

Hardware and Software

Engineered to Work Together

ORACLE®

Oracle & The **Power of Place**

Peter Doolan

GVP Oracle Public Sector



The following is intended to outline our general product direction. It is intended for information purposes only, and may not be incorporated into any contract. It is not a commitment to deliver any material, code, or functionality, and should not be relied upon in making purchasing decisions. The development, release, and timing of any features or functionality described for Oracle's products remains at the sole discretion of Oracle.





Technology Is A Resource
LIBERATING Mechanism

It Can Make The Once **SCARCE** The Now
ABUNDANT













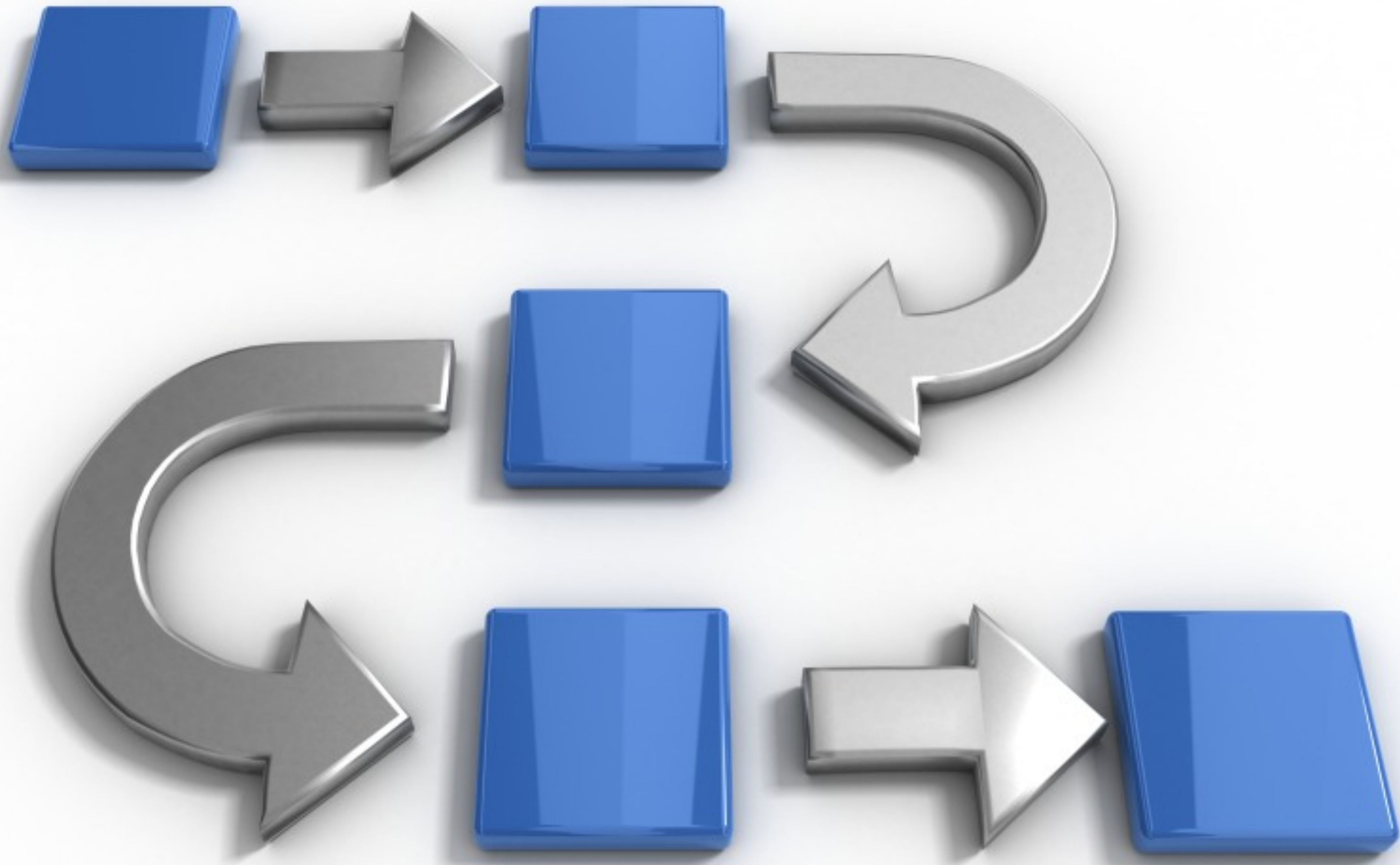




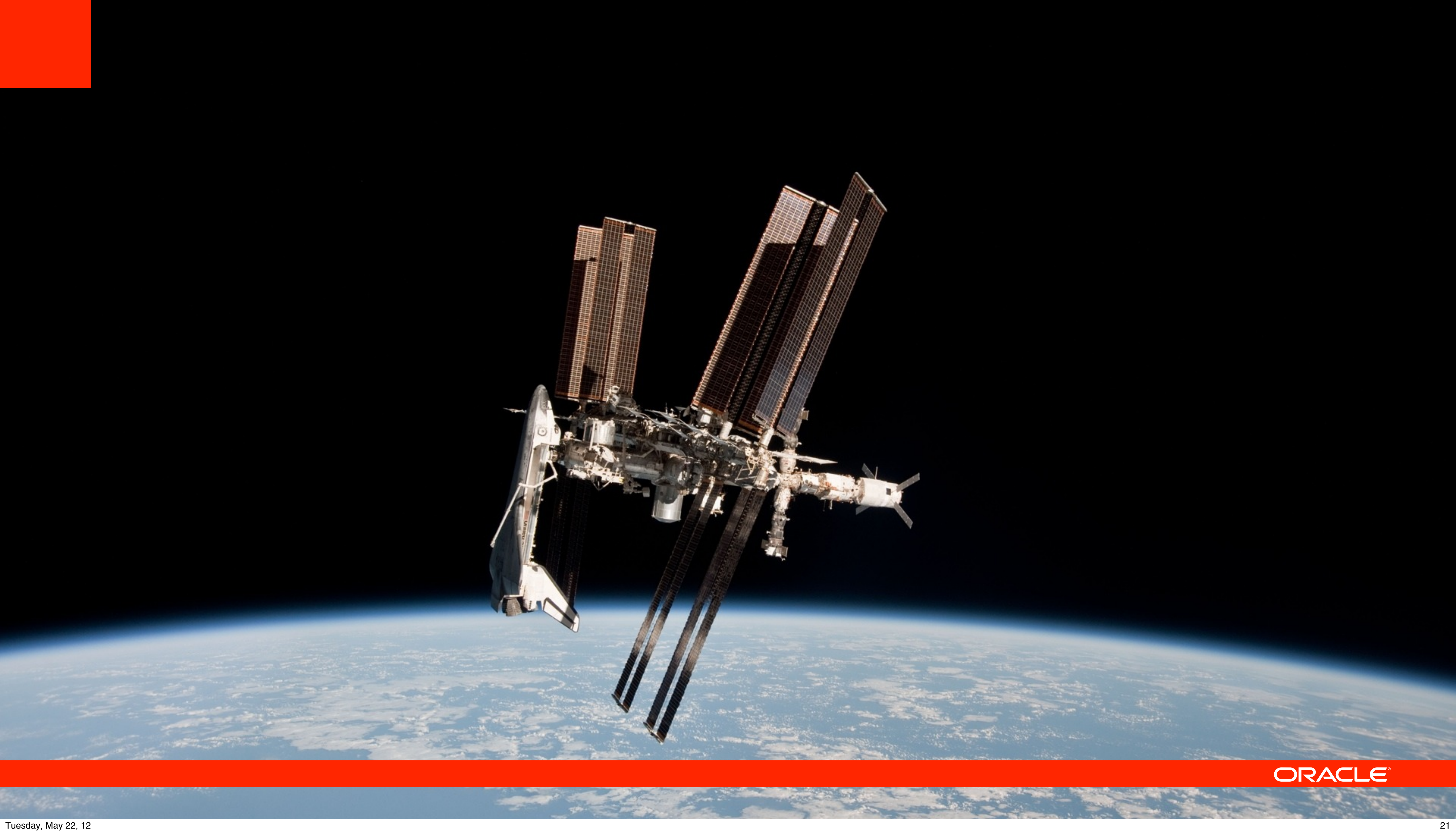








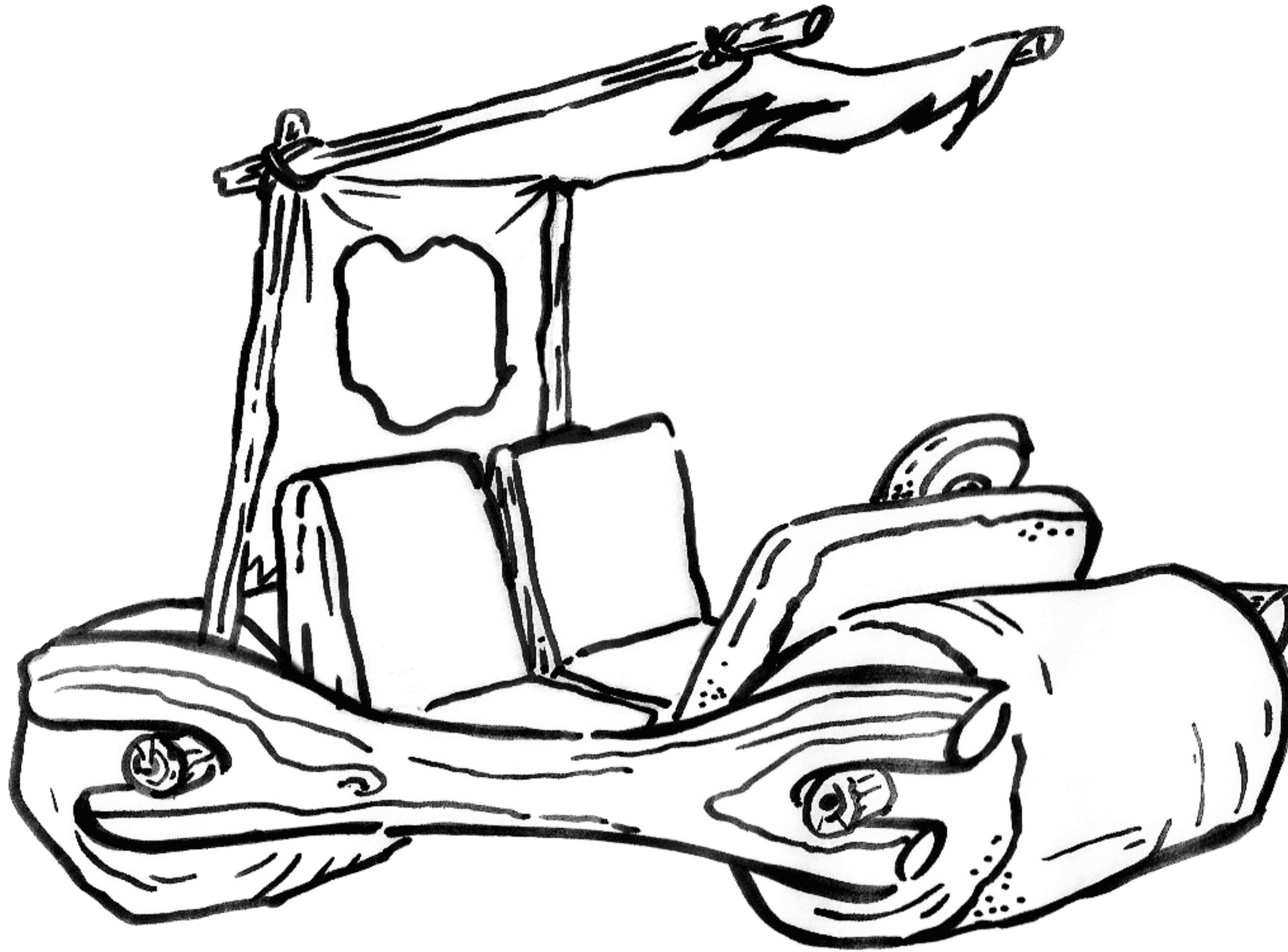




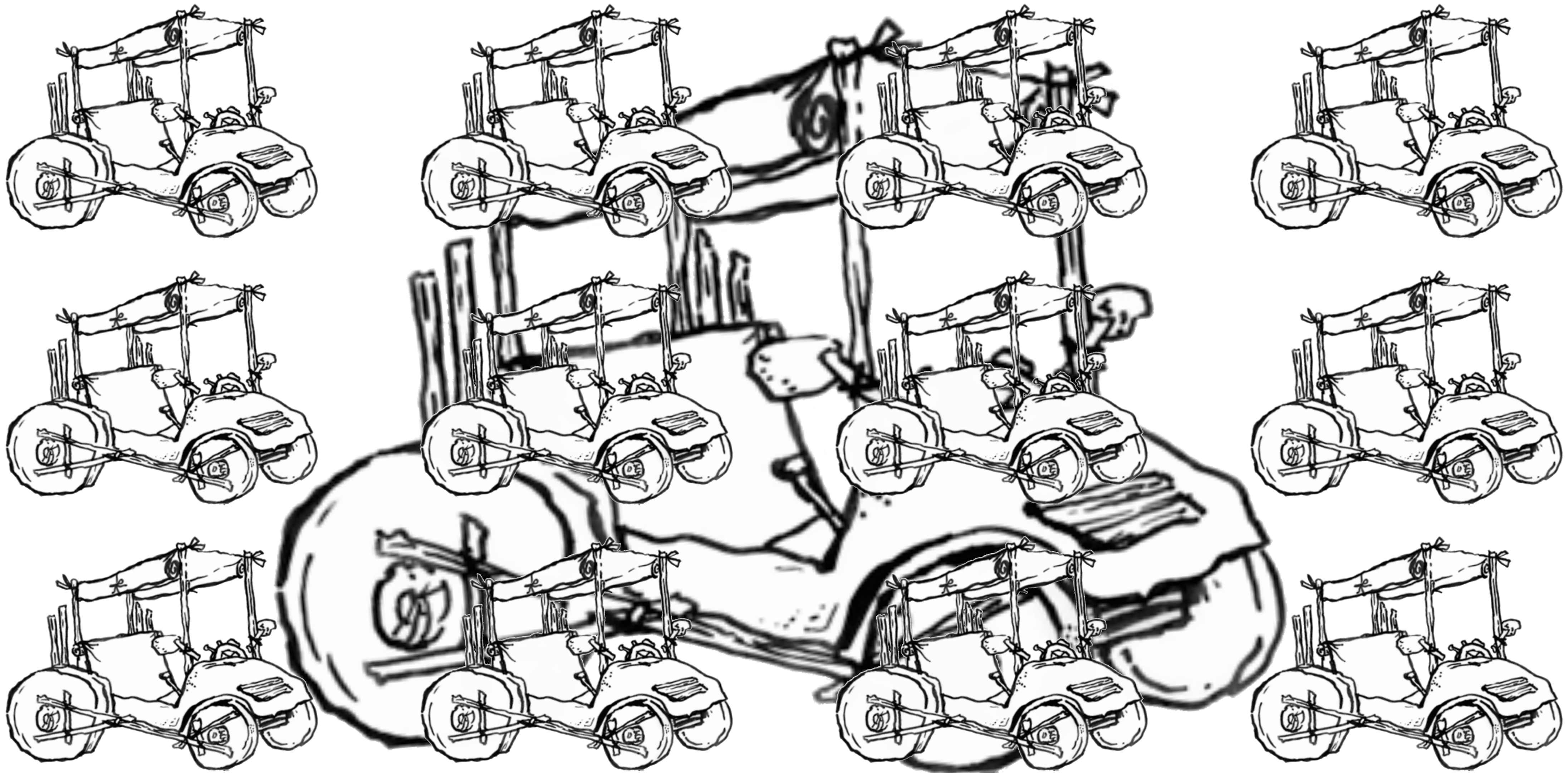
What is Complexity?



