Speaker’s Notes
Síle Ginnane is presenting Liberty Bell under the session heading ‘What is Data?’ at Velo-City 2018 Rio.

http://www.libertybell.ie
Speaker’s Notes
Liberty Bell is a citizen-led surveying platform, that uses a bicycle bell to help collect insights into the experience of cycling, from the point of view of the bicyclist.
In Rotterdam, 49% of primary children cycle to school. The figure in Dublin is 3.2%.

**Speaker’s Notes**
Context about the current numbers of children cycling in Dublin.
In the last 10 years, the number of people cycling in Dublin... 

...has increased by 154%.

**Speaker’s Notes**
The number of people in Dublin cycling has increased greatly in the last decade.
Current sources of cycling data in Ireland include:

- Canal Cordon Count
- National Census
- Bike Share usage data & Totem Counters

Speaker’s Notes
Current sources of quantitative data about cycling in Ireland
Need to understand what’s behind the numbers

Need to understand the quality of the experience

**Speaker’s Notes**
Quantitative data, although useful, does not paint the full picture of the experience cycling. Cities need to have a richer insight into the experience people have while cycling around their community. Qualitative data can help illustrate the quality of their experience.
Hard to get emotionally attached to ‘Data’

- A Personal Story can resonate with a key decision-maker.
- Personal stories can widen the perception of the types of people who cycle or who want to cycle more.

Speaker’s Notes
Decision-makers may find it hard to dispel preconceived ideas of the type of people who cycle. Stereotypes can be challenged by providing personal insights from a diverse group of people who cycle.
Cycling needs a Seat at the Table

Diverse Voices need to be heard

**Speaker’s Notes**
We need more data about cycling. Currently the data available on cycling and walking is negligible in comparison to other modes of traffic, so it is important to grow this bank of data to inform the argument. Cities cannot just presume how different people experience their neighbourhoods. Liberty Bell raises a voice for cycling in a data-driven world.
Design Thinking has an interesting way to think about problem solving.

Empathy is the foundation of a human-centered design process.

**Speaker’s Notes**
Design Thinking looks at understanding the human experience of the problem being addressed, in order to be able to best solve the problem.
Observe - Engage - Immerse

Experience what your user experiences.

**Speaker’s Notes**
It’s important to ‘walk a mile in their shoes’ of the people for whom you are designing. See how they experience the space through field research - observe them, engage with them, immerse yourself in their experience.
Speaker’s Notes
Unsurprisingly, it’s difficult to conduct interviews with people while cycling! It’s important to have a practical, safe and low-cost solution to help transport planners and city authorities conduct research.

Photo credit: www.cyclingwith.com
**Speaker’s Notes**
Liberty Bell is a platform that uses a smart bicycle bell to gather data about the cycling experiences in a city. It gathers both quantitative and qualitative data.

A public authority, private firm or advocacy group commissions a survey about the cycling experience in a particular community. Volunteer participants are recruited for the particular survey and their bicycles are fitted with Liberty Bells paired with their smartphones*. Some demographic info can be collected as required - e.g. age range, gender, type of bicycle, standard of cycling experience.

Participants cycle as they normally would during their daily lives, ringing the bell when and where they encounter anything they would like to report. A timestamped, geolocated record is created on the platform every time the Liberty Bell is rung.

The participant gets a message asking why they rang the bell at that time and location. They can choose a number of predetermined checkboxes - is it a positive or negative experience, if it is a priority record, was the experience an observation or a close call or a collision. A series of other checkboxes are available to help categorise the issue e.g. the behaviour of other road users, issues with road conditions, anti-social behaviour. These options are fully customisable, depending on the objectives of the survey. Participants can also describe the issue in their own words in freeform text. The structured data can be filtered across categories and can be exported in a number of different formats.
The Liberty Bell Platform

- Evaluation tool
- Actionable insights
- A field research tool

Speaker’s Notes
The Liberty Bell platform can be used in a number of different ways.

