

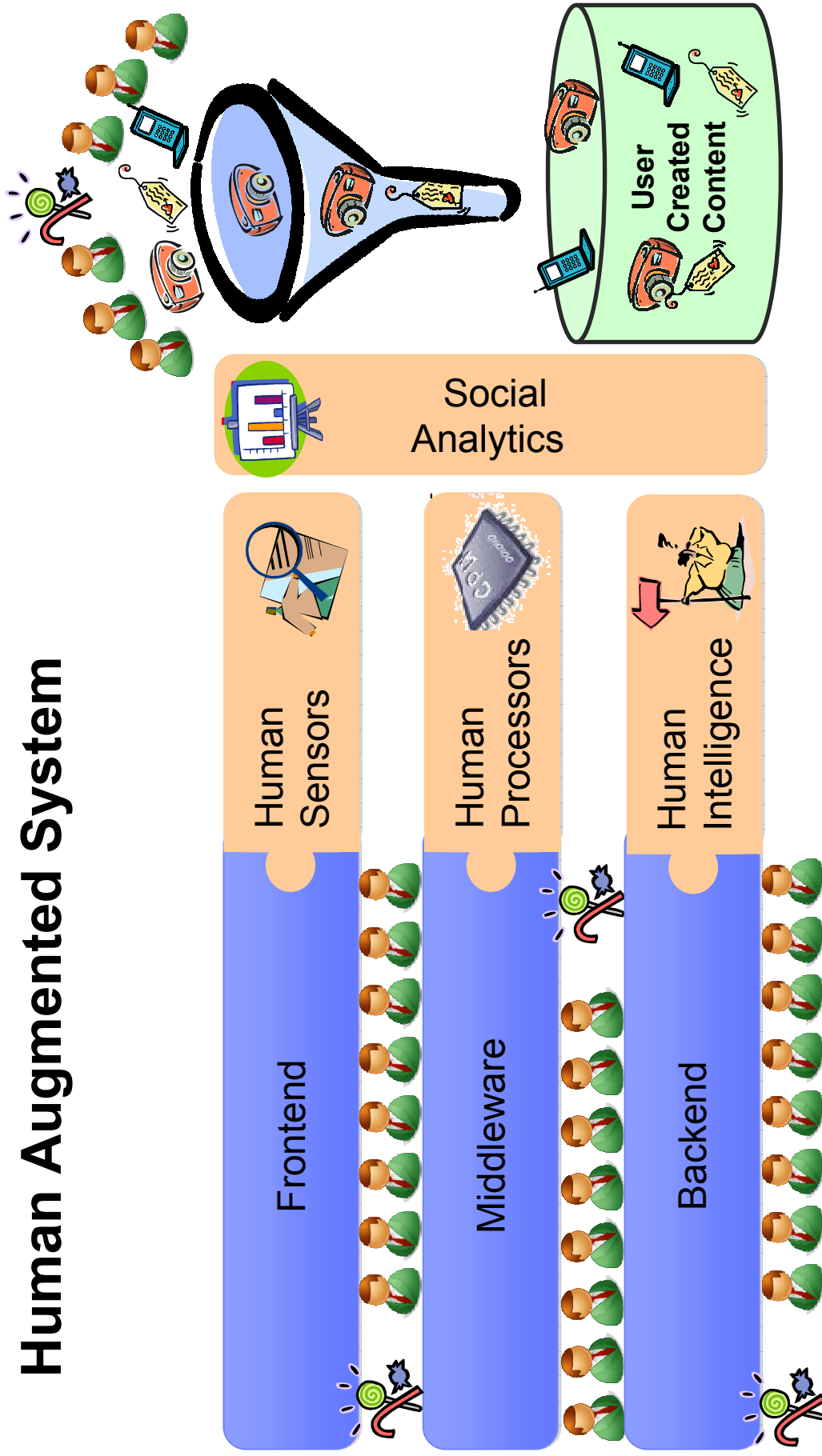
IBM Research

Future Internet Platform Smarter Cities

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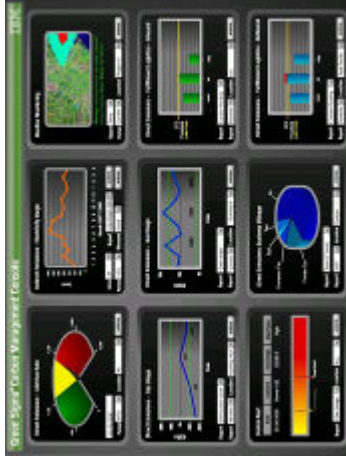
Human Augmented System



- Motivational apps on every level

Smarter City

- Today
 - Cities are managed by unconnected systems and do not have many sensors
 - Even when sensors are in place they can be very ineffective (e.g. cameras in London) because of lack of appropriate analytics
 - Citizens are rarely an integrated part of the city management process and participate in it only when electing the mayor
- With Human Augmented Systems
 - A large collection of motivational applications deployed throughout the city
 - Friend finders, location tagging, tourist services, location based social networks
 - Citizens become sensors
 - The output of those applications (locations based photos, videos, tags, voice clips, reports) is fed into the central system where IBM analytics processes it
 - When in doubt, the system sends the collected data to humans through games and other motivational applications for further augmentation
 - City Services have multiple dashboards to see the current state of the city
 - Citizens can help making sense of the dashboards through collaborative reasoning



Current vs. Future City Medical Assistance

Elderly person living alone
becomes incapacitated ...

Today	With Pulse of the City
Joe's medical history is not known to the local medical dispatcher. His history of heart problems is on his medic alert bracelet, but no ID.	Joe's medical history is known to the local medical dispatcher – either via integration or manually provided by Joe.
Joe loses consciousness and falls at home	same
No one is likely to notice for hours or days	System notices change in habits and informs relevant social network, or medical sensor provides warning.
Someone calls police to force entry	Person in vicinity with key is identified via social network, and they open the door.
Neighbor waits for help to arrive and/or receives general tips from the dispatcher on what to do. (Move to a safe position)	Closest available good samaritan with most appropriate level of training is sent to help, and is provided an appropriate level of information about Joe's condition in order to be able to assist. Exact location and instructions on how to arrive are provided.
Joe's children know nothing about what has happened.	Relevant people in Joe's social network are updated that he is being taken to a local hospital.