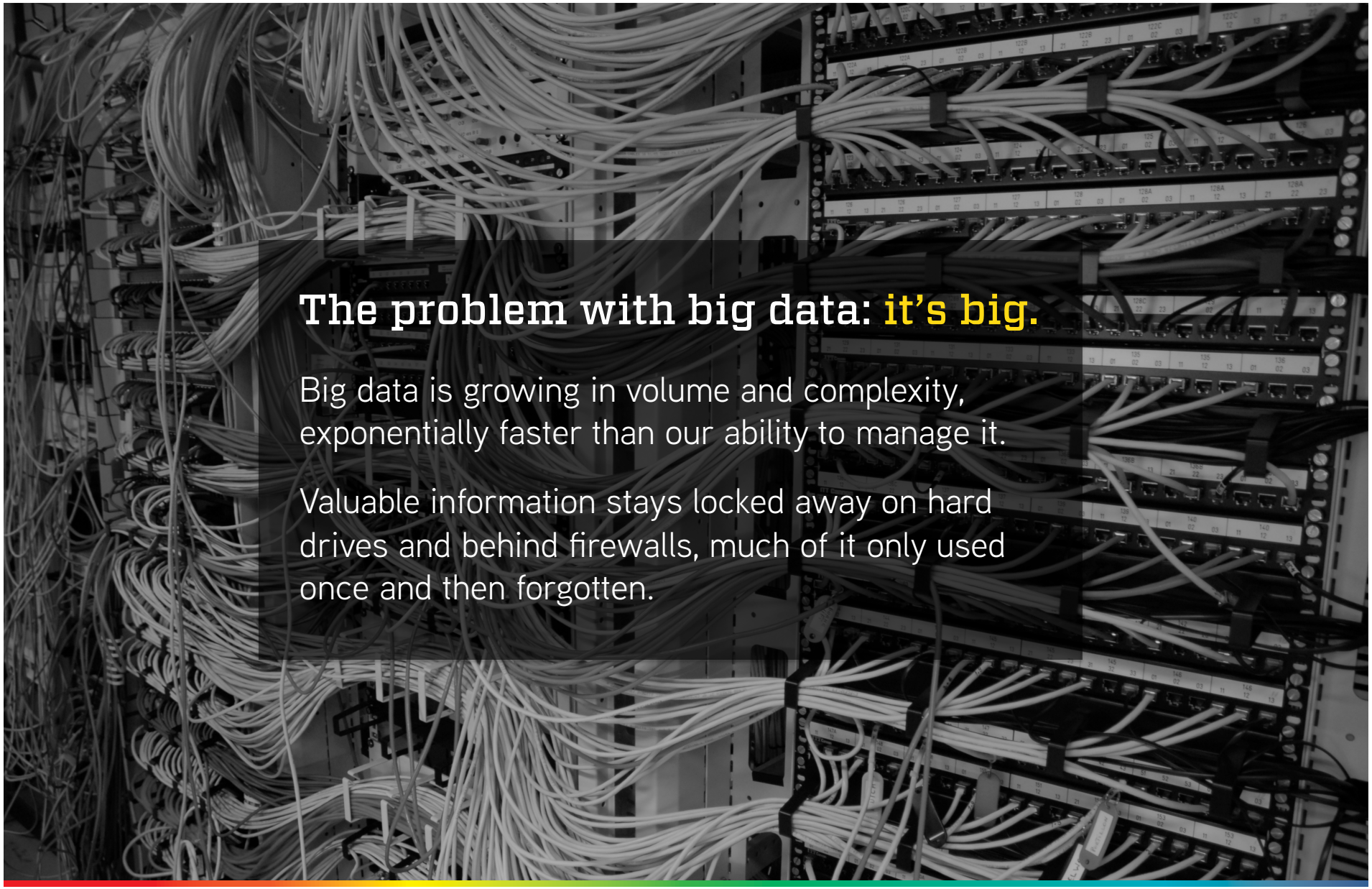
Bringing the Ocean into the Cloud

Timothy Kearns
GEBCO Science Day– Venice, Italy

October 7, 2013

OneOcean


The problem with big data: it's big.
Big data is growing in volume and complexity, exponentially faster than our ability to manage it.
Valuable information stays locked away on hard drives and behind firewalls, much of it only used once and then forgotten.

