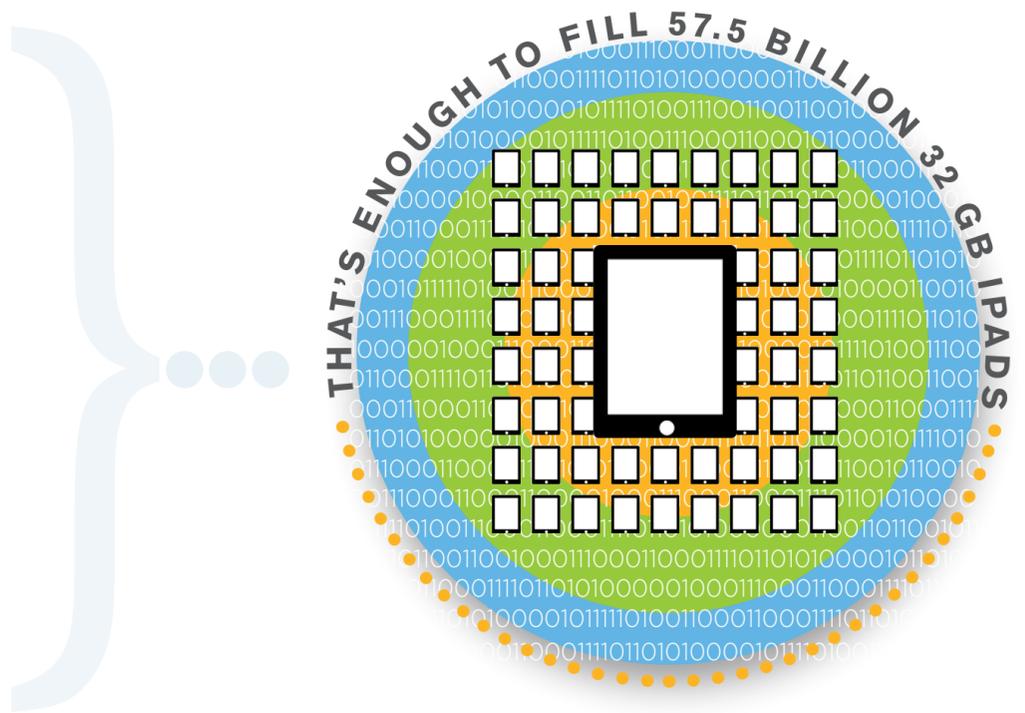




Yes, the data deluge is here – but even more significant is the explosion of highly related data. Data is pouring in from the internet of things (IoT), social ecosystems, and even natural and biological systems.

2.5 QUINTILLION
BYTES OF DATA
ARE CREATED
EVERY DAY

Relational databases are great at transactional data. But, contrary to their name, they don't actually handle "related" data very well because of their table-based nature.



IDC estimates that by 2020, transactions on the internet will reach 450 billion per day

As we reach a tipping point of highly related complex and dynamic data, it's not surprising that graph databases are gaining significant traction – because they focus on relationships. From detecting cyberattacks to using IoT sensor data to identify drug interactions, graph has become a powerhouse in detecting never-before-seen connections.



READY TO LOOK AT GRAPH ANALYTICS?

START HERE:

Once you've gone through these initial steps, you're ready to start planning your graph analytics journey.

If you need help moving forward you can learn more at:

www.cray.com/graph

- 1. CONFIRM YOUR ANALYTICS NEEDS MEET AT LEAST TWO OF THESE CIRCUMSTANCES.** (If not, consider extending your current approach.)

 - Your problems and queries have become too complex for your environment.
 - You care as much about the data relationships and patterns as the data items.
 - You are encountering "unrunnable" queries.
 - Your current data models and schemas will not support your queries.
 - You have lots of new and disparate data sources (IoT, web, natural) that are inherently unstructured.
- 2. CHOOSE A GRAPH METHOD THAT FITS YOUR TOP ANALYTICS NEEDS:**

 - Hypergraphs can connect any number of nodes. They work well for domains with mostly many-to-many relationships.
 - Triples or semantic graph databases use a subject-predicate-object data structure based on W3C standards to represent every known fact, such as "George likes steak." They work well for combining many varieties of data sources for analysis.
 - Property graphs allow any pair of nodes to be connected by an edge, and any node or edge to have a connected table. They perform well when you have some data that should be represented as linked to other data, but other data that doesn't need to be linked to anything else.
- 3. CONSIDER LONG-TERM USABILITY AND RETURN ON YOUR INVESTMENT:**

 - Talk to experts and other graph users for guidance.
 - Ensure your solution is designed to scale with your future needs.
 - Evaluate internal resource skills and align your strategy appropriately.