

Street Design Manual



New York City
Department of Transportation

2009

New York City Street Design Manual

NACTO Designing Cities Conference // October 24, 2012



For whom is the Manual intended?

**Government
Agencies**

Planning,
Engineering, and
Design
Consultants

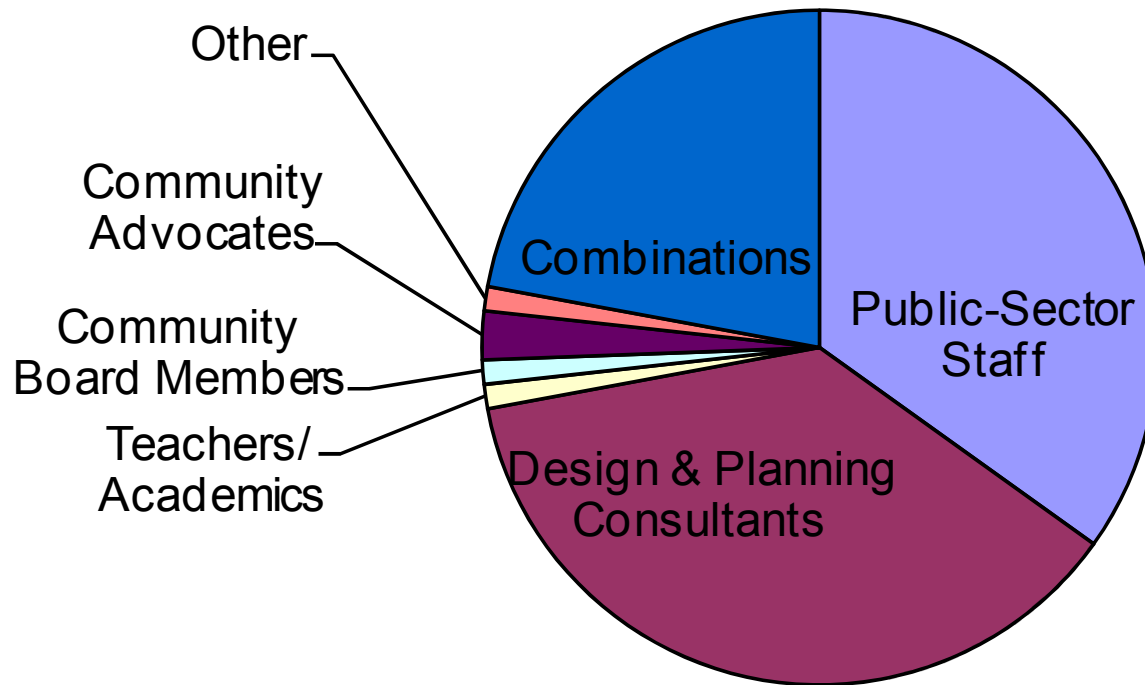
Private
Developers

**Utilities and
Contractors**

Community and
Neighborhood
Groups

Elected Officials

Who's using the Manual?



Purpose of the Manual

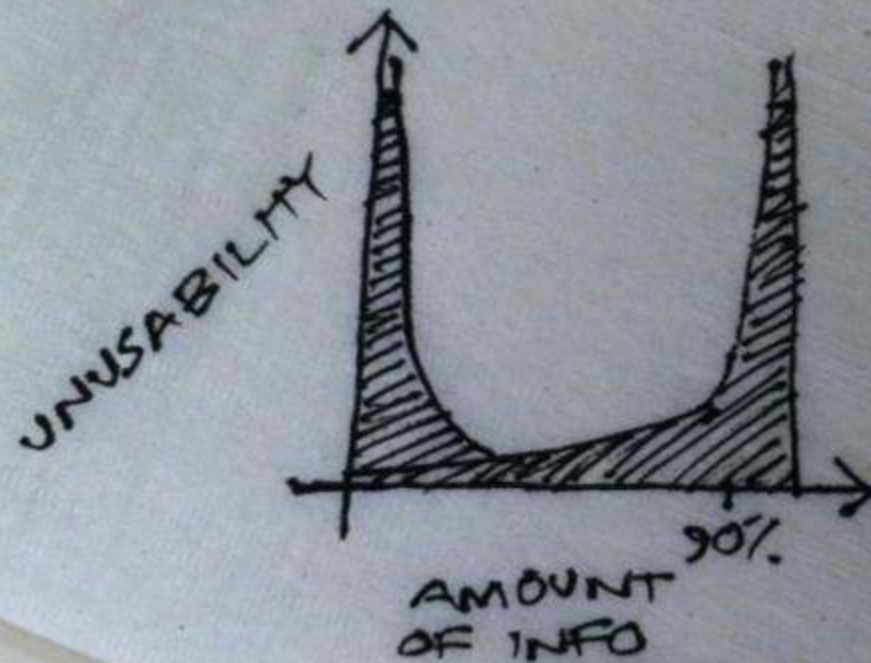
- Gateway to resources
- Policy direction