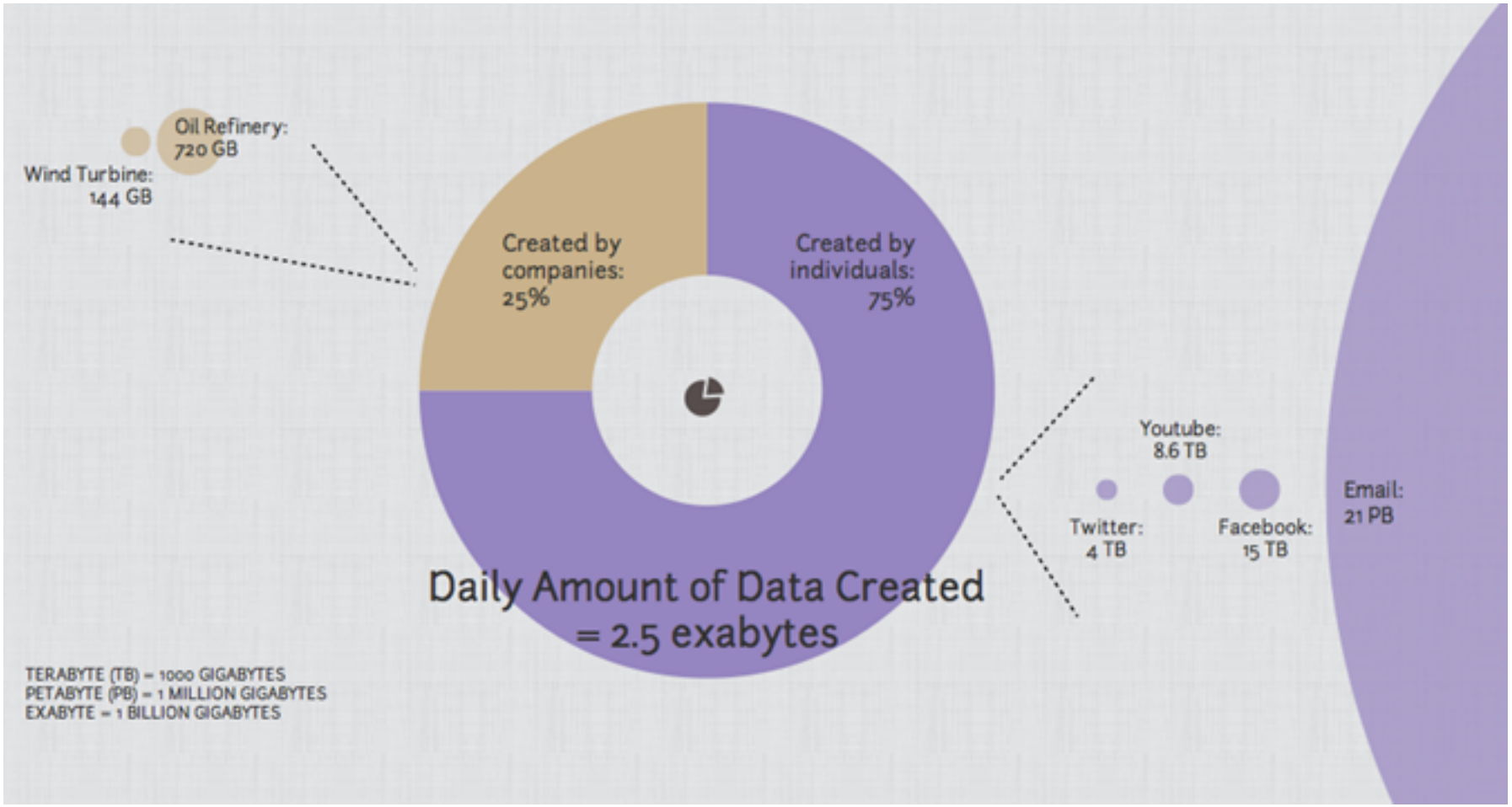
the

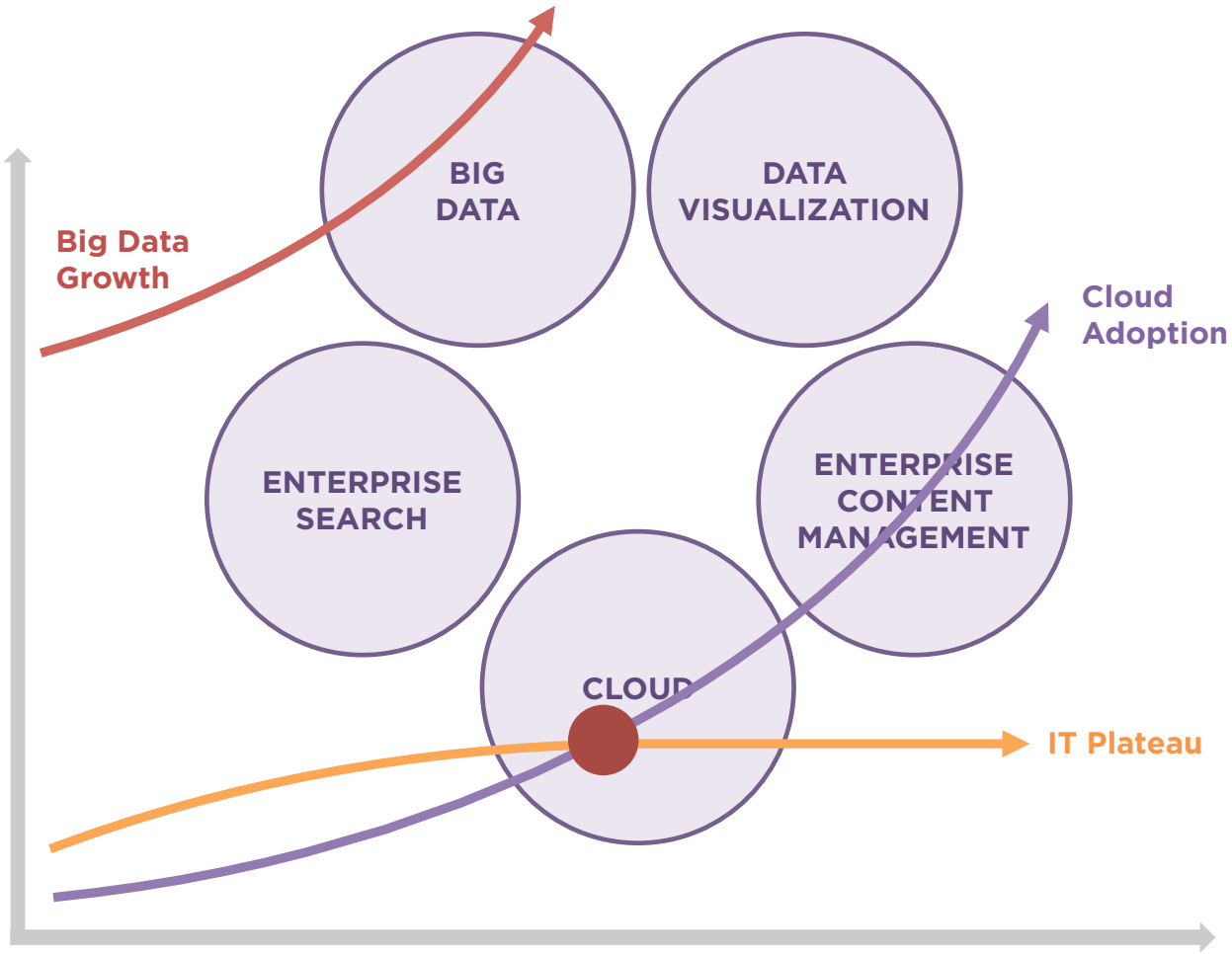
big data problem

is not just a

data problem

Current amount of data created daily




Big Data Growth
BIG DATA
DATA VISUALIZATION
Cloud Adoption
ENTERPRISE SEARCH
ENTERPRISE CONTENT MANAGEMENT
CLOUD
IT Plateau

99.5%

of newly-created data is

never analyzed

IDC + MIT Technology Review, June 2013

© Getty Images

Software has attempted to evolve…

single beam

3D

mid-water

combined grids

soundings

shrinking resources

models

it is impossible to keep up.