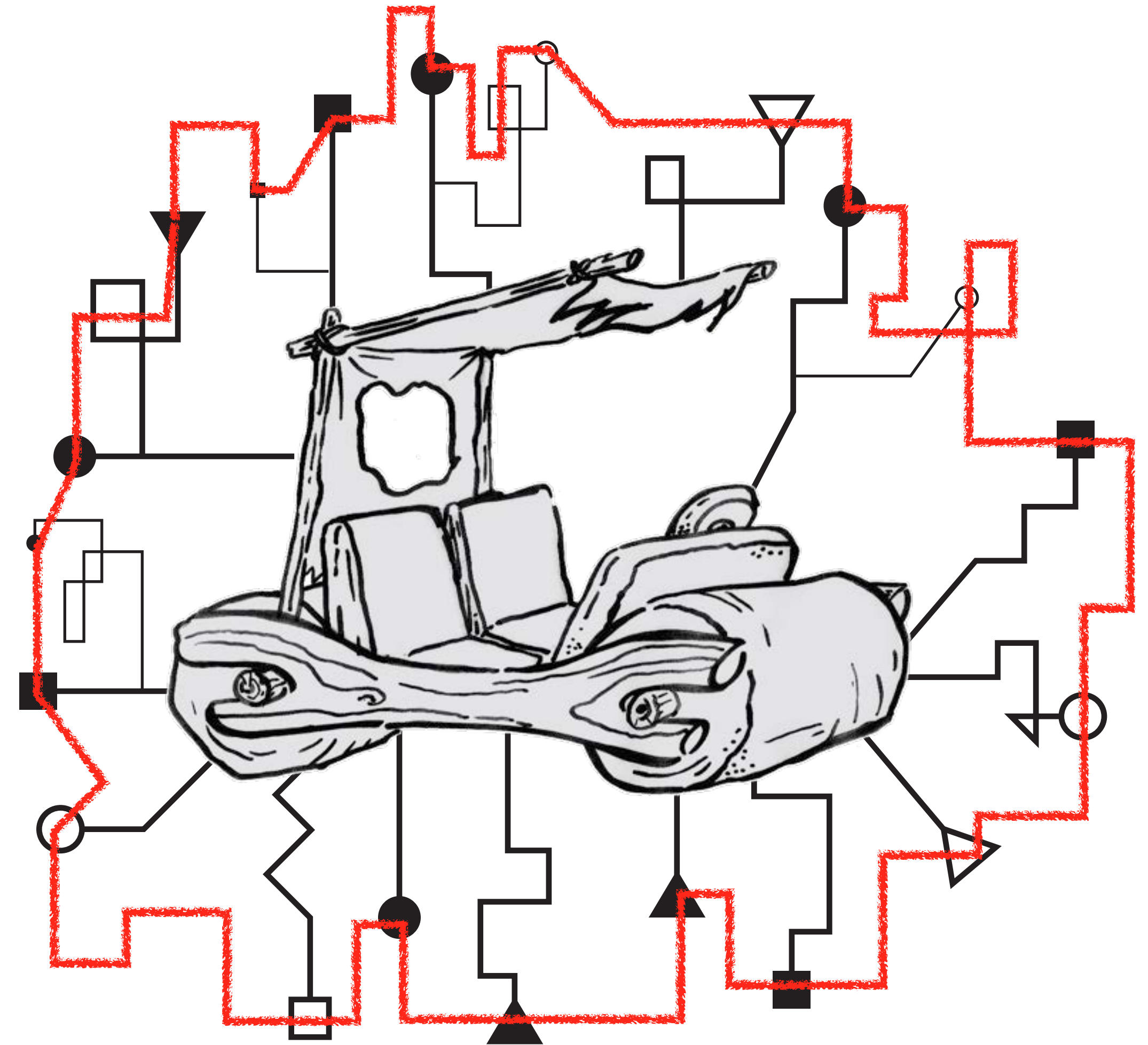
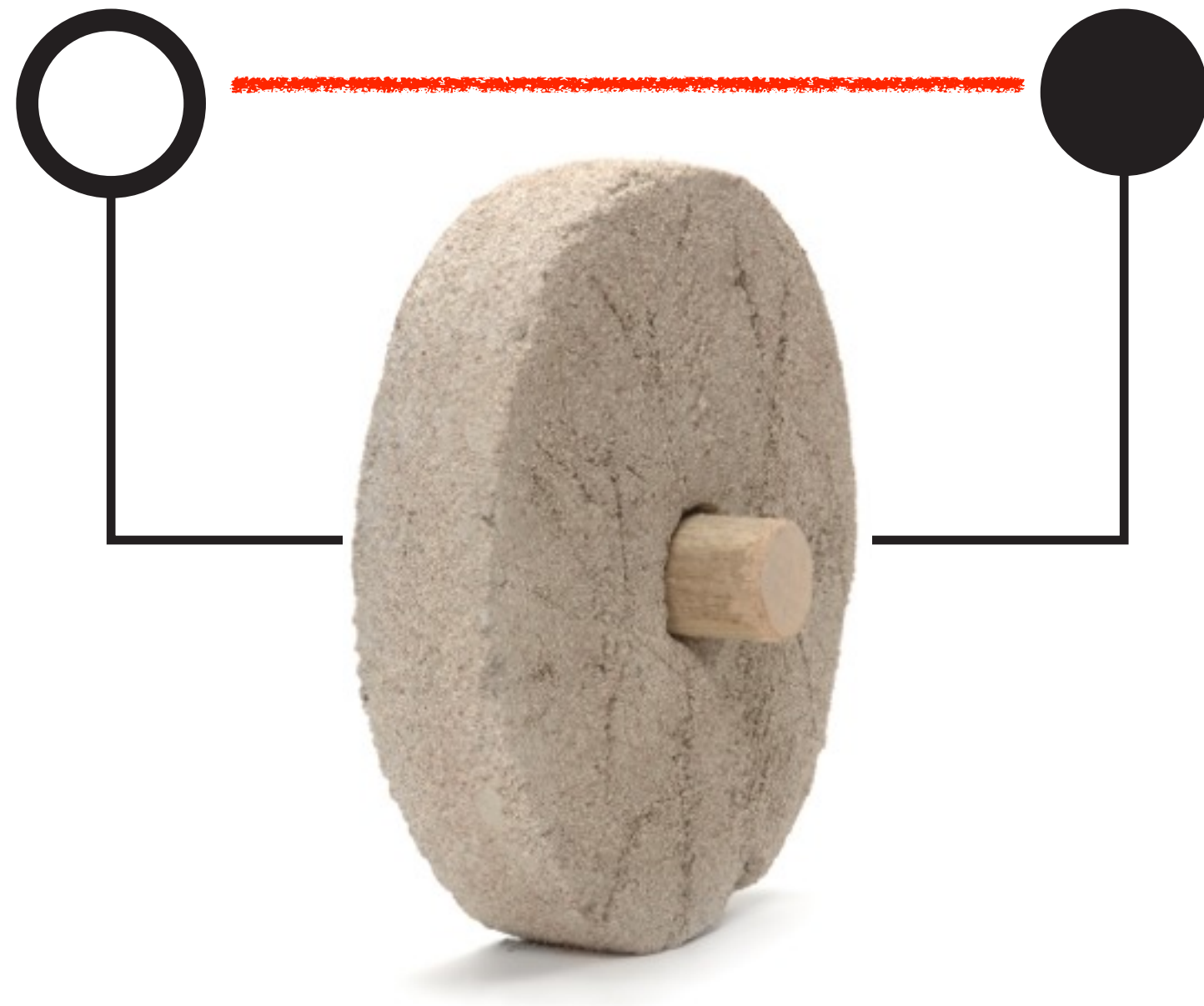
More vs. Less Complexity?



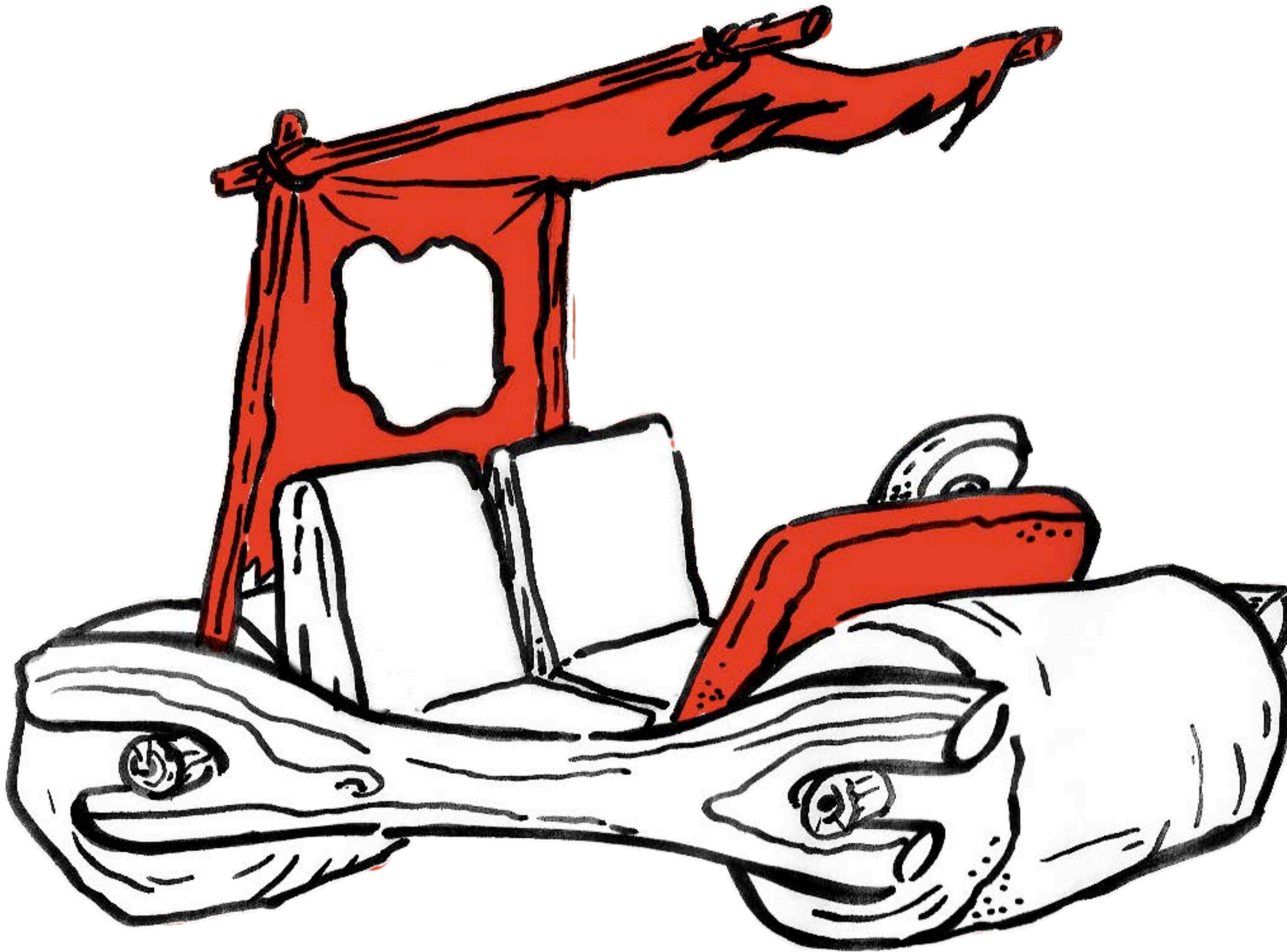
Why Should We Care?



