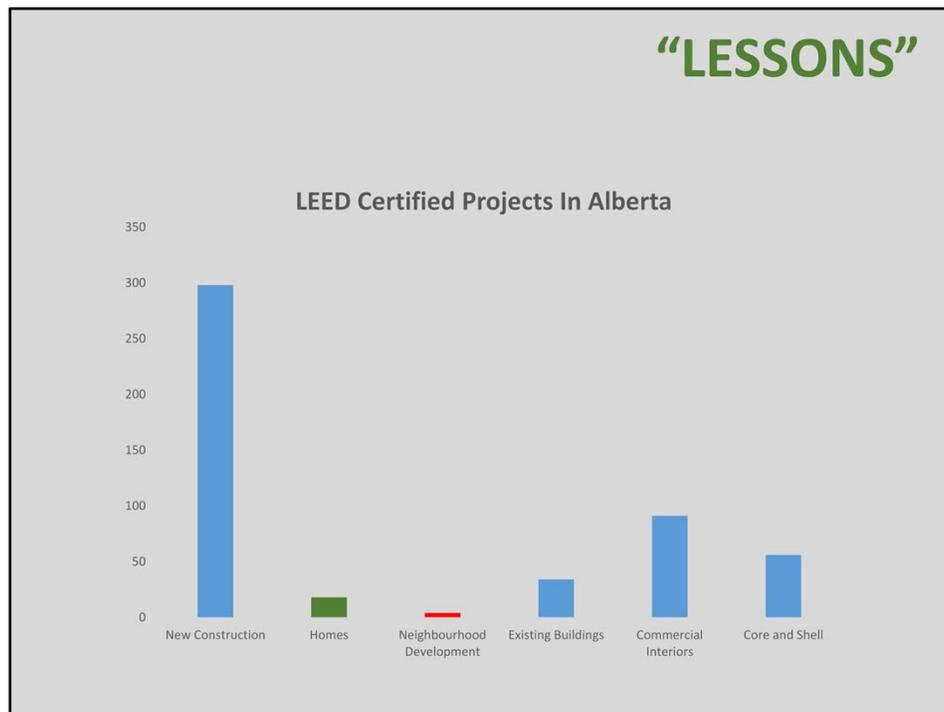
We've found that LEED = good, and that there is public recognition of the brand and approval authorities recognize and understand it as well, where we are seeking their support

Independent, 3rd party measurement and verification brings a level of transparency and accountability to projects – mitigating the "uncertainty" on the other side of the table

LEED ND also relies on integrated design approaches, requiring all stakeholders to collaborate from the project outset

harvesting the "low-hanging fruit" – better project (whether LEED ND certified or not)

in this way, we're making steady progress and incorporating more and more GND approaches



But there's a long way to go in proving the value of GND, if uptake of LEED ND – particularly the realization of certified projects is considered an indicative measurement

Many projects have implemented aspects of GND, which is great, but full adoption is rare for private sector projects

Proving the value of GND (and of LEED ND) to everyone in this room, and your project partners is essential, and there's lots of work to do

- Accurate, local, relevant information related to the benefits of GND is needed – and CaGBC needs to work with our industry to make this available