Content

A black and white photograph of a woman sitting at a desk, looking extremely frustrated. She has her hands buried in her curly hair, pulling it out. Her mouth is wide open in a scream or shout. On the desk in front of her are several sheets of paper, some of which appear to be crumpled or scattered. The background shows a window with vertical blinds.

What should we include/exclude?!

Content



Answer 90% of people's questions

Style

Curb Extension

USAGE: WIDE

An expansion of the curb line into the lane of the roadway adjacent to the curb (typically a parking lane) for a portion of a block, either at a corner or mid-block.

Also known as neckdowns, curb extensions can enhance pedestrian safety by reducing crossing distances, can relieve sidewalk crowding, and can provide space for functional elements such as seating, plantings, and furniture. In addition, two curb extensions can be located on either side of a street to create a MID-BLOCK NARROWING (2.2.3) or at an intersection to create a GATEWAY (2.3.2).



Curb Extension at Avenue C, Manhattan

Benefits

- Creates a safe bus stop and visually narrowing the roadway
- At a corner, slows turning vehicles and emphasizes the right of way of crossing pedestrians
- Shortens crossing distance, reducing pedestrian exposure and minimum required signal time for crossing
- Improves the ability of crossing pedestrians and drivers to see each other
- Makes the crosswalk more apparent to drivers, encouraging them to stop in advance of the crosswalk and reducing illegal parking within crosswalk
- Reinforces lane discipline through intersection, preventing vehicle passing maneuvers in parking lane
- Provides additional pedestrian space and reduces crowding, particularly for queuing at crossings and bus stops or when located at a subway entrance or other protrusion

- Creates space that may be used to locate street furniture, bike parking, bus stop, public seating, street vendors, etc., potentially reducing sidewalk clutter
- Keeps fire hydrant zone clear when located in front of a hydrant
- Defines the ends of angle parking
- Can discourage truck turns onto streets with No Truck regulations (See RCNY Title 24, Chapter 4, Section 4-1.2)

Considerations

- May impact street drainage or require catch basin relocation
- May impact underground utilities
- May require loss of curbside parking
- May complicate delivery access and garbage removal
- May impact snow plows and street sweepers



Curb Extension, Seventh Avenue, Manhattan

Style

2.2.2 Curb Extension

GEOMETRY: SIDEWALKS & MEDIANS



A curb extension "blockbuster" with One Street Amsterdam Avenue, Manhattan



Lay-by for curbside loading between curb-edge areas, Glenview Street, San Francisco

Application

Only applicable within a curbside parking lane

Comers with marked pedestrian crosswalks in retail districts, directly adjacent to schools, at intersections with demonstrated pedestrian safety issues, on wide streets, or in areas of high foot traffic

At school crosswalks

At mid-block crossings

(see MID-BLOCK CROSSINGS 2.2.2d)

Intersections where a two-way road transitions to oncoming one-way operation so as to block wrong-way traffic from proceeding straight onto the one-way portion (a "blockbuster")

Near to subway entrances or other sidewalk pinch points so as to increase pedestrian walking or queuing space

