By 2030 eThekwini will be Africa's most caring and liveable city
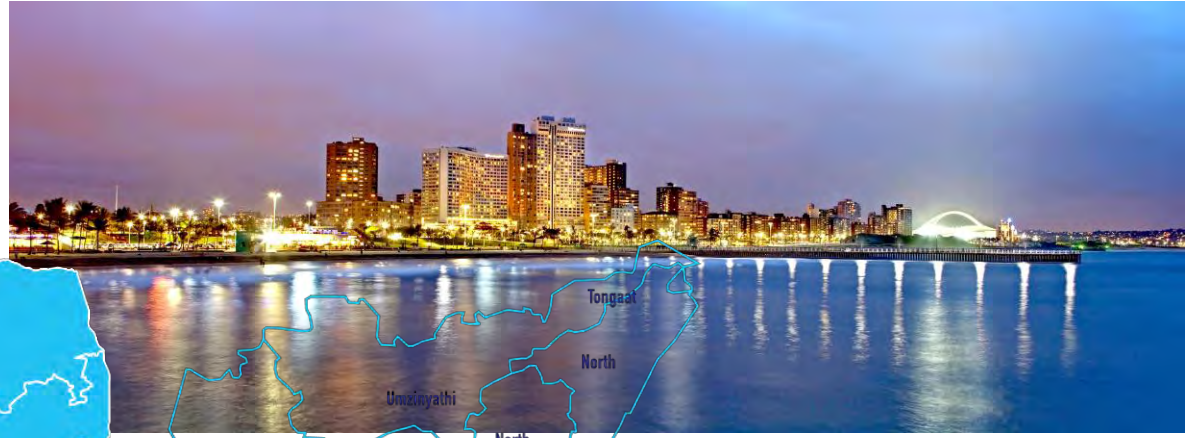
UK Prosperity Fund: Future Cities Programme: Durban -Project 1 : Improved Data Integration, Collection and Analysis to Facilitate Collaborative Informal Settlement Action in Durban

Sarah Watson, eThekwini Municipality
Case study: data management in the informal settlement upgrading programme in eThekwini
4 November 2021

Durban

- **Data (collection, analysis, integration and application**) is a major challenge in the eThekwini Municipality.
- This data challenge is reflected in **Durban's Resilience Strategy,** where it is highlighted as a key constraint in how the city makes strategic decisions within the context of informal settlements.