Measuring Complexity



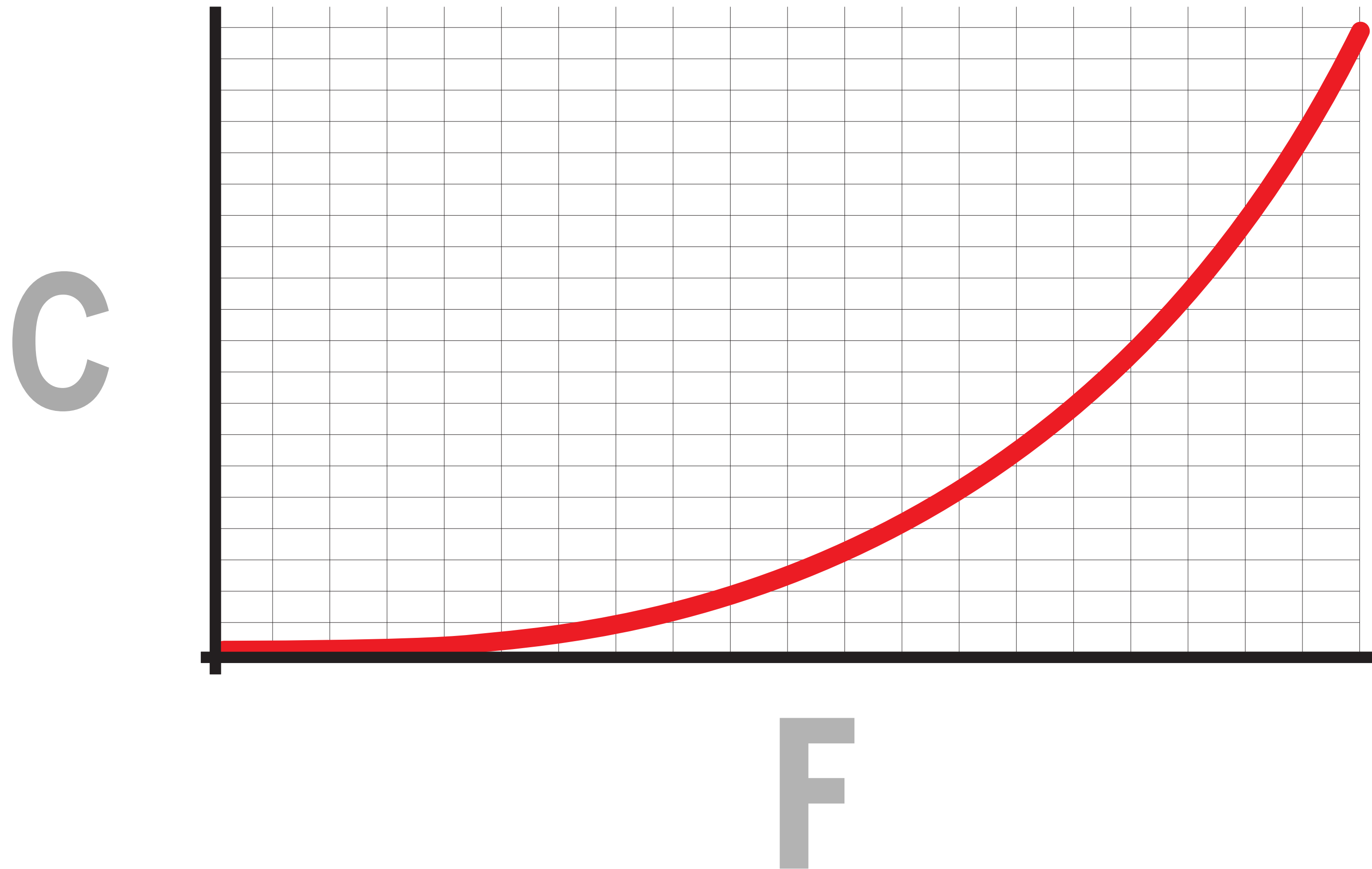
Key Elements of Complexity



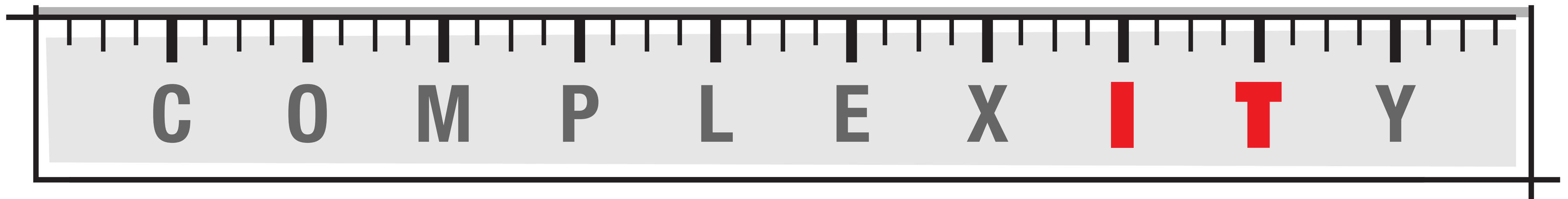
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FDaptandahbiess