In front of fire hydrants so as to keep clear of parked vehicles

Consider at all corners and pedestrian crossings

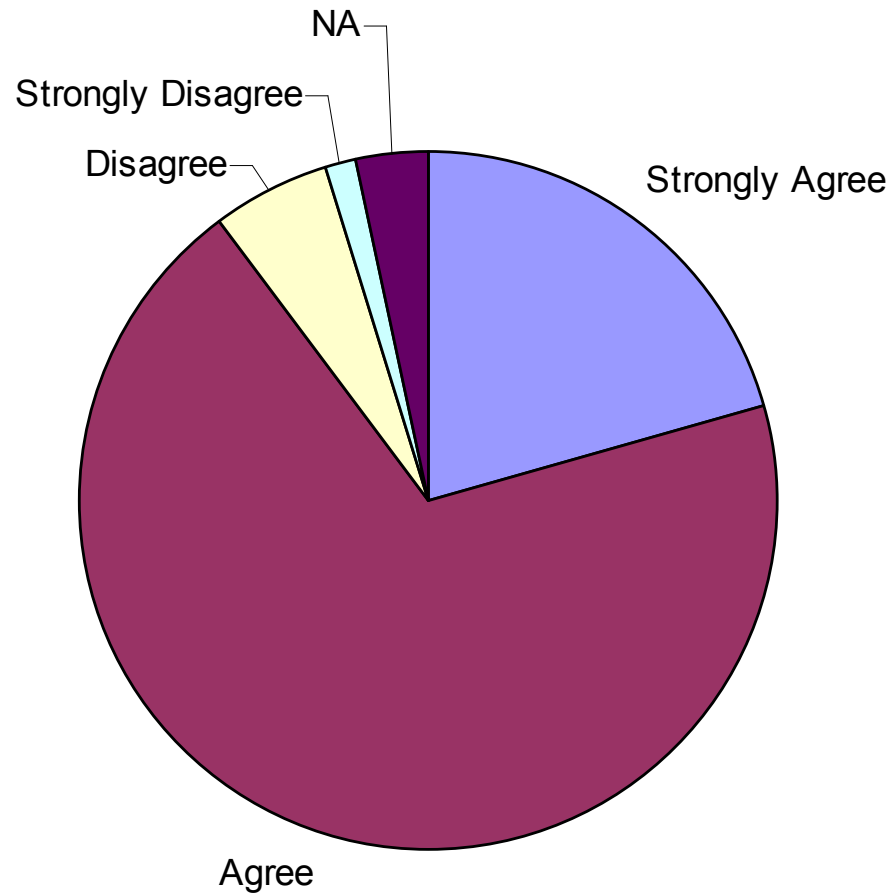
Consider elongated curb extensions for some or most of a block (i.e., a widened sidewalk with lay-by areas) in areas where a full sidewalk widening would be desirable but some loading, drop-off, or parking access must be maintained

Cannot be used where curbside travel (including bus, bicycle, or general traffic) lane exists, such as those created through peak-period parking restrictions

Feasibility of curb extensions is evaluated based on engineer review of design vehicle turning movements and vehicle turning volumes