CUBE

interpolation

web services

fieldsheets / fairsheets

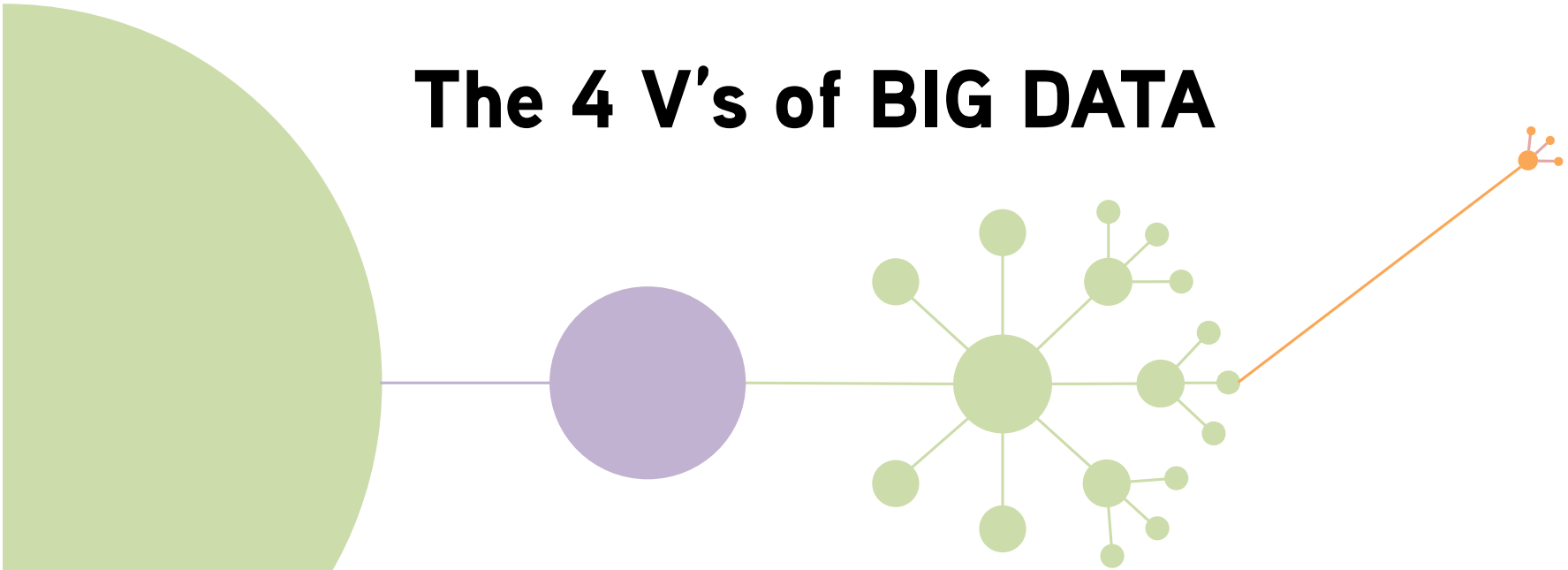
ray tracing

sidescan

backscatter

sonar

The 4 V's of BIG DATA



VOLUME

hydrographic
archives
analog conversion

VERACITY

legacy data
crowd sourced
oversampling
data processing

VARIETY

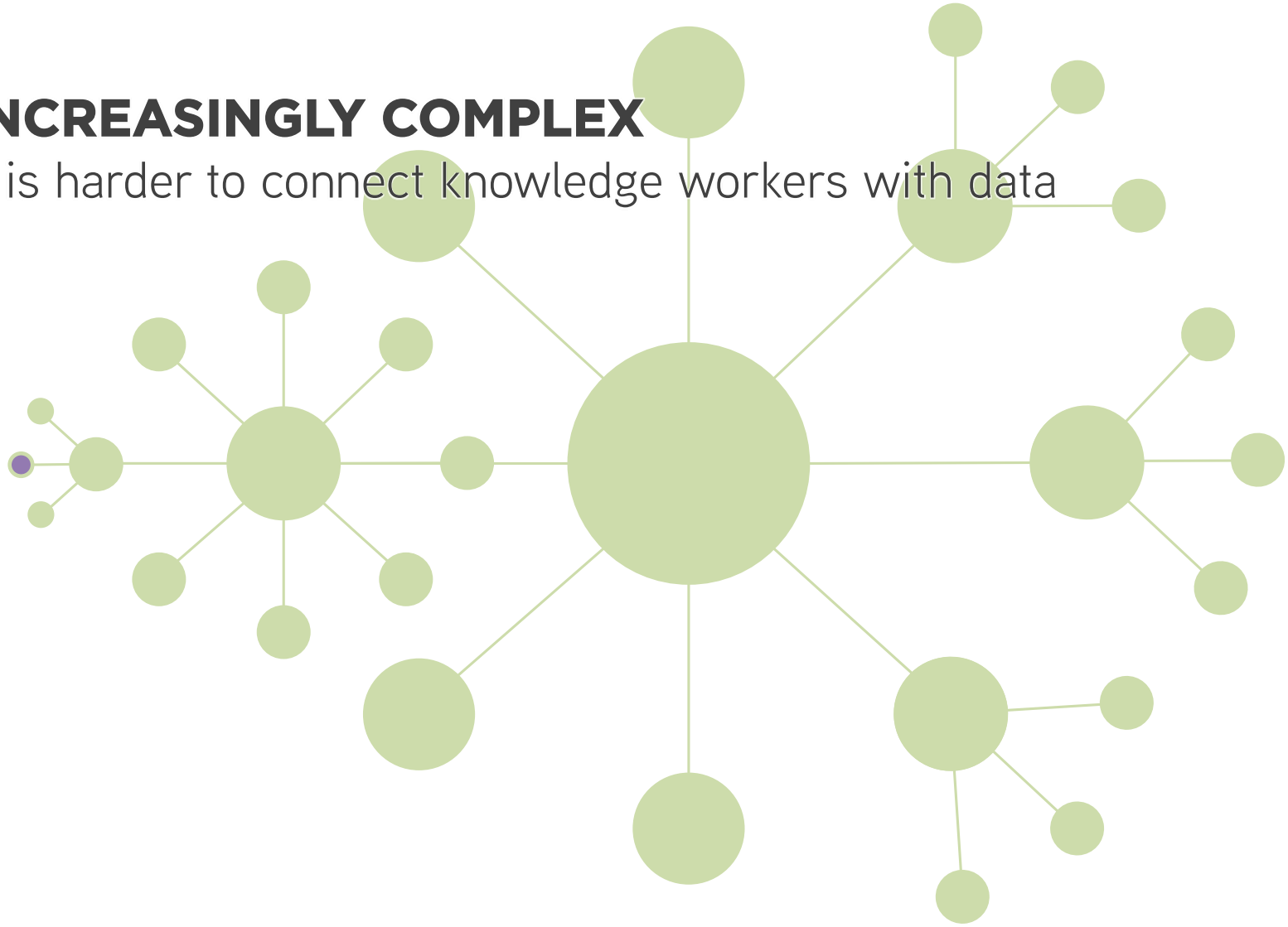
buoy sensors
gliders
satellite
ship based