Existing data challenges within the informal settlements space compromise service delivery and strategic decision making:
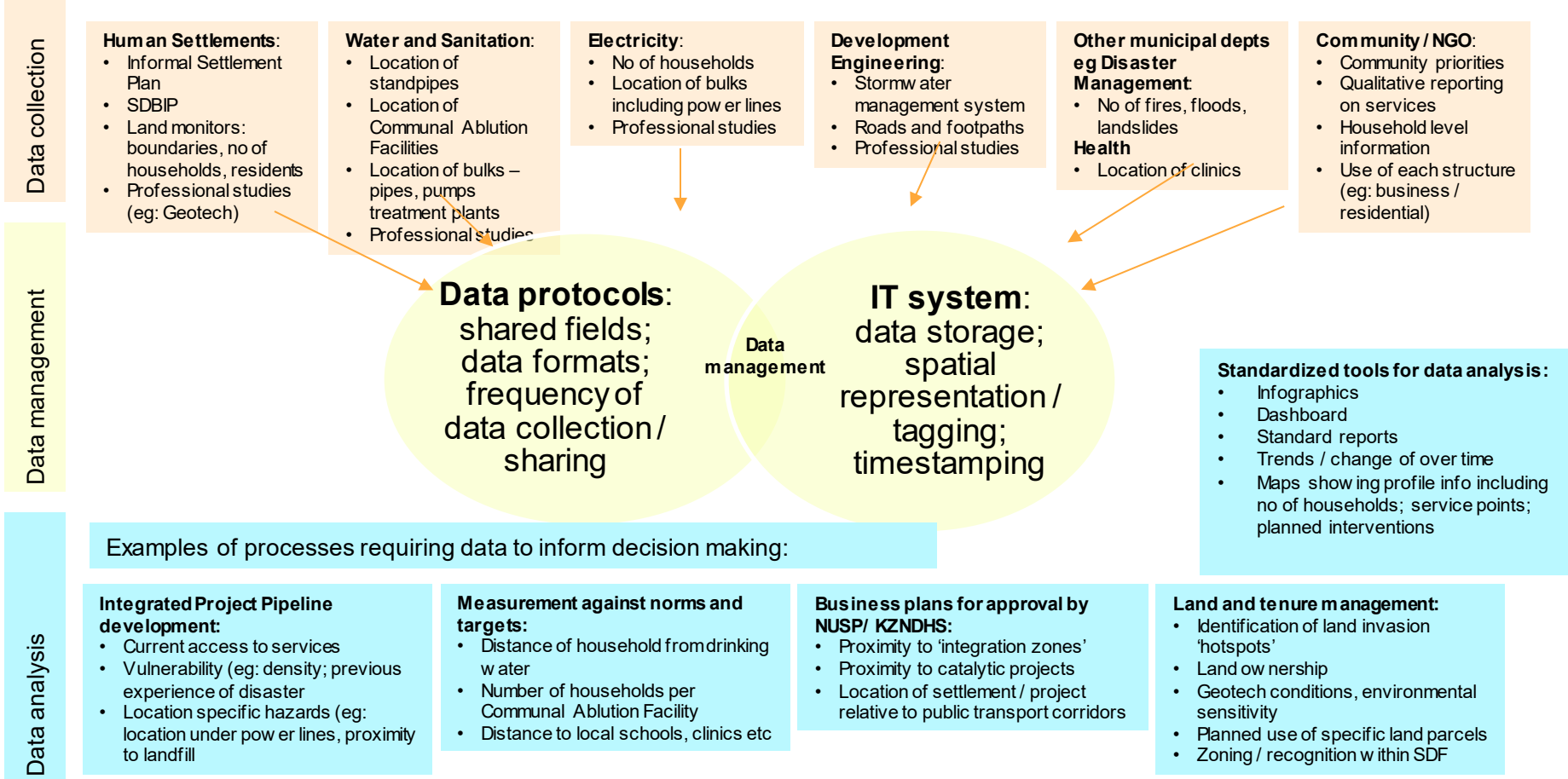- No standards for data management - data in various formats, stored in different locations, being shared via flash drive;
- Data are out of date;
- Duplicated or conflicting data systems and data sets;
- Capacity to generate, capture and analyse data (eg: 15 land monitors to observe 581 informal settlements)
- Difficulty in obtaining access to municipal data across departments and then integrating this (no data sharing protocols or systems in place);
- Inadequate incorporation of community-collected data; and
- Poor data management and analysis to inform strategic decision-making.

Improved data in the informal settlements space is critical in order to:
- Inform informal settlement incremental upgrading programmes and National level reporting requirements on informal settlements;
- Building partnerships;
- Improving social and economic interventions in informal settlements; and
- Accommodate (and where necessary, regulate) informal settlements within the urban planning context for Durban

Informal Settlements data ecosystem

Data collection

Human Settlements:
- Informal Settlement Plan
- SDBIP
- Land monitors: boundaries, no of households, residents
- Professional studies (eg: Geotech)

Water and Sanitation:
- Location of standpipes
- Location of Communal Ablution Facilities
- Location of bulks – pipes, pumps treatment plants
- Professional studies

Electricity:
- No of households
- Location of bulks including power lines
- Professional studies

Development Engineering:
- Stormwater management system
- Roads and footpaths
- Professional studies

Other municipal depts eg Disaster Management:
- No of fires, floods, landslides

Health
- Location of clinics

Community / NGO:
- Community priorities
- Qualitative reporting on services
- Household level information
- Use of each structure (eg: business / residential)

Data management

Data management

Data protocols: shared fields; data formats; frequency of data collection / sharing