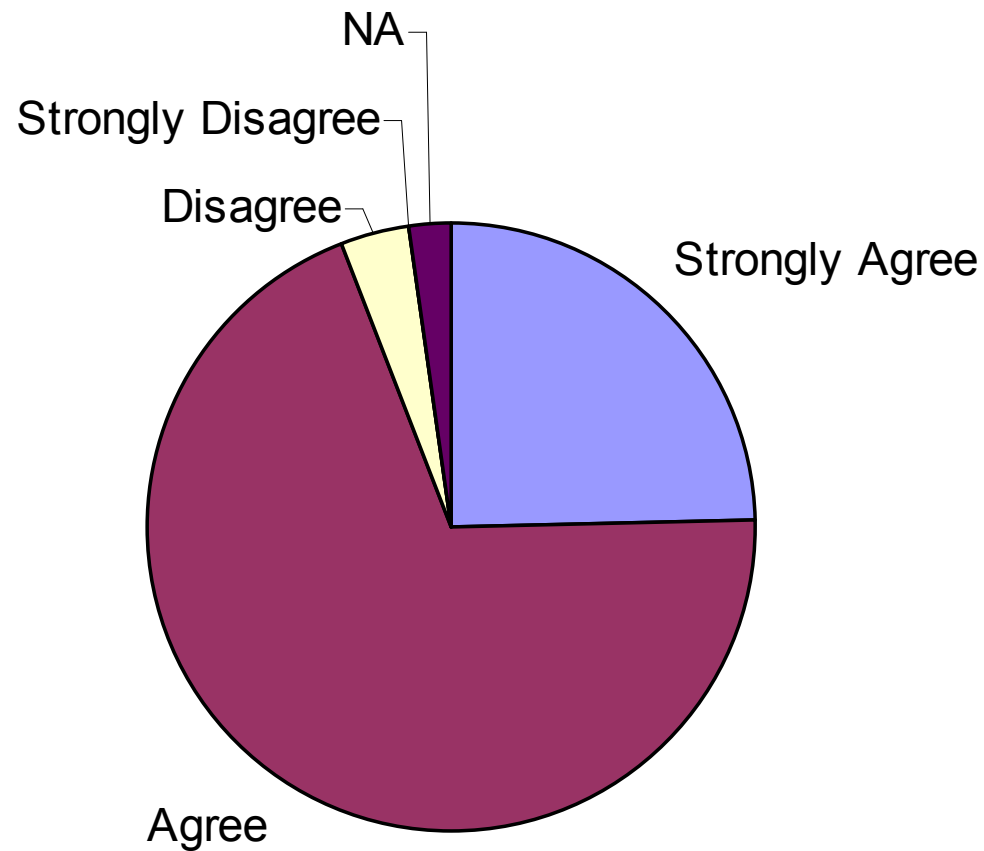
Survey

“It's easy to find the information I need in the Manual.”



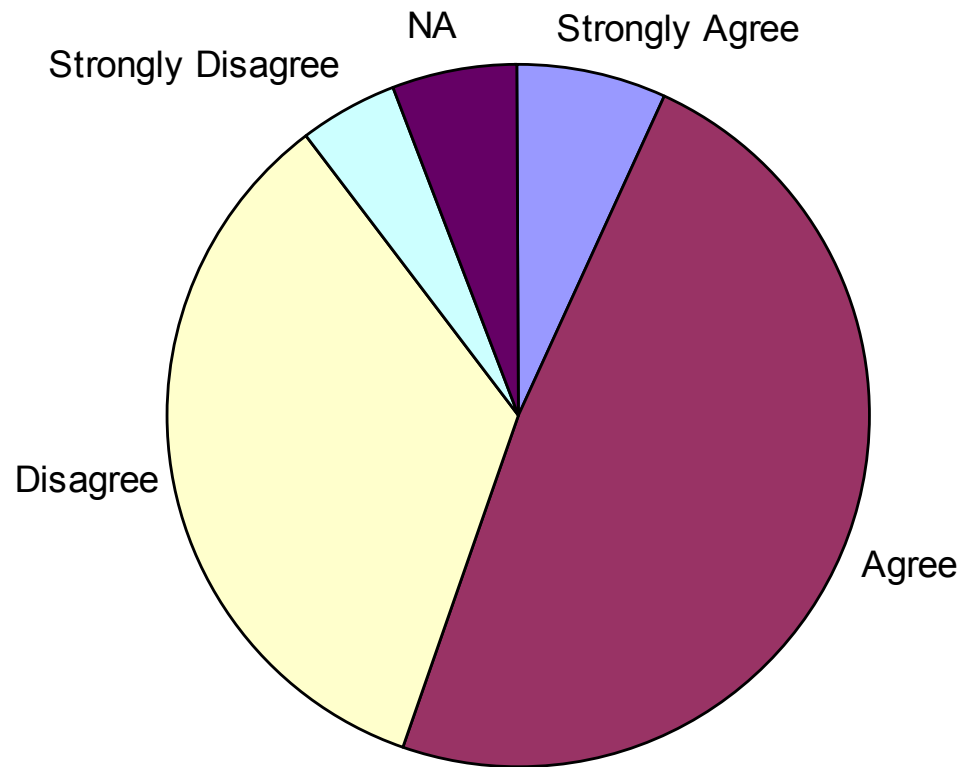
Survey

“The Street Design Manual is easy to understand.”