The Complexity Curve



Measuring Complexity



A Complexity Algorithm

$$C = (F^3 + D^3) * N$$

A Simple Example

Complexity Score =
9

A Slightly More Complex Example

Complexity Score =

2,000

Relative Complexity

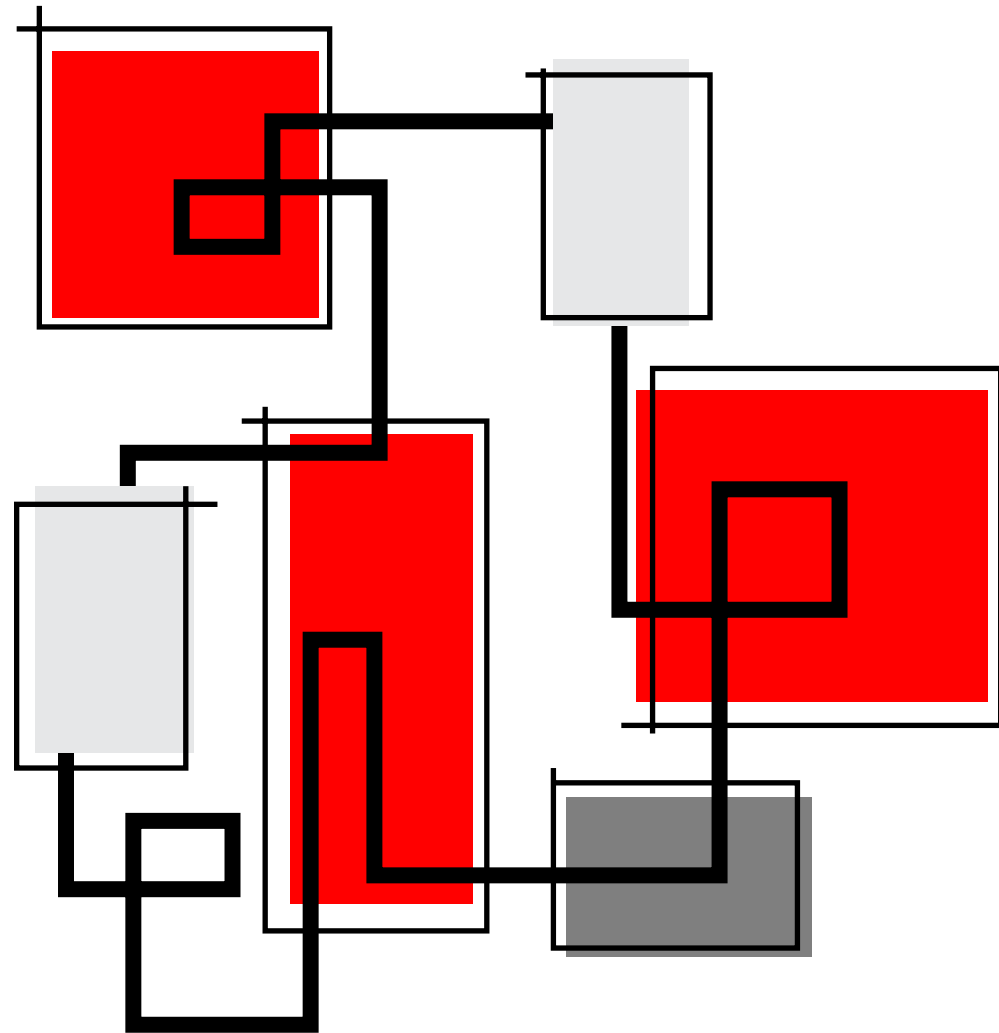


$C = 9$

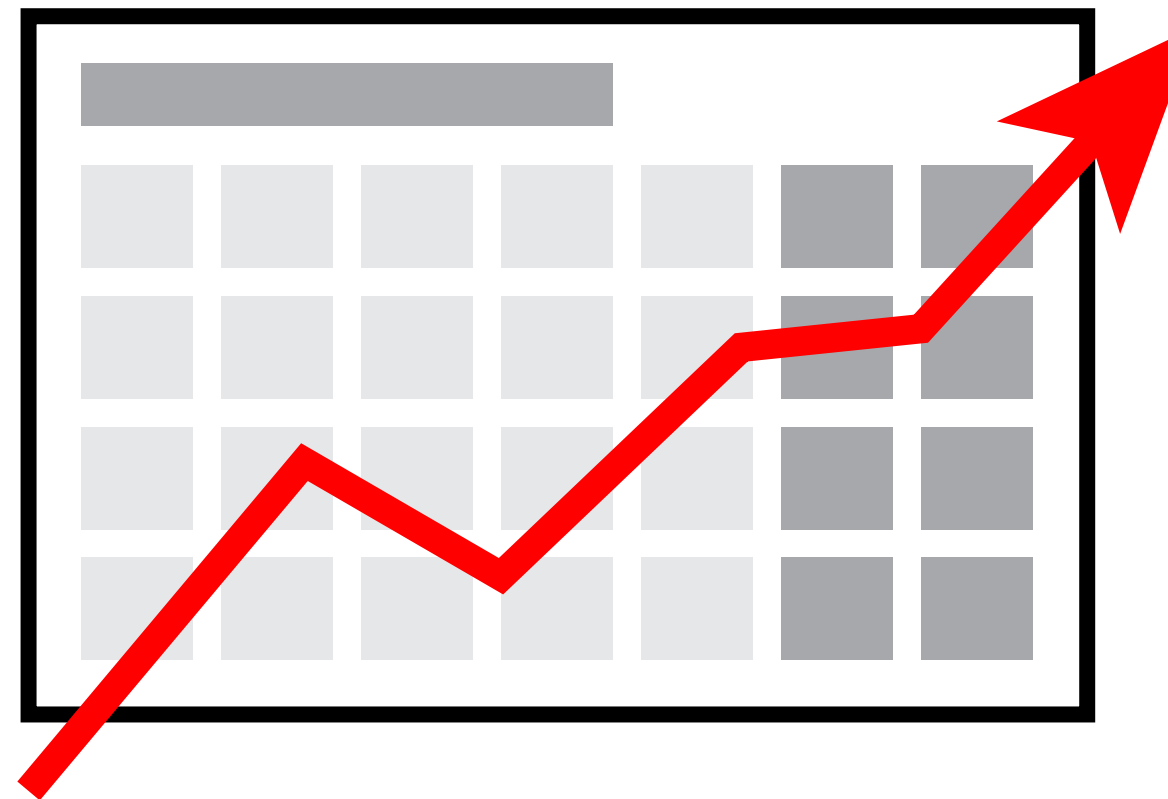


$C = 2,000$

Why Should We Care?