IT system: data storage; spatial representation / tagging; timestamping

Standardized tools for data analysis:
- Infographics
- Dashboard
- Standard reports
- Trends / change of over time
- Maps showing profile info including no of households; service points; planned interventions

Data analysis

Examples of processes requiring data to inform decision making:

Integrated Project Pipeline development:
- Current access to services
- Vulnerability (eg: density; previous experience of disaster
- Location specific hazards (eg: location under power lines, proximity to landfill

Measurement against norms and targets:
- Distance of household from drinking water
- Number of households per Communal Ablution Facility
- Distance to local schools, clinics etc

Business plans for approval by NUSP/ KZNDHS:
- Proximity to 'integration zones'
- Proximity to catalytic projects
- Location of settlement / project relative to public transport corridors

Land and tenure management:
- Identification of land invasion 'hotspots'
- Land ownership
- Geotech conditions, environmental sensitivity
- Planned use of specific land parcels
- Zoning / recognition within SDF

- The aim of Project 1 is to develop an **Informal Settlement Information Management Solution** (ISIMS) that "**will facilitate improved collection, integration and analysis of city-level data**" with the ultimate objective to "utilise this information management solution as **a planning tool**

Objectives of the ISIMS project
- Develop **broad principles for data governance** in the city that can inform a city data strategy (Phase 1 - complete)

- Develop a **technical specification** for an informal settlement information management solution (Phase 2 – current)

- **Design and implement** the informal settlements information management solution (Phase 3)
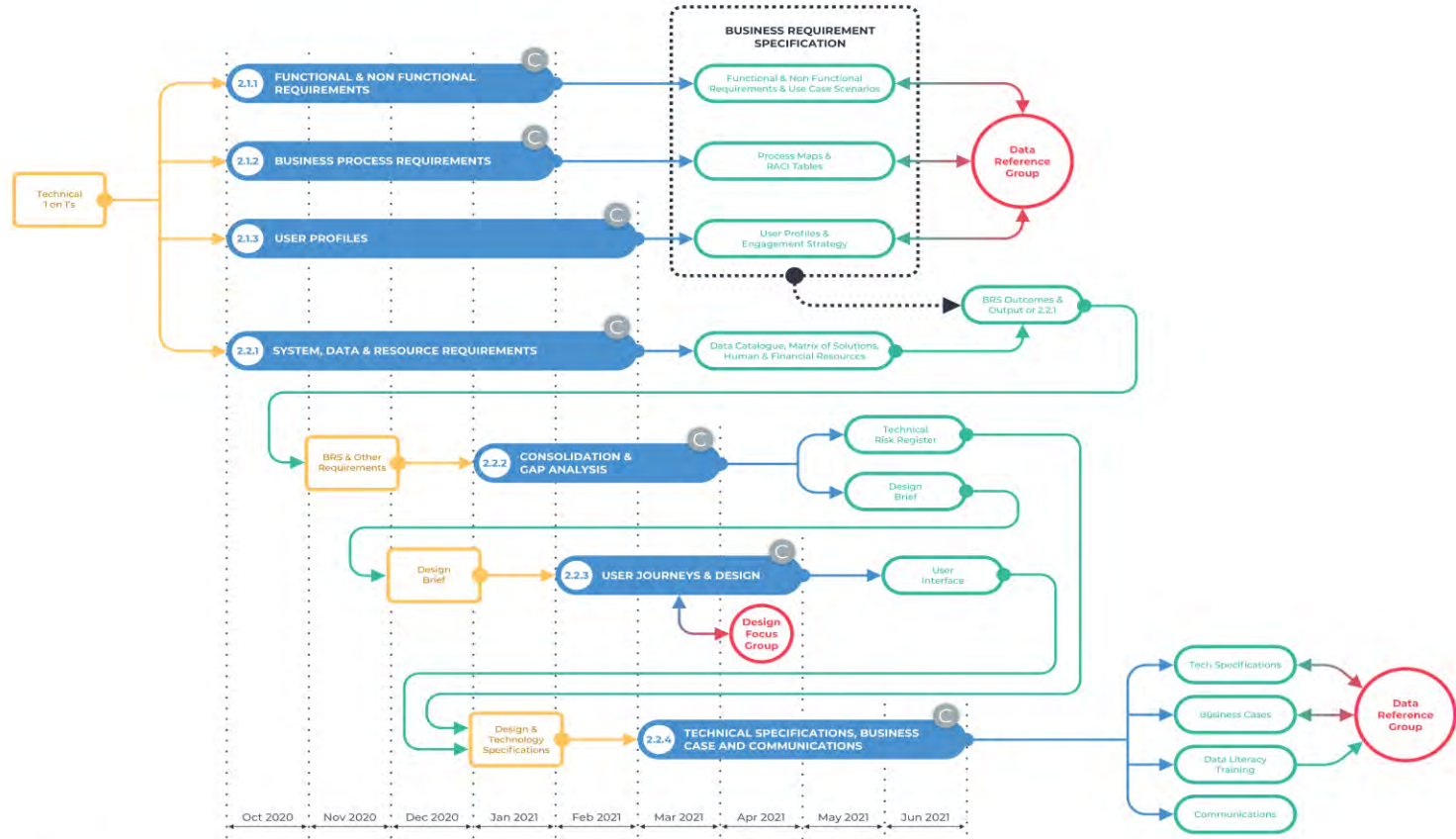
Challenges and Opportunities