VELOCITY

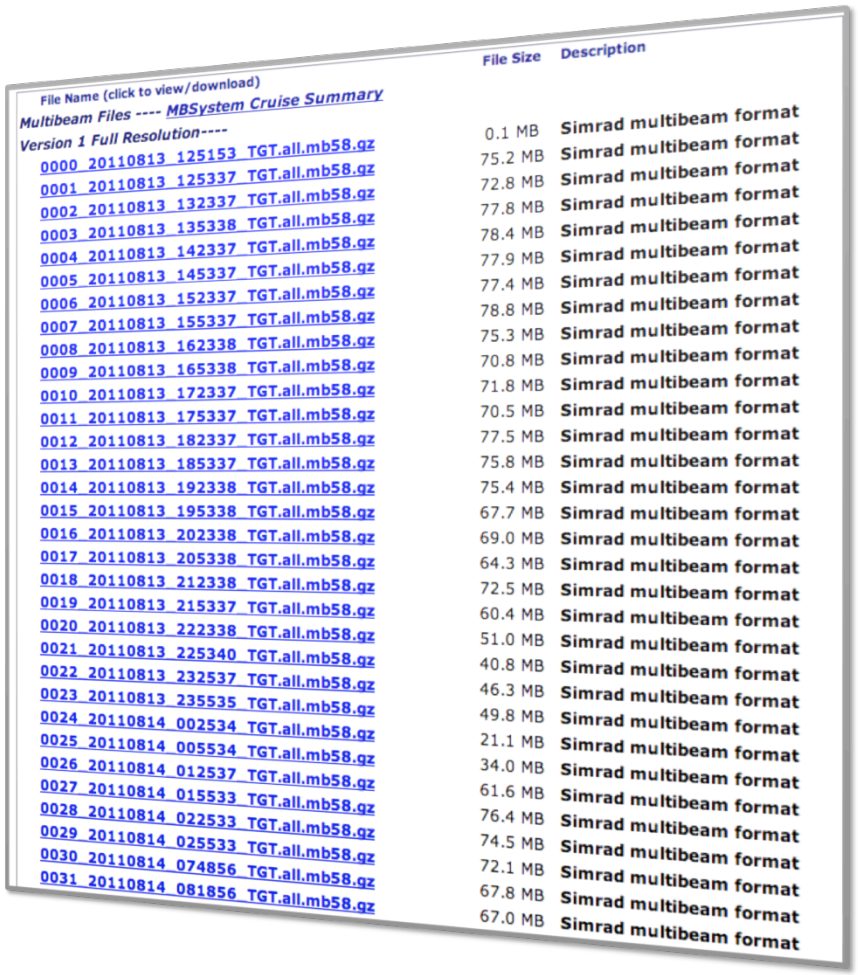
multi-(beam/ping/
channel)
streaming data
ROV video
mid-water

INCREASINGLY COMPLEX

it is harder to connect knowledge workers with data



Legacy approaches aren't making it easy.



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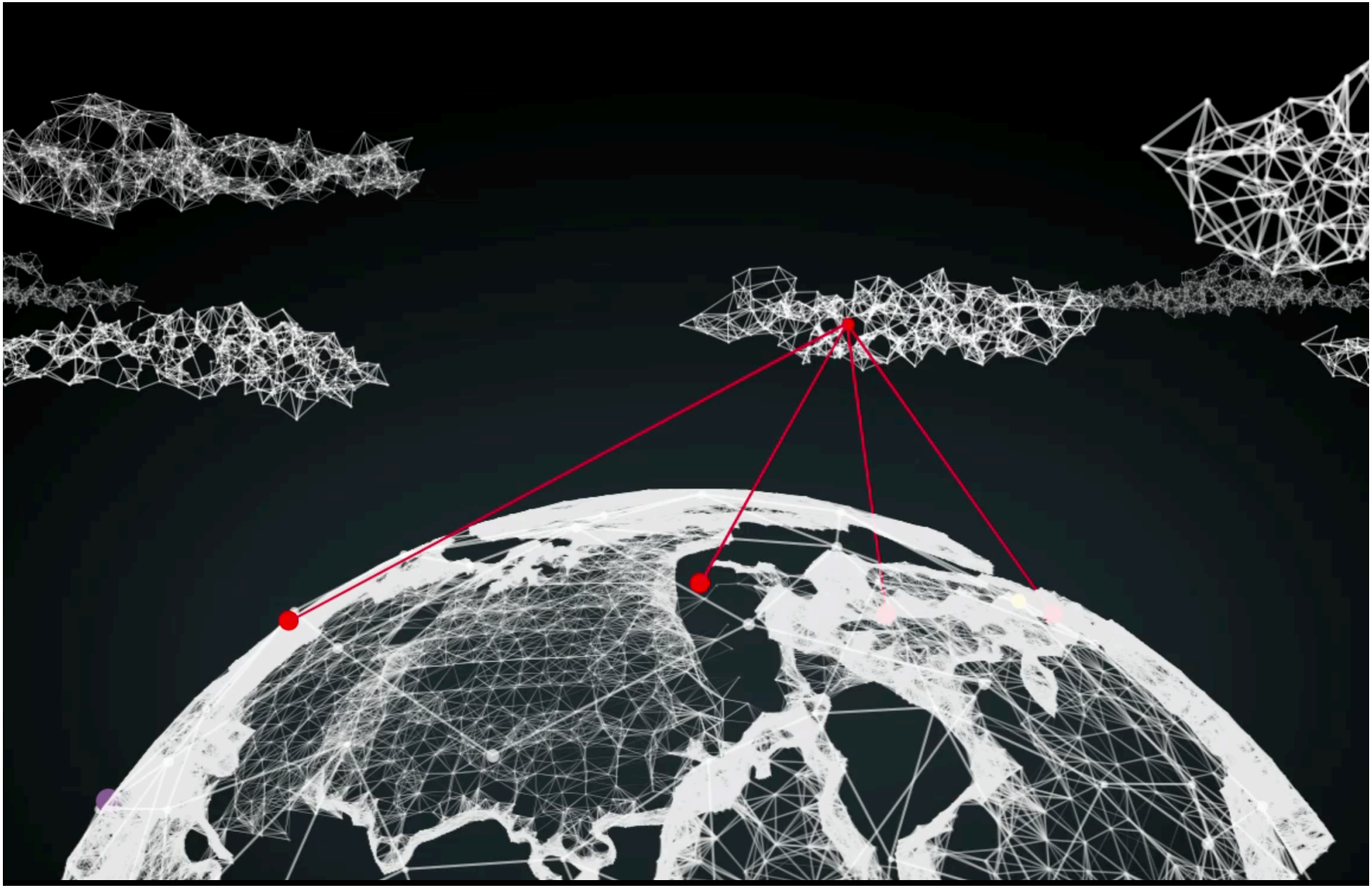
http://www.csc.noaa.gov/ArcGISPUB/rest/services/USInteragencyElevation_Inventory/USInteragencyElevationInventory/MapServer/5

