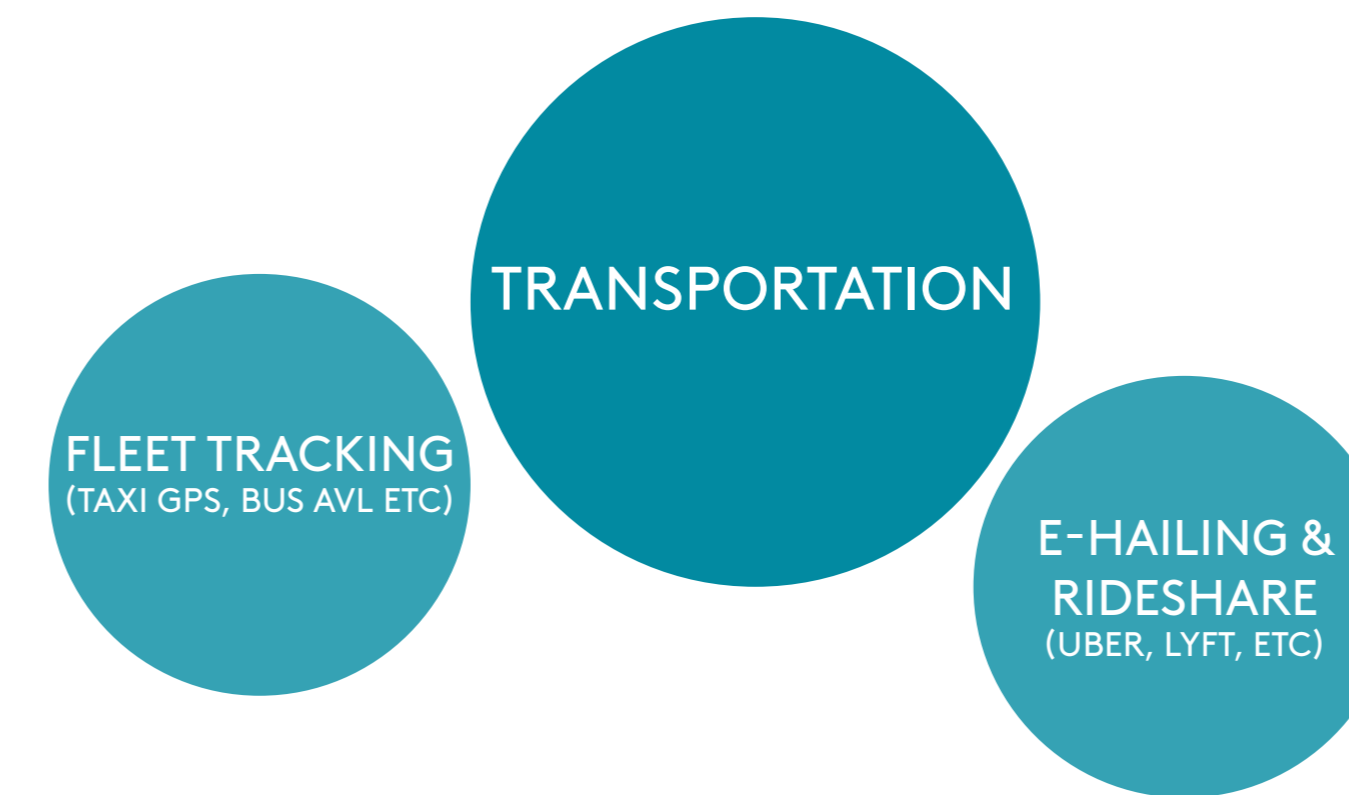