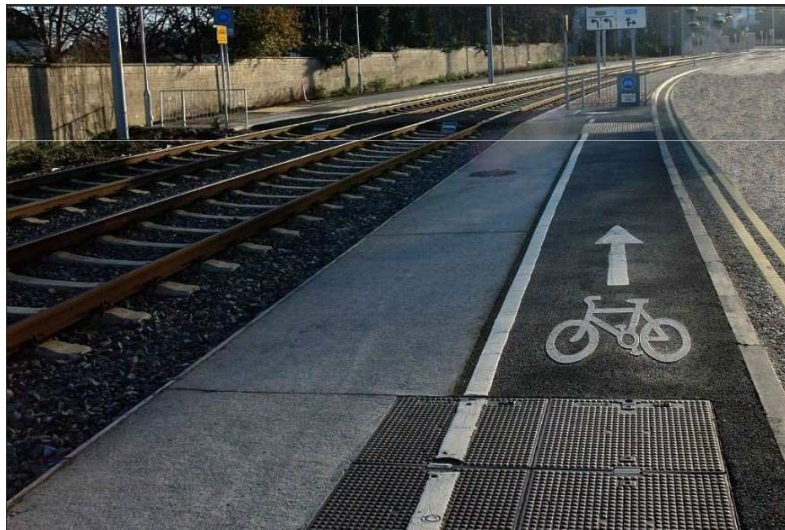# The impact of TBI

how technology helps

The Accident

- Sandyford LUAS Cycle Lane Crossing
- 16th Sept 2011 (<15 months)

Immediate Impact

- Glasgow Coma Scale 8/15 (severe) SVUH ICU (4 at scene)
- Injuries from impact Luas
  - Left side fractured ribs (x6)
  - Left side punctured lung
  - Left side pulmonary contusion
  - Left side hemopneumothorax
- Injuries from impact with ground
  - Bifrontal contusion
  - Right frontal subarachnoid bleed
  - Left side exit foramina, swelling with obstruction and stretched nerve

- Incubated twice (including 1st night, incl. being worked on for 5 hours)
- 12 days in ICU, 5 weeks on Observation Ward
- 15 days Post Traumatic Amnesia
- Left side paralysis
- Neuro Changes (still resolving)
  - Pre accident calm, considered, quiet
  - Post accident giddy, extrovert, self centred, get flustered easily, changes in film and musical tastes
  - Short term and working memory loss, recollection of life events
  - Organisation skills
  - Concentration and drive
  - Ability to deal with stress & noise & general pace of every day life
  - Ability to keep up with fast paced conversations
  - Ability to manage a crowded, noisy environment
  - Role as a parent & husband
  - Social skills

Challenges as result of Frontal Lobe damage

- **Memory**
- **Planning**
  - have difficulty doing any task that requires multiple steps (e.g. planning a meal)
- **Organizing**
  - Reduced ability to sequence and organize. (naking pack lunches)

- **Immediate or working memory**
  - e.g. remembering a phone number long enough to dial it.
- **Short-term or recent memory**
  - processes information long enough for it to be used for a few minutes, hours or days such as appointments, birthdays
- **Long term or remote memory**
  - **Episodic memory** personal information and events in one's life
  - **Semantic memory** facts (the mantle is made up of peridotite)
  - **Procedural memory**-how to drive a car
  - **Prospective memory -** memory to do something in the future and involves planning e.g. remember an appointment or birthday.

Techniques for memory and organisation

- Being organized helps your memory
  - Use a smartphone at all times, which is sync to my computer
  - More organised than I was pre accident
- Write **everything** down. **LISTS**
  - In one place when its fresh
  - Write once, use often
  - Doesn't improve memory, but it will help get things done.
- Use Calendar Function on smartphone(I live in my calendar)
  - Input daily tasks with reminders (Chores ☹, when to put bins out etc.)
  - Chunk Activities (beginning and end point, smaller tasks)
  - Schedule appointments
  - Review and plan for activities and responsibilities (ensure rest periods included)
- Ask for email notes/txts rather than verbal communication
- Keep a "cheat sheet" of important information on smartphone such as an 'Important numbers' file
- Keep a journal to record your progress, your thoughts.

All in One Place

- Accessible everywhere (wherever I am, on smartphone when out & about, available to access on PC)
- Easy to use (otherwise it won't get done, is there pay off for the cognitive effort involved?)
- Information is secure (I lose **everything**, so not device centric) Use a Public Cloud Service to store, sync and access data