http://www.csc.noaa.gov/arcgis/rest/services/MMC/MultipurposeMarineCadastre/MapServer

http://www.marine-geo.org/services/wms?request=GetCapabilities&service=WMS&version=1.1.1

http://www.usap-data.org/services/ogc?service=wfs&version=1.0.0&request=getcapabilities



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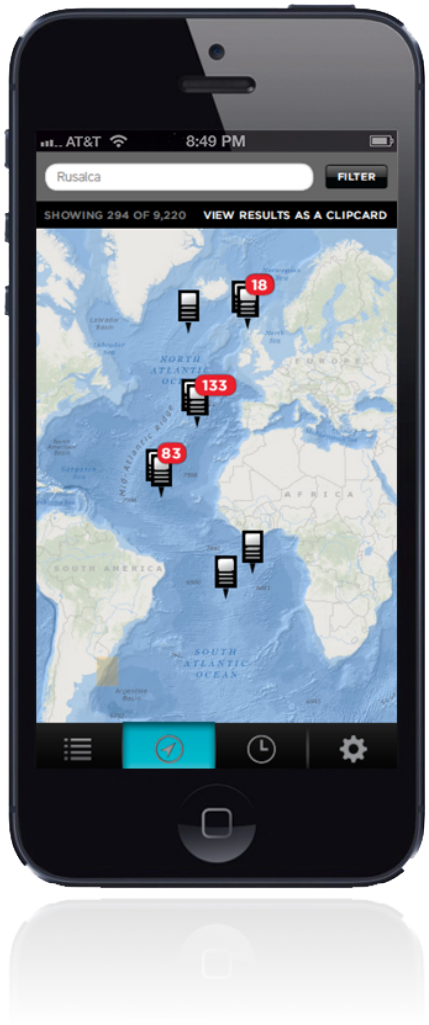
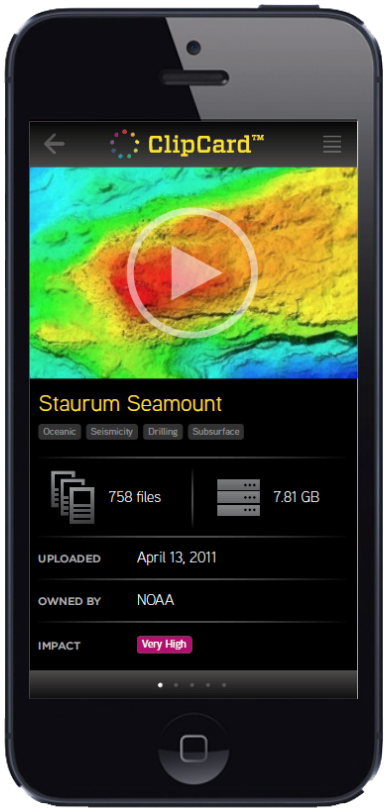