Hard to Manage

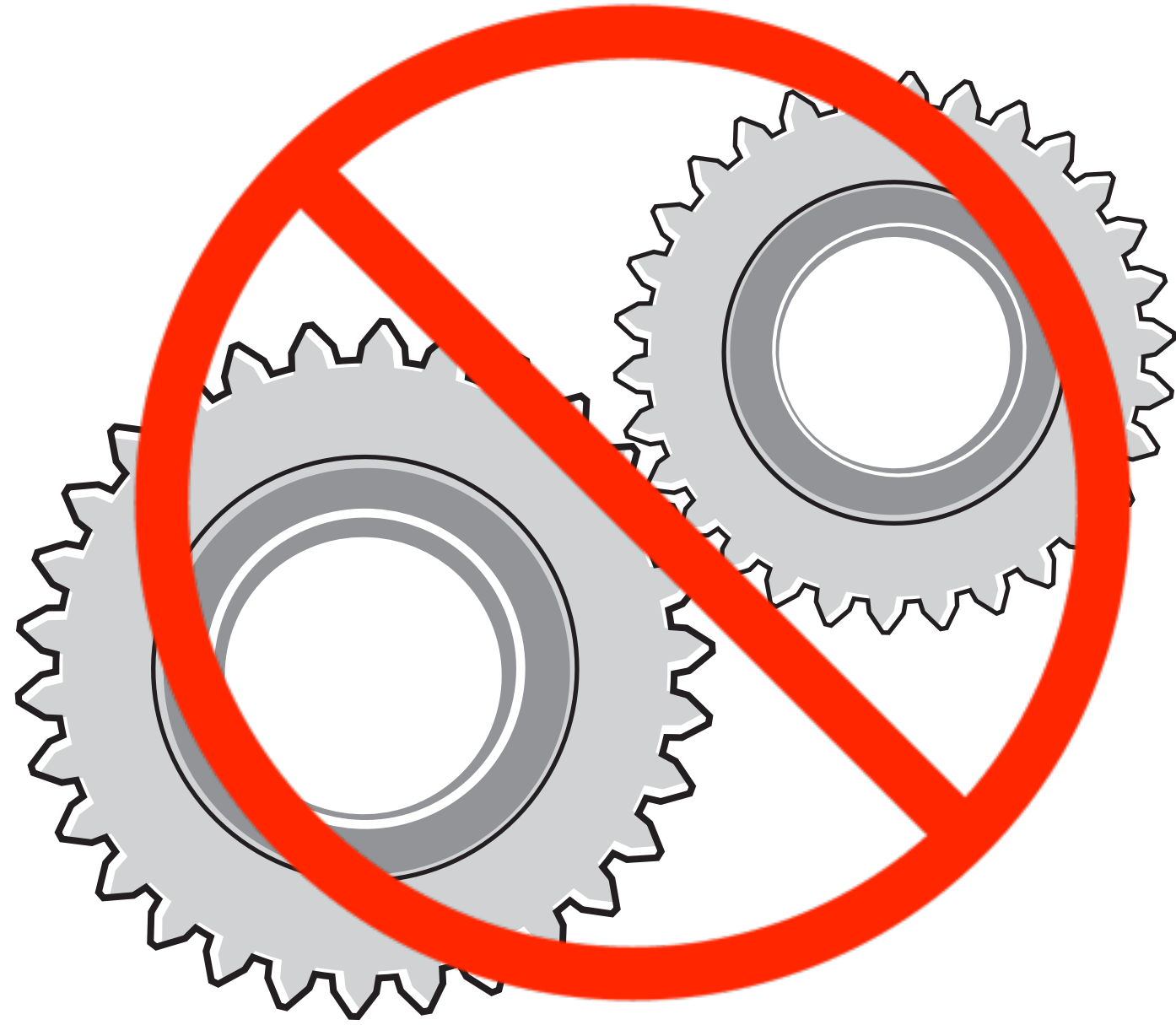


Increase Over Time



Budget Impact

The Hidden Cost



Functionality

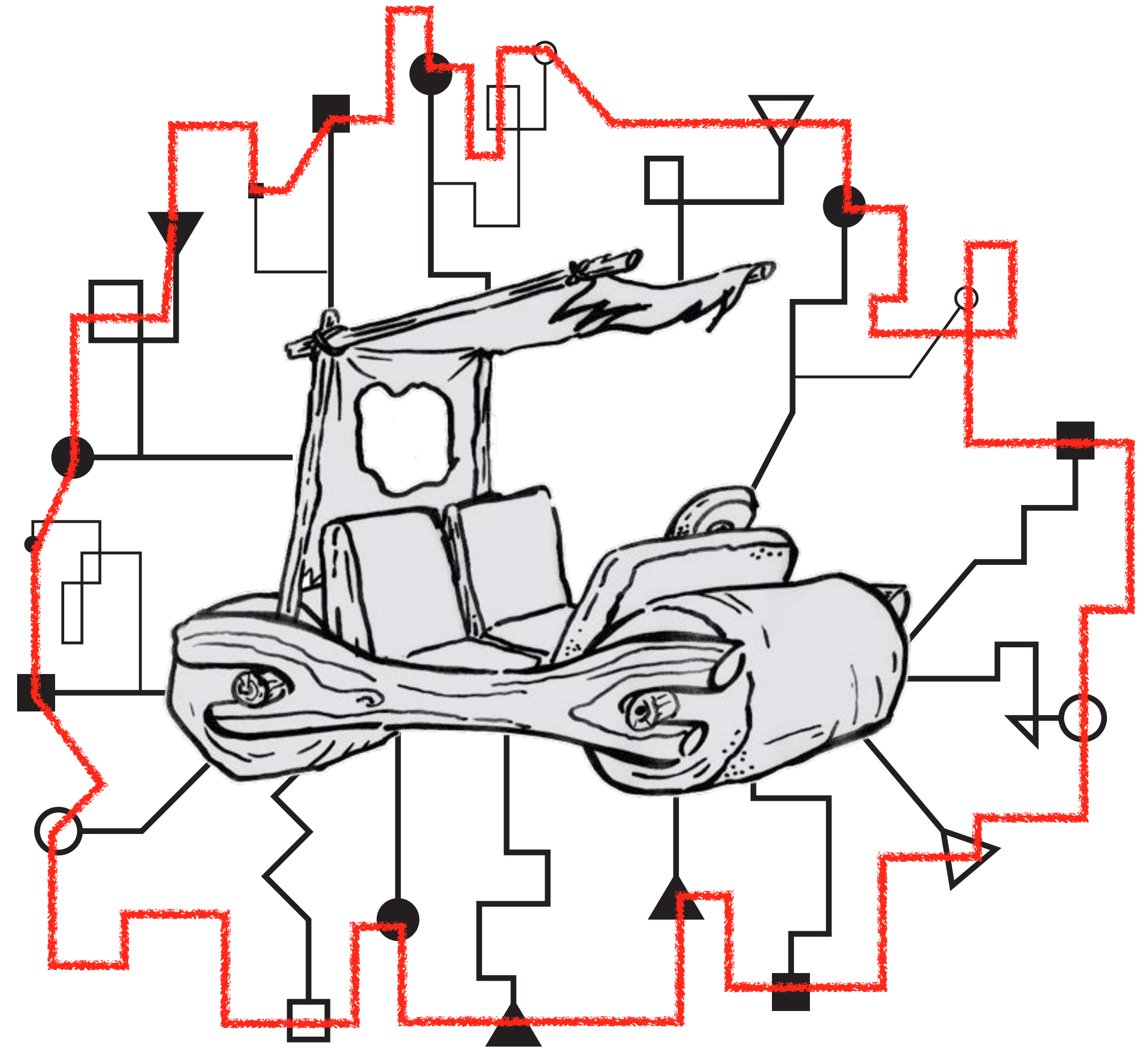
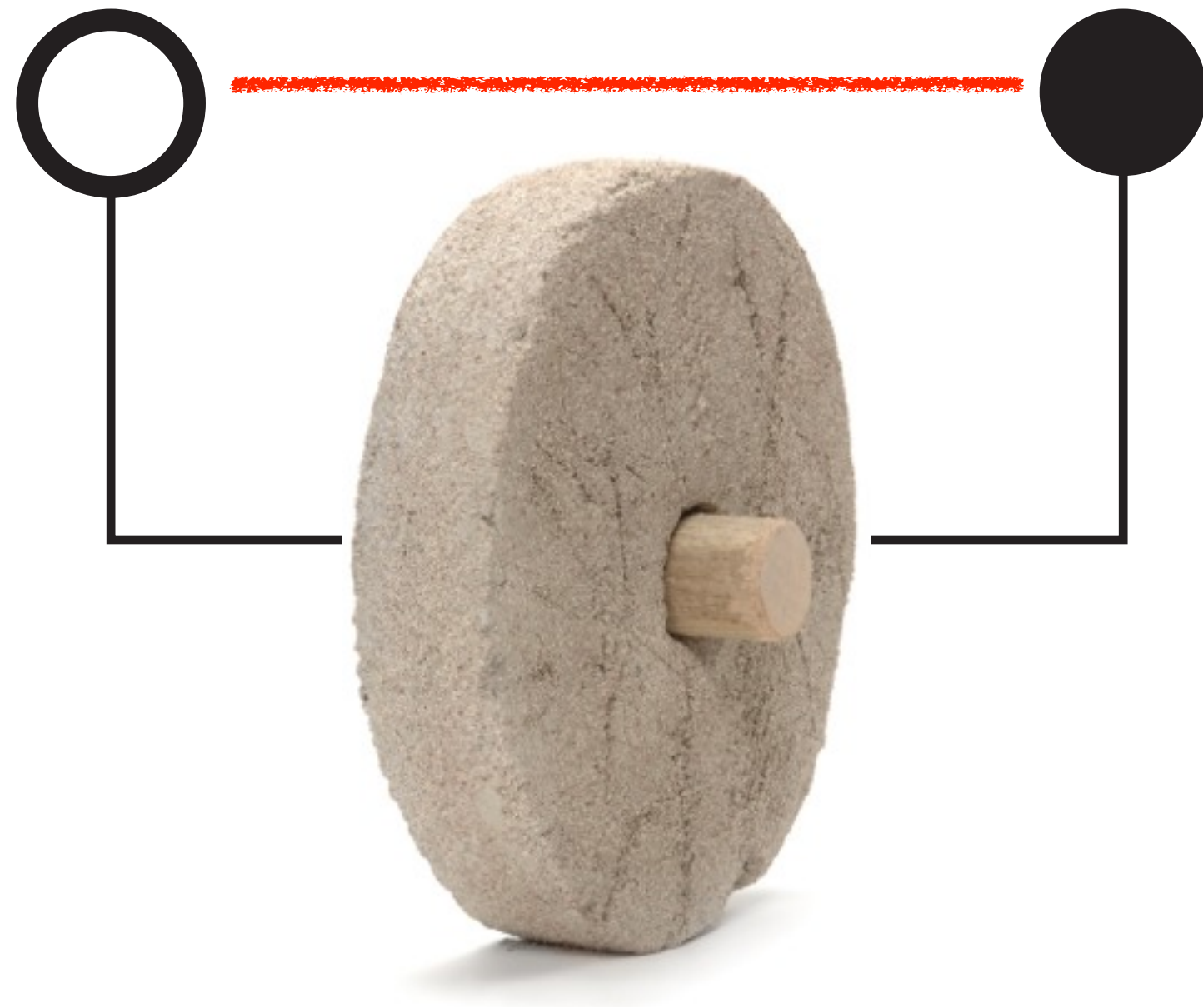