For example, evaluation of experimental or temporary road designs could be carried out before and after changes have been made. Likewise, comparisons between the cycling experience in Summer or Winter could be evaluated.

The structured data collected allows reviewers to sort or filter by the record categories, and/or by participant demographics. For example, all anti-social behaviour logged can be forwarded to the relevant authorities, or all lighting issues could be reviewed and addressed by the relevant city division.

Liberty Bell helps identify different issues and different barriers that different people might experience when cycling. It acts as a field research tool. For example, in order to understand why in Ireland the gender imbalance in cycling is 3:1, male to female, specific cohorts’ experiences could be researched e.g. teenage girls cycling to or from school.
Likewise, a woman cycling her granddaughter to or from the creche will have an entirely different experience to a recent college graduate cycling to a job interview - it is important to hear all voices.
Speaker’s Notes
As part of the Smart Dublin Cycling Challenge, Liberty Bell worked with:
- An Taisce Green Schools to survey safe cycling, walking and scooting routes to school
- a large utilities workplace to survey staff experiences as they cycle to and from their workplace as part of their Corporate Sustainability Programme,
- members of the Dublin Cycling Campaign as they cycle during their normal daily lives.

https://greenschoolsireland.org

https://esb.ie

http://www.dublincycling.com

http://www.smartdublin.ie
Liberty Bell works with schools to carry out walkability surveys, cyclability surveys and scootability surveys of the routes to school to encourage children and their parents to embrace active travel to school.
Speaker’s Notes
Sample positive records logged on the Liberty Bell platform during a scootability survey of pupils from a girl’s national school in Dublin, Ireland

This survey of routes around the school was carried out with An Taisce Green Schools, an eco-schools organisation in Ireland.

Leaves from trees, dogs, ducks, and just being outside were positives, as were any social encounters.
Speaker’s Notes
Sample negative records logged on the Liberty Bell platform during a scootability survey of pupils from a girl’s national school in Dublin, Ireland.

This survey of routes around the school was carried out with An Taisce Green Schools, an eco-schools organisation in Ireland.

Cars parked on footpaths, litter on footpaths like discarded cigarette boxes were negatives.
**Speaker’s Notes**

Sample records from the area between two bridges on the River Liffey in Dublin City Centre. These records - both positive (blue) and negative (red) - were logged on the Liberty Bell platform during a survey of individuals and staff of the ESB, as they cycled around the city.

The Convention Centre Dublin, venue for Velo-City 2019 is located on the river, near these bridges.

• Smart Dublin SBIR Cycling Challenge
• Colorado Dept. of Transportation Bike & Pedestrian Challenge

Speaker’s Notes
Liberty Bell was a winner in the Smart Dublin Cycling Challenge in 2016/2017. It went on to win the Colorado Department of Transportation RoadX Bike and Ped Challenge in 2017. The platform can be customised to best record experiences according to local contexts and cultures.
**Speaker’s Notes**

This is a sample record logged on the Liberty Bell platform.

Issues encountered during the cycling experience are mapped and timestamped automatically when the bell is rung and can subsequently be categorised across a number of parameters, as well as being described in the participant’s own words.

The categorisation of the issues can be customised according to what a city is looking to record - every city is different, there is no ‘copy and paste’ solution for all. For example, bears are sometimes sighted on the outskirts of cities in Colorado - this category won’t be required in Dublin!
No city is perfect...

- Open data - transparency builds trust
- Trust builds citizen engagement
- Data for what? Data for Impact

**Speaker’s Notes**

No city is perfect so there is no need to hide data. Open data provides researchers with more data sets, allowing more in-depth research. Putting more data out there will allow for more evidence-based policies.

Open data also builds trust - an essential component for any city in relation to citizen engagement. By encouraging citizens to participate, it creates greater awareness of the issues faced. Working with more citizens and more diverse citizens will result in richer and more useful data.
Liberty Bell: Understand active mobility from the perspective of the person cycling.

http://www.libertybell.ie