OneOcean



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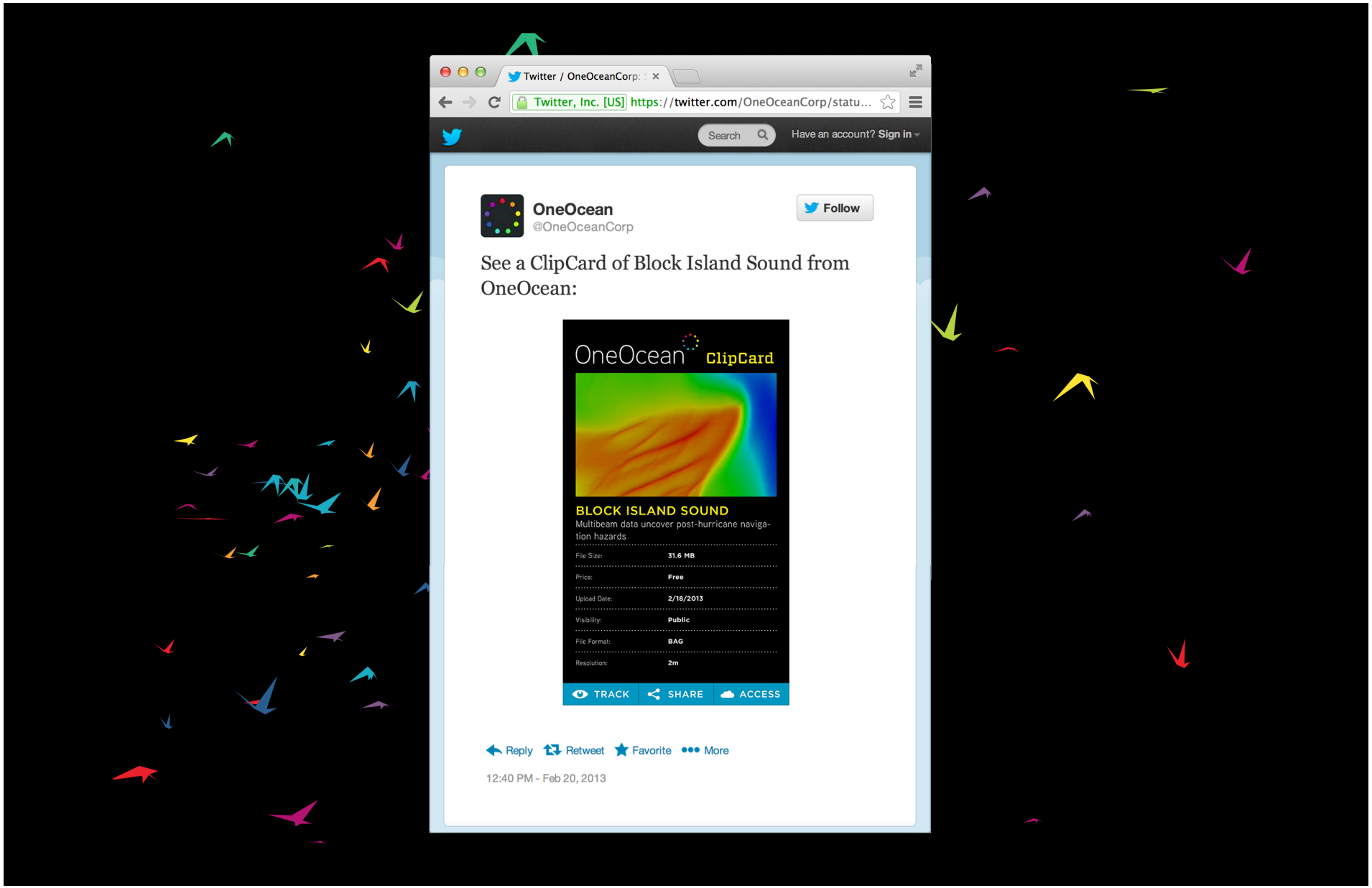
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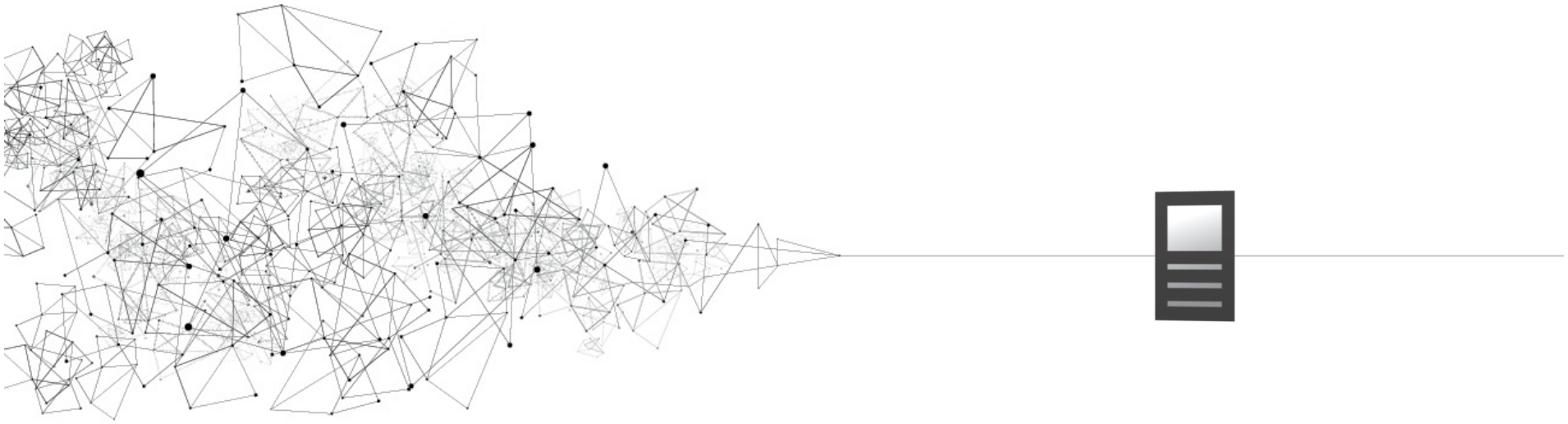