Information



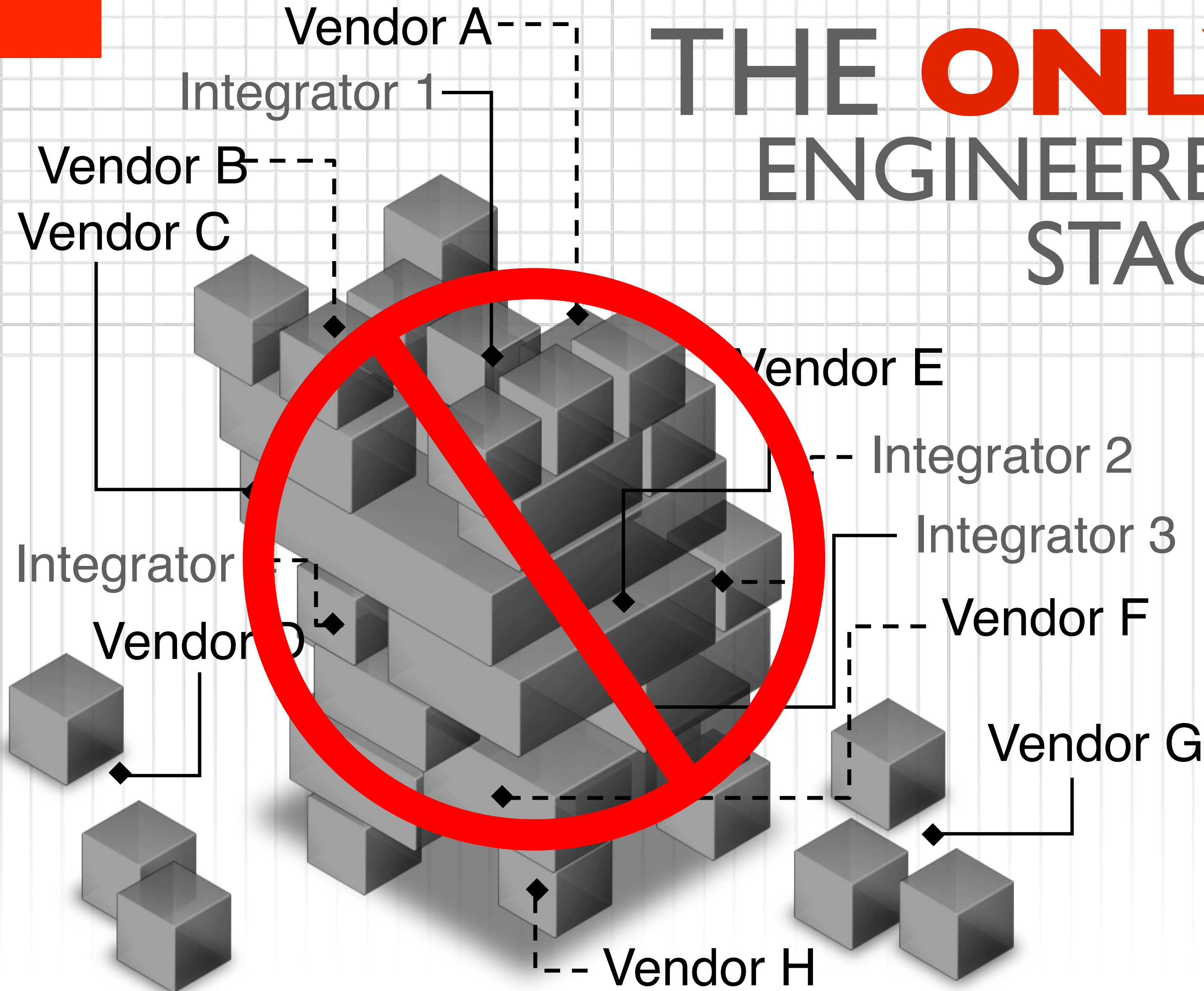
Innovation

Measuring IT Complexity





THE ONLY ENGINEERED STACK



Over 5,000 IT staff





Largest law enforcement organization in the United States



22,000 Vehicles
290 Aircraft
225 watercraft
280 horse patrols
1,420 canine teams

A Very Big Customer

Traditional Servers

120

VS

Oracle Exadata Racks

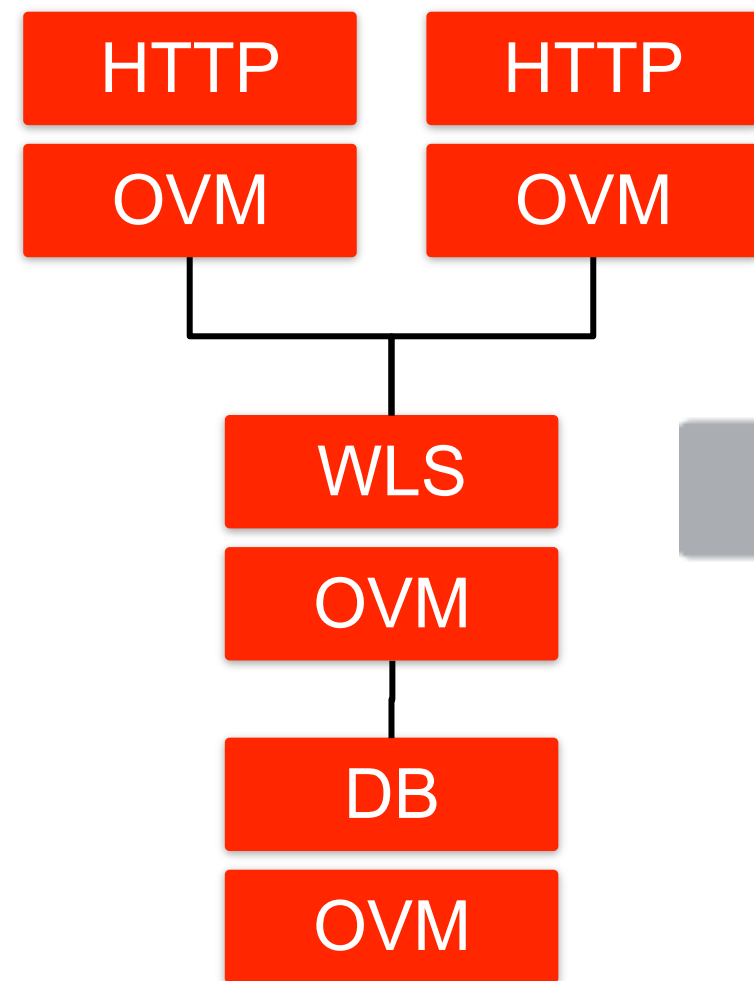
12



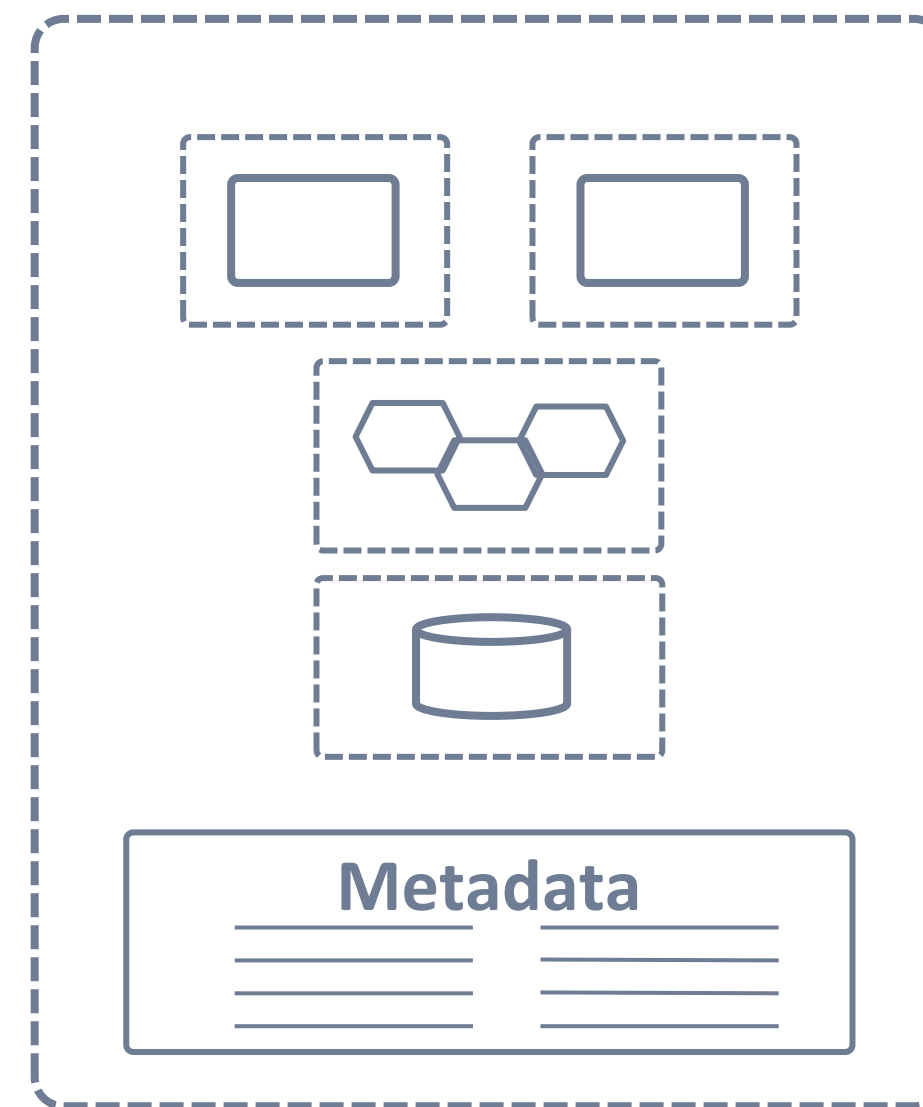
Package Multi-tier Enterprise Applications

Oracle Virtual Assembly Builder

Capture Complete Application Topology



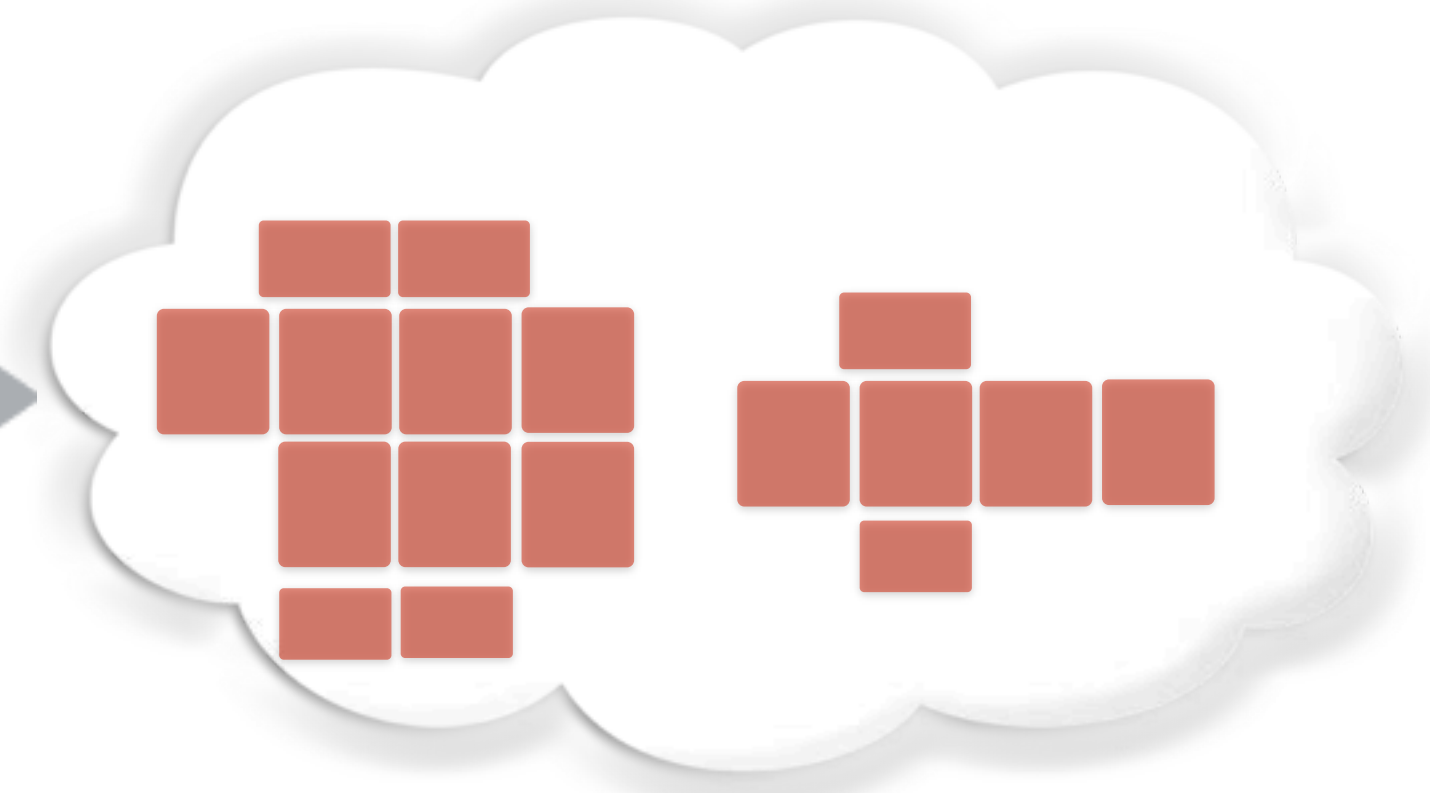
Package Into Single Assembly



Upload to Software Library



Deploy Self-Service



Engineered Systems | What?