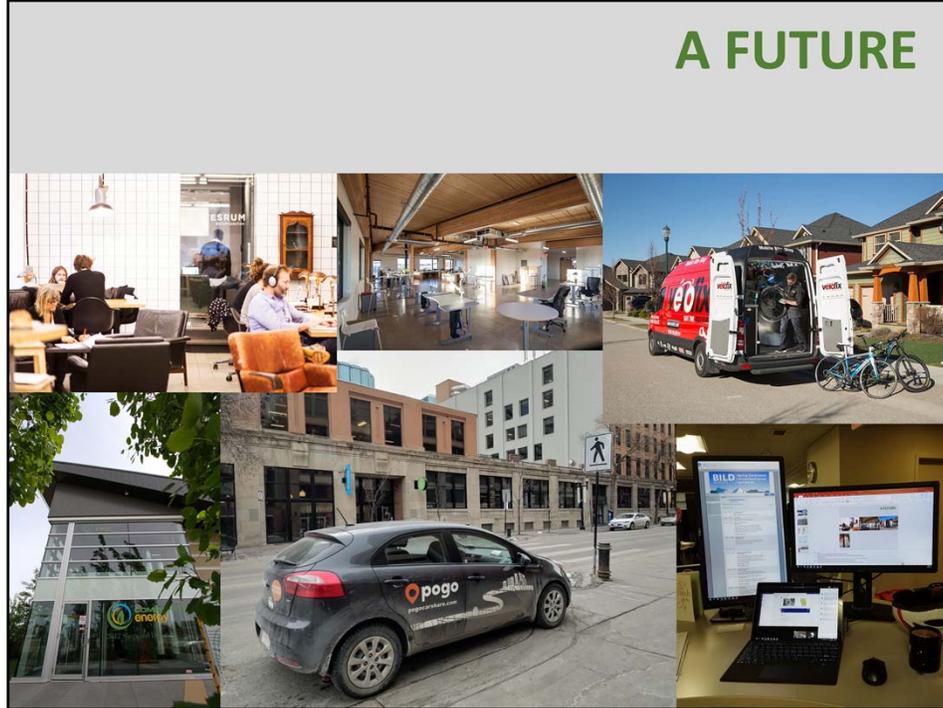
Continuing to prove the value of LEED, and other, “brands” is also important to maintain momentum

- Securing public trust and recognition of the value of choosing LEED communities

- Supporting approvals (good news stories)

- Positioning GND projects differently in the market (back to bottom line benefits)

Finally, risk associated with innovation needs to be shared – governments want (and need) to see GND happen and need to come to the table to support the developers and builders who are making it happen



The rise of the sharing economy will, in my view, transform how we advance GND and I'll discuss just a few examples briefly here.

Sharing space

buildings (flex time / home office / coffices) – doing more with less

Memberships in coworking organizations in Canada more than doubled from 2012, at 50,000, to 2013, at over 100,000, and more spaces are being provided to satisfy this demand all the time

Can companies grow without physically growing and how does this change how the market provides space (in terms of size and function)

public spaces (multi-tasking in parks, on roads - velofix) – changing where work and services occur, and presenting new regulatory challenges

Sharing information (advanced collaboration and communication tools)

changing how and where people work – proposal story

Sharing resources

heat recovery (at single home + community scale) – looking at waste as a resource and improving operating costs

South False Creek in Vancouver captures waste heat from an adjacent municipal sanitary trunk and provides about 80% of the space and domestic water heating needs for 3.5 million square feet (granted, that's in BC, but that's a lot of heat!)

We're investing in sanitary systems all the time – where are the opportunities for

private and public sector collaboration to not see these opportunities “flushed away”
– ha!

Center in the Park Community Energy – while not a waste heat system – reduces greenhouse gas emissions by 18% to provide hot water for the Centre in the Park development (Bard can tell you more about this innovation)

transportation (shared, autonomous, electric vehicles) – Nikolas Badminton will be speaking on this specifically later today

car shares are already here and rapidly expanding (geographically and in terms of membership)

in 2012, Calgary had the distinction of being Car2Go’s most successful expansion market

Edmonton has trailed, but not has Pogo car share and I see multiple fleet vehicles every single time I come downtown

These are all interrelated and allow us to reimagine the physical forms of our communities: reduce roadway infrastructure and repurpose streets - through n'hood renewal (greenways, LID SWM)

Address the impact of infill (parking and traffic concerns)

more intense and vibrant (mixed-use?) commercial developments (infill and new-build) – with reduced parking and circulation

renewed flight to outskirts – the new “streetcar suburbs” to live and work?

lower land cost, employees travel times don't factor into commute as heavily w/
increased tele-work (now truly as, or more, effective than in-person collaboration)
and AV (commutes are no longer “down-time”)?

Transform transit (eliminate “feeder/transfer” w/ on-demand, self-routing, self-driving transit)

Industry and politicians can make policy choices to advance GND

Alternative (market driven, related to private vehicle ownership) - may result in greater congestion and parking issues