Survey

“The Street Design Manual includes all the information I need.”



Second Edition

Bike Lanes & Paths

USAGE: WIDE

A dedicated on-street lane or path for bicycles (see Glossary).

Bikeways are typically designed as BIKE LANES within the roadway delineated with markings (2.1.2a) or as BIKE PATHS physically separated from traffic for most of their length.

Benefits

Provides dedicated space for bicyclists, enhancing safety, comfort, and mobility.

Cumulative with other bikeways, provides a comprehensive network of recommended routes for bicyclists, thereby encouraging bicycling.

Application

Streets not on the Master Plan when identified by NYC DOT as priority routes.

Consider on streets with high current or anticipated bicycle volumes.

Design

See Table 1 (following 2.1.2b) for a listing of typical bikeway designs and their respective spatial requirements, ideal applications, and advantages and disadvantages.

Create connectivity with adjoining bikeways, bike parking, and bicycle destinations.

Sustainability Opportunities

Utilize permeable paving and/or paving with a high SRI value within BIKE LANE or BIKE PATH.

Utilize recycled content in paving materials.

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Buffered Bike Lane, 9th Street, Brooklyn

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One-way parking, associated bike path on a cross-street, Grand Street, Manhattan



Buffered Bike Lane, 9th Street, Brooklyn

Bike Lanes & Paths: Bike Lane

USAGE: WIDE

A portion of a roadway that has been designated by striping, signs, and pavement markings for the preferential or exclusive use of bicyclists.

Physical separation of bike lanes is desirable, but is not always possible due to physical or operational constraints.



Green-painted Bike Lane, Broadway, Manhattan



Bike Lane, 164th Street, Queens

Benefits

See benefits of BIKE LANES & PATHS (2.1.2).

Addition of on-roadway bike lanes can also calm traffic speeds when used to narrow or replace travel lanes.

Considerations

Without physical separation, vehicles can block bike lanes, making enforcement of violations more critical.

Application

See application guidance for BIKE LANES & PATHS.

Consideration should be given to use of BIKE PATH (2.1.2b) rather than, or in addition to, BIKE LANE whenever possible.

Design

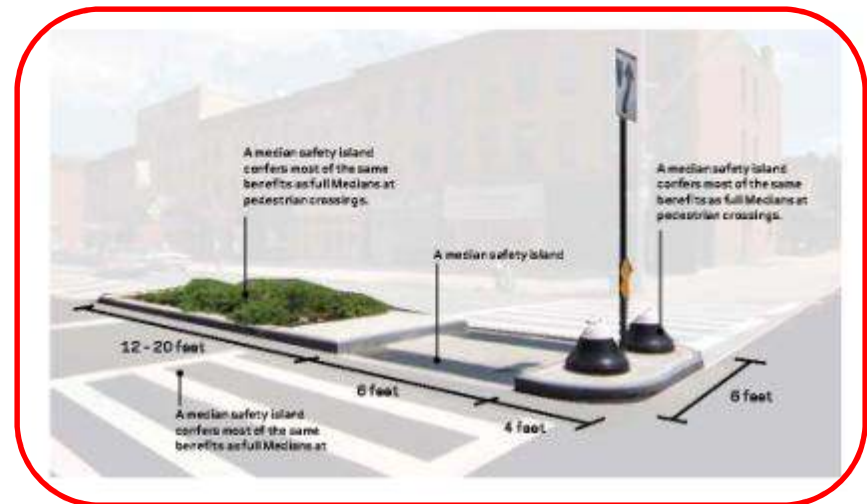
See design guidance for BIKE LANES & PATHS.