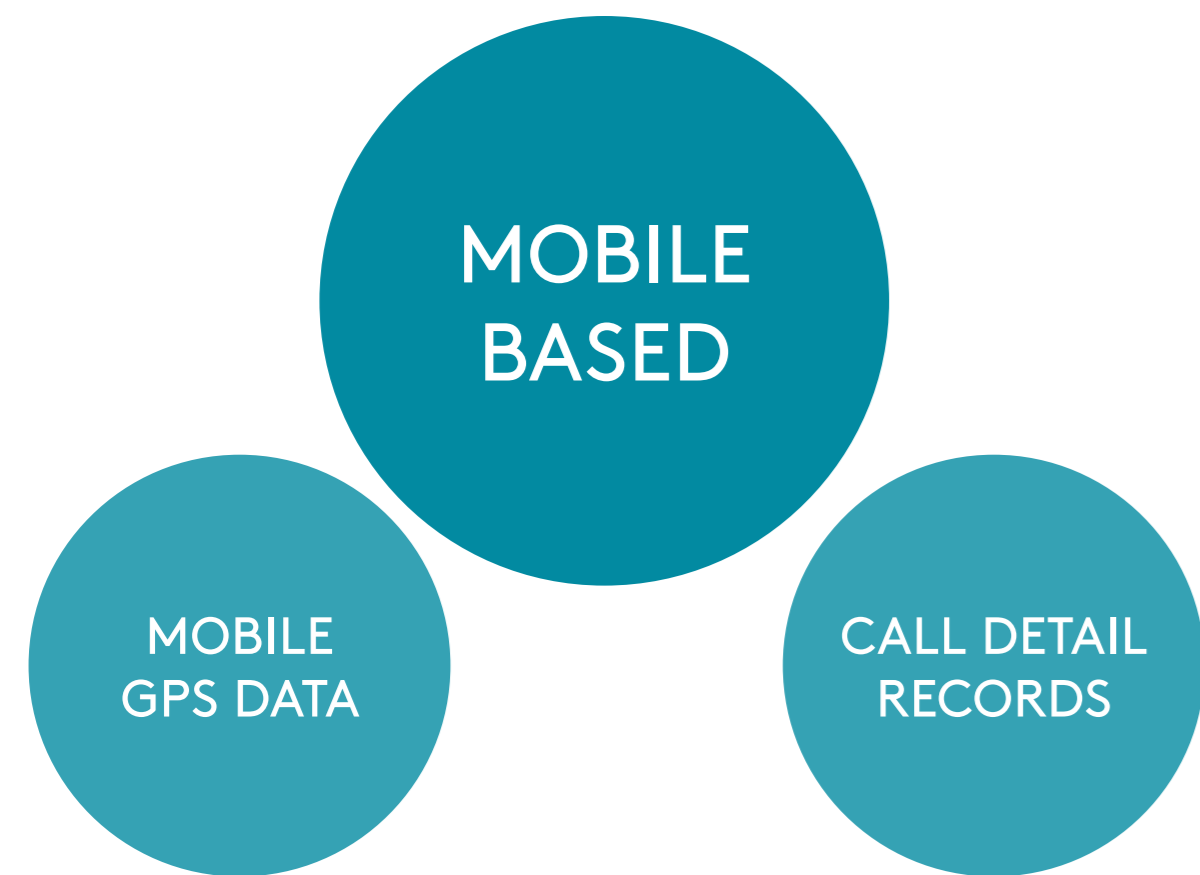