ClipCard is linked to your source data,
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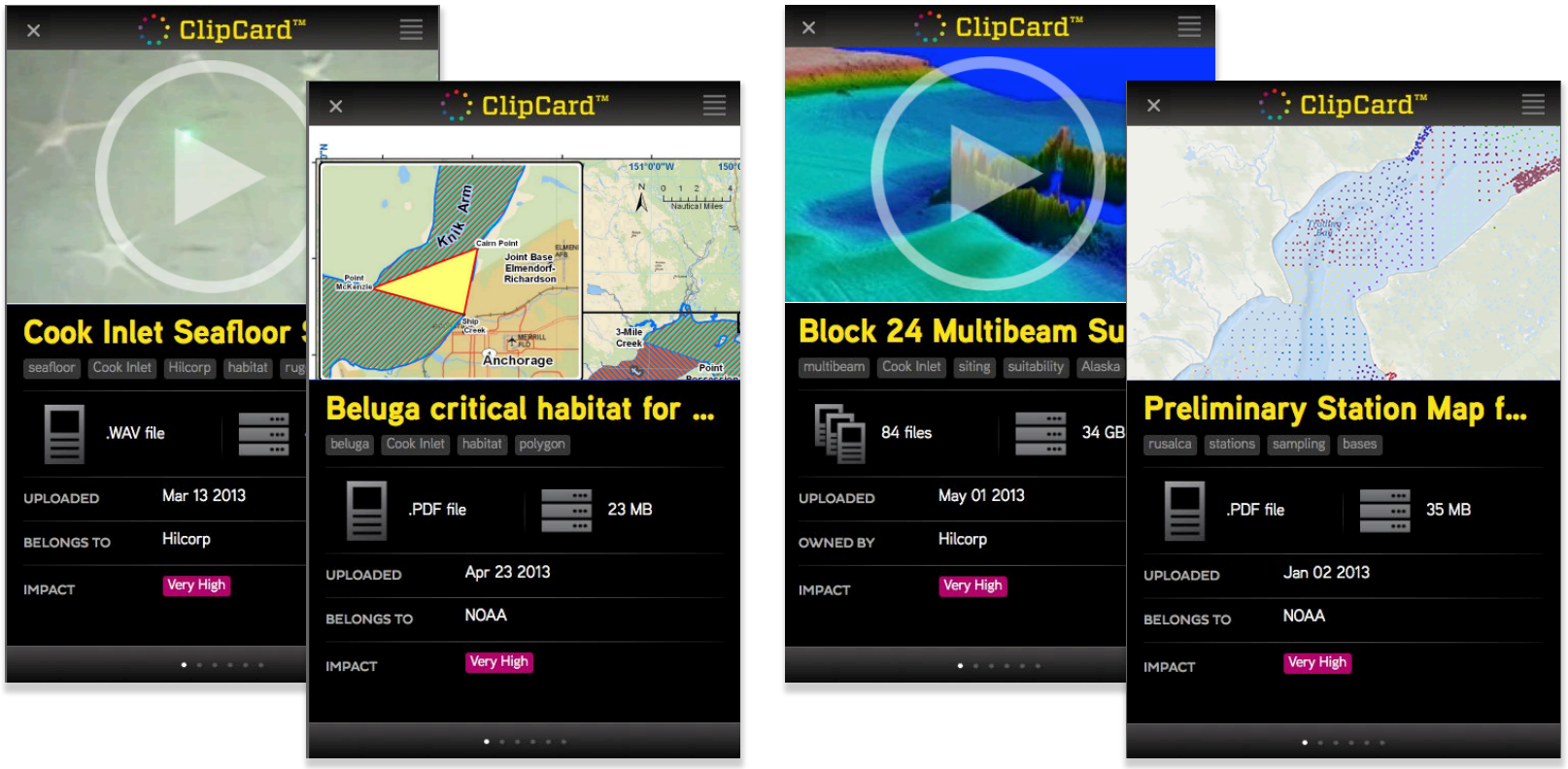

ClipCard is a powerful gateway to ocean data.

Thank you.
(and so will your data)

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