BIKE LANES should be buffered when possible, typically with 3 feet of channelization.

At intersections with complex traffic patterns—or when bike lanes located immediately adjacent to the curb—bike lanes can be given visual emphasis through the use of green-colored pavement.

Sustainability Opportunities

See sustainability opportunities for BIKE LANES & PATHS.

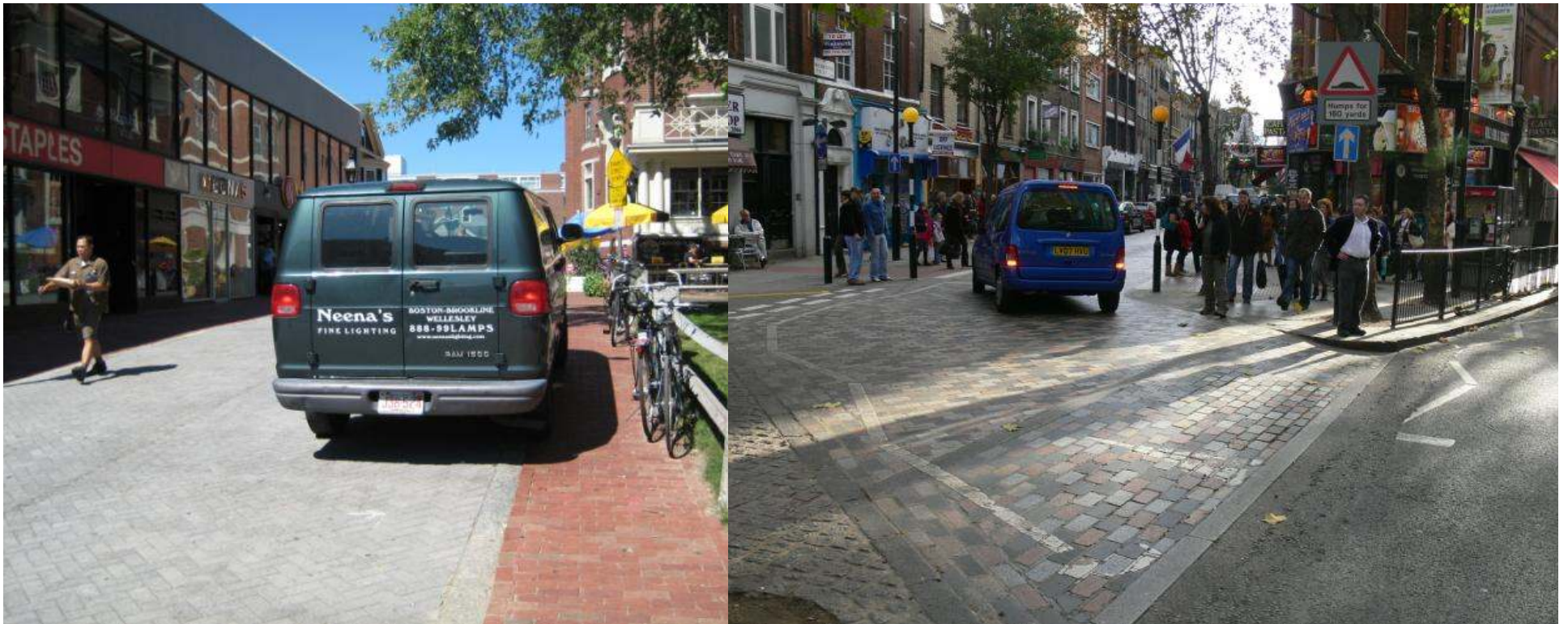


Policy/Process/Standards

- Currently no legislative/regulatory actions
- Manual is a common playbook
 - + OMB: CAS-HW2 cut review from 90–180 days → 30
 - + Public Design Commission
- Transformed scoping process

Impact on Project Designs

- Progress: Various treatments being rolled out
- Challenge: Pilot treatments require the right circumstances



Conclusion

It's not enough to have a book.

You have to use it!