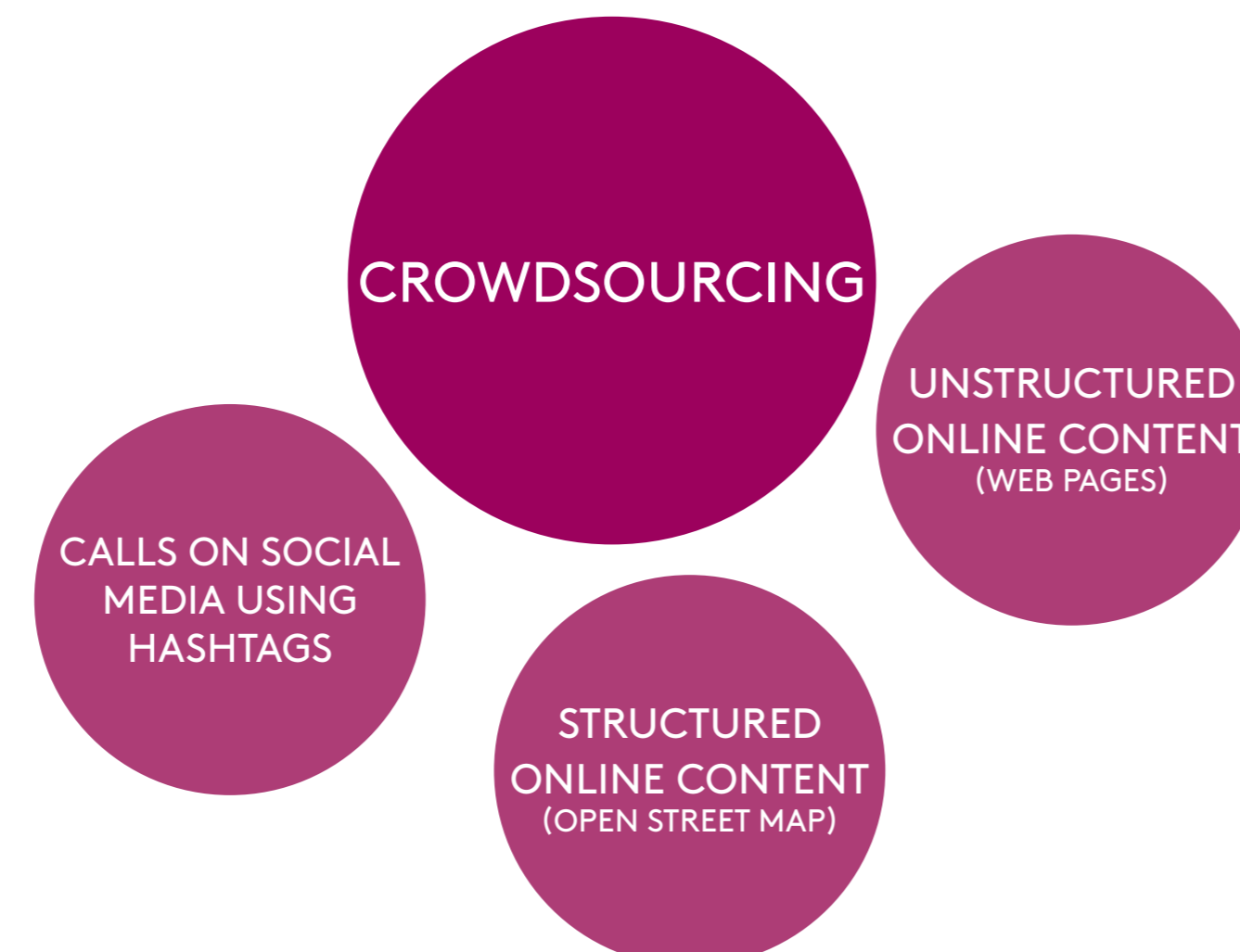