OPPORTUNITIES
- **Eliminating inefficiencies and duplications**
- **Utilization of existing data sets**
- **Potential to expand system beyond informal settlements**

CHALLENGES
- **Broad range of internal and external stakeholders – beyond the BIG 5 service delivery line departments**
- **Data "ownership" and accountability**
- **High level of complexity – multiple user types, specific business requirements**

- Working across specialties (IT / informal settlement upgrading) requires a high level of unlearning and relearning

- Valuable insights can come from pilot projects / modular approach to solution development

- Set tolerance levels for risk, imperfect information, limited engagement
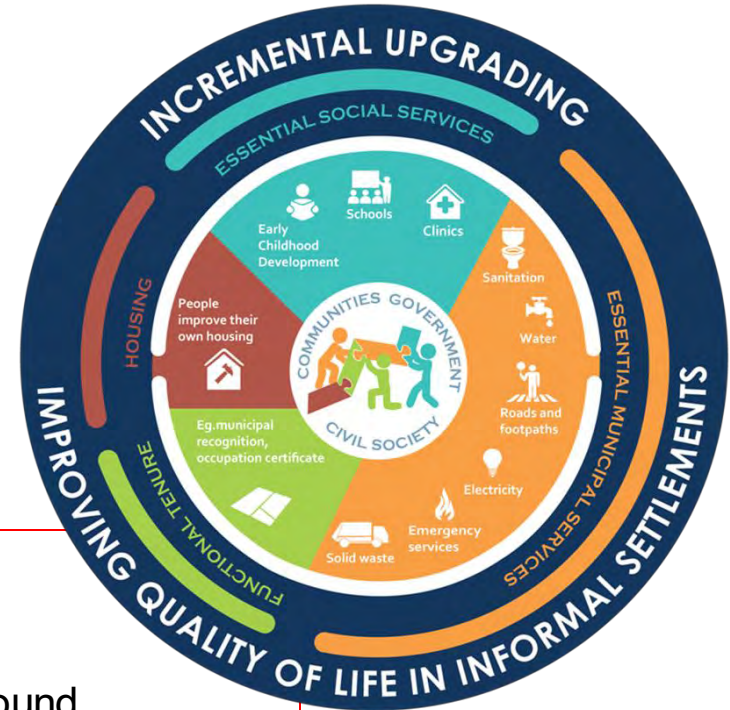
RISKS

- Resourcing and capacity for implementation

- Institutional inertia / change management (esp around organograms, job descriptions and Key Performance Areas)

- Policy issues - tolerance of informality, mandate for informal settlement action, paradigm shift in the face of expectations

Sarah Watson
Sarah.Watson@durban.gov.za

Siyabonga

Baie dankie

Thank you