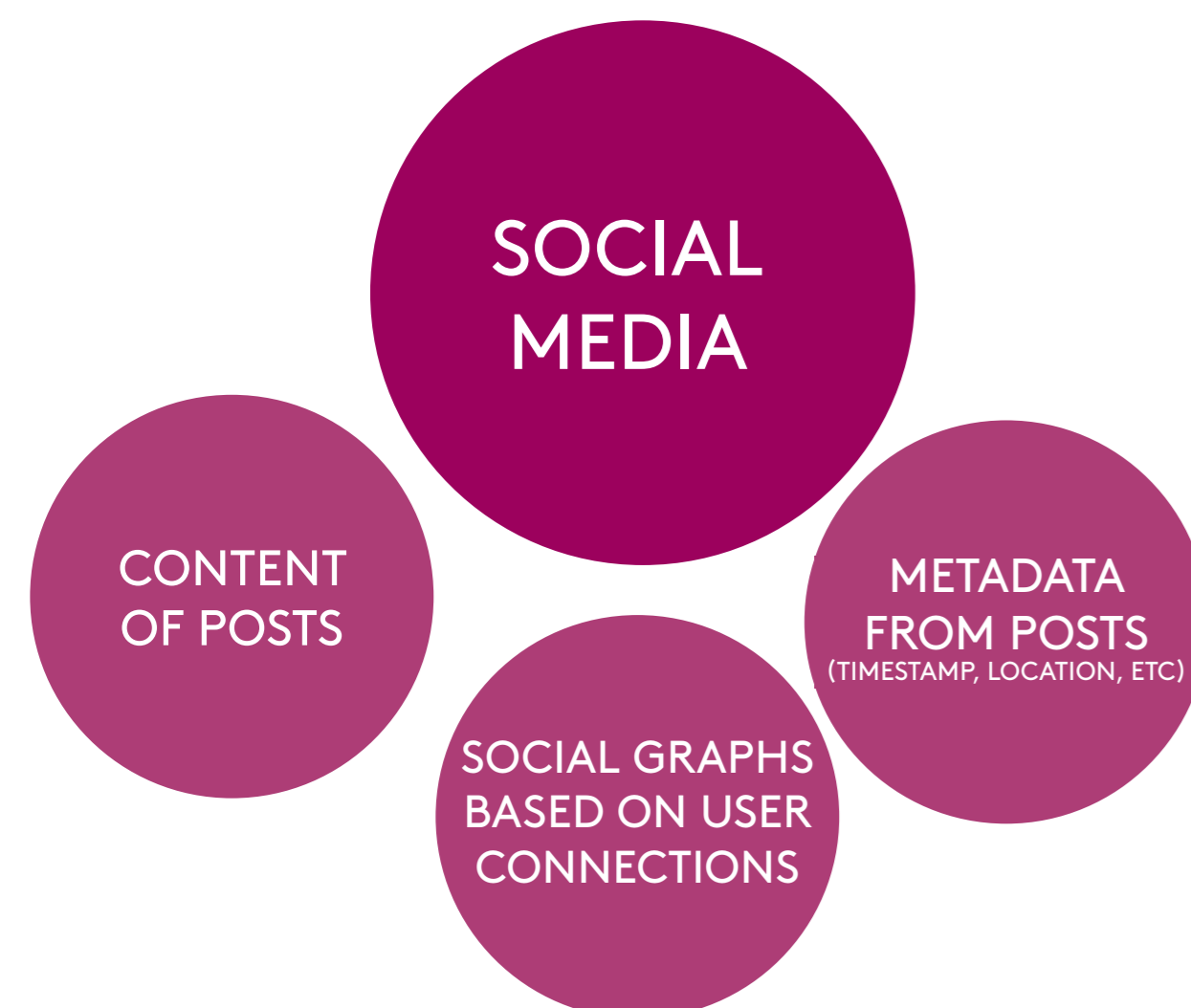# BIG DATA SOURCES

EXHAUST DATA

Passively collected transactional data from people's use of digital services like mobile phones, purchases, web searches, etc., and/or operational metrics; these services create networked sensors of human behaviour.

MOBILE BASED
- MOBILE GPS DATA
- CALL DETAIL RECORDS

ONLINE TRACES
- BROWSER COOKIES
- IP ADDRESSES
- SEARCH HISTORY

TRANSPORTATION
- FLEET TRACKING (TAXI GPS, BUS AVL ETC)
- E-HAILING & RIDESHARE (UBER, LYFT, ETC)

FINANCIAL
- ONLINE MARKET-PLACE DATA (AIRBNB ETC)
- CREDIT/DEBIT TRANSACTION
- FIDELITY PROGRAMS & MEMBERSHIP REWARDS CARDS
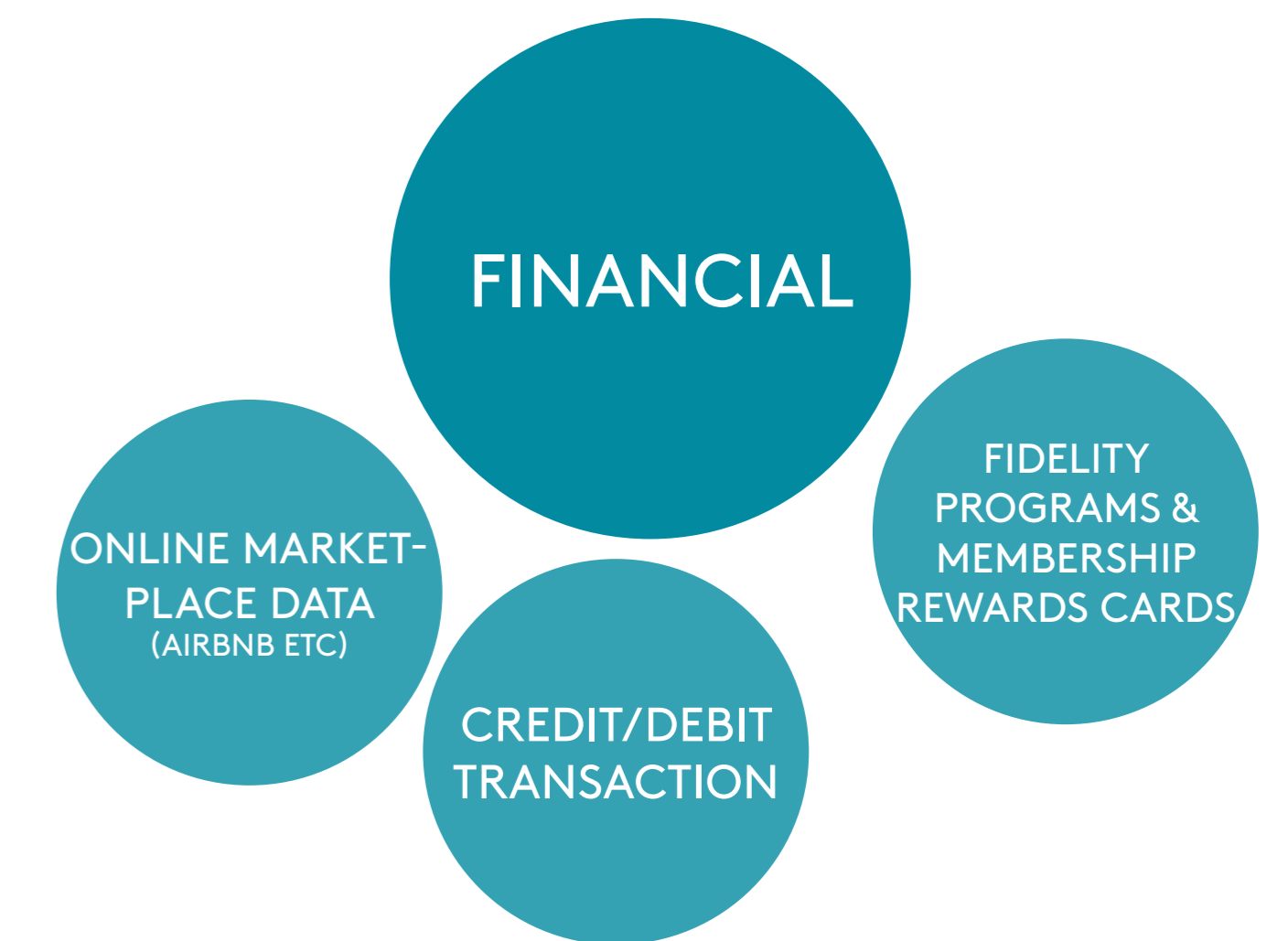
DIGITAL CONTENT

Web content such as news media and social media interactions (e.g. blogs, Twitter), news articles, e-commerce, job postings; this approach considers web usage and content as a sensor of human intent, sentiments, perceptions, and want.

SOCIAL MEDIA
- CONTENT OF POSTS
- SOCIAL GRAPHS BASED ON USER CONNECTIONS
- METADATA FROM POSTS (TIMESTAMP, LOCATION, ETC)

CROWDSOURCING
- CALLS ON SOCIAL MEDIA USING HASHTAGS
- STRUCTURED ONLINE CONTENT (OPEN STREET MAP)
- UNSTRUCTURED ONLINE CONTENT (WEB PAGES)

SENSING DATA

Satellite or infrared imagery of changing landscapes, traffic patterns, light emissions, urban development and topographic changes, etc; this approach focuses on remote and direct sensing of changes in human activity.

PHYSICAL
- SMART METERS
- USGS SEISMOMETERS
- SPEED/WEIGHT TRACKERS

REMOTE
- UNMANNED AERIAL VEHICLES (UVAS)
- SATELLITE IMAGERY (NASA, TRMM, LANDSAT)