ORACLE®

EXADATA

Database Machine



ORACLE®

EXALOGIC

Elastic Cloud



ORACLE®

SPARC SUPERCLUSTER

Solaris 11



ORACLE®

EXALYTICS

**Business Intelligence
Machine**

ORACLE®

Engineered Systems for Oracle Database

Oracle Database
Appliance



Quarter Rack



Half Rack



Full Rack

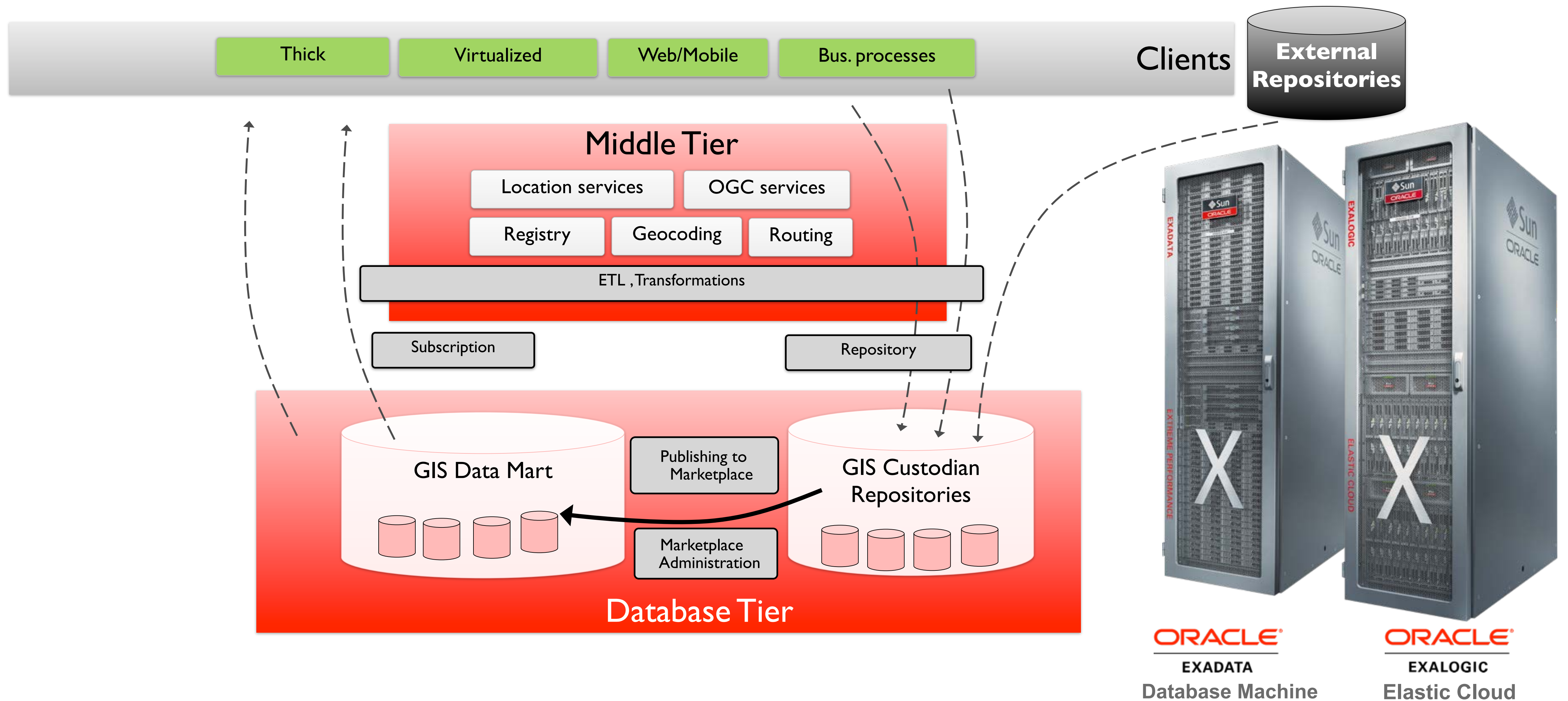


Oracle Exadata
Database Machine

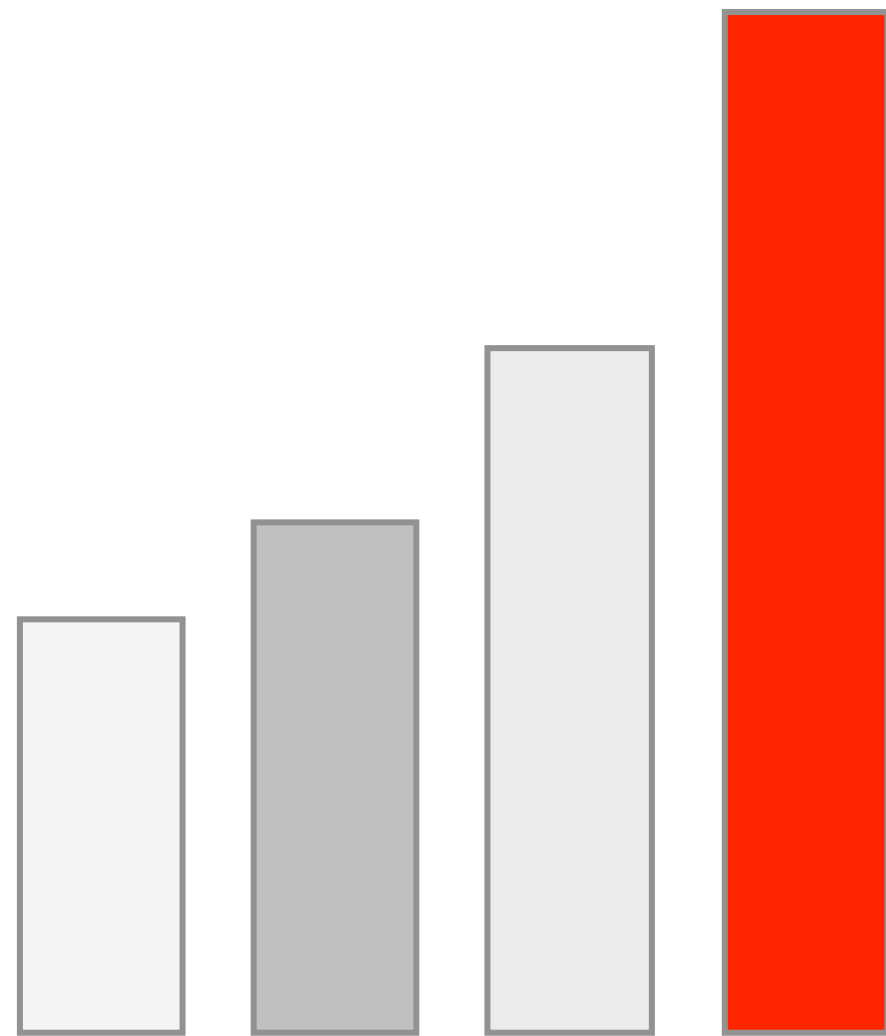
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Oracle Enterprise Architecture

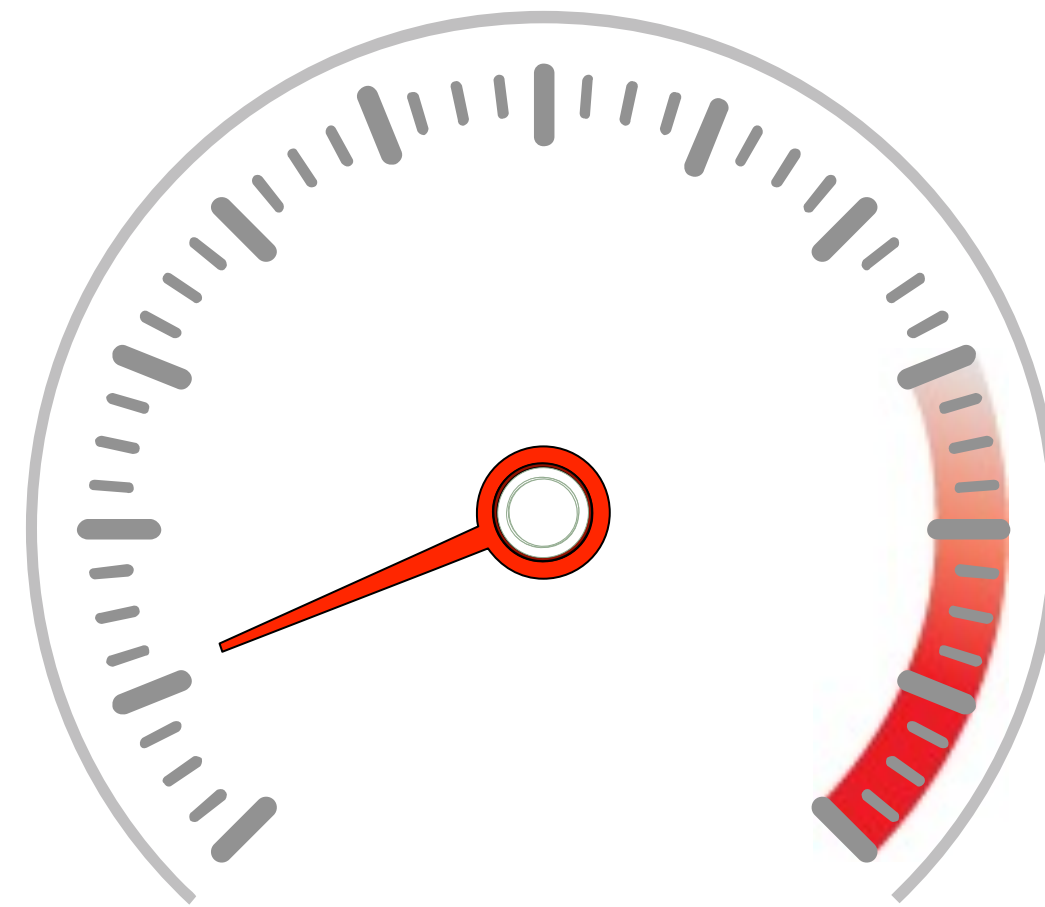
GIS-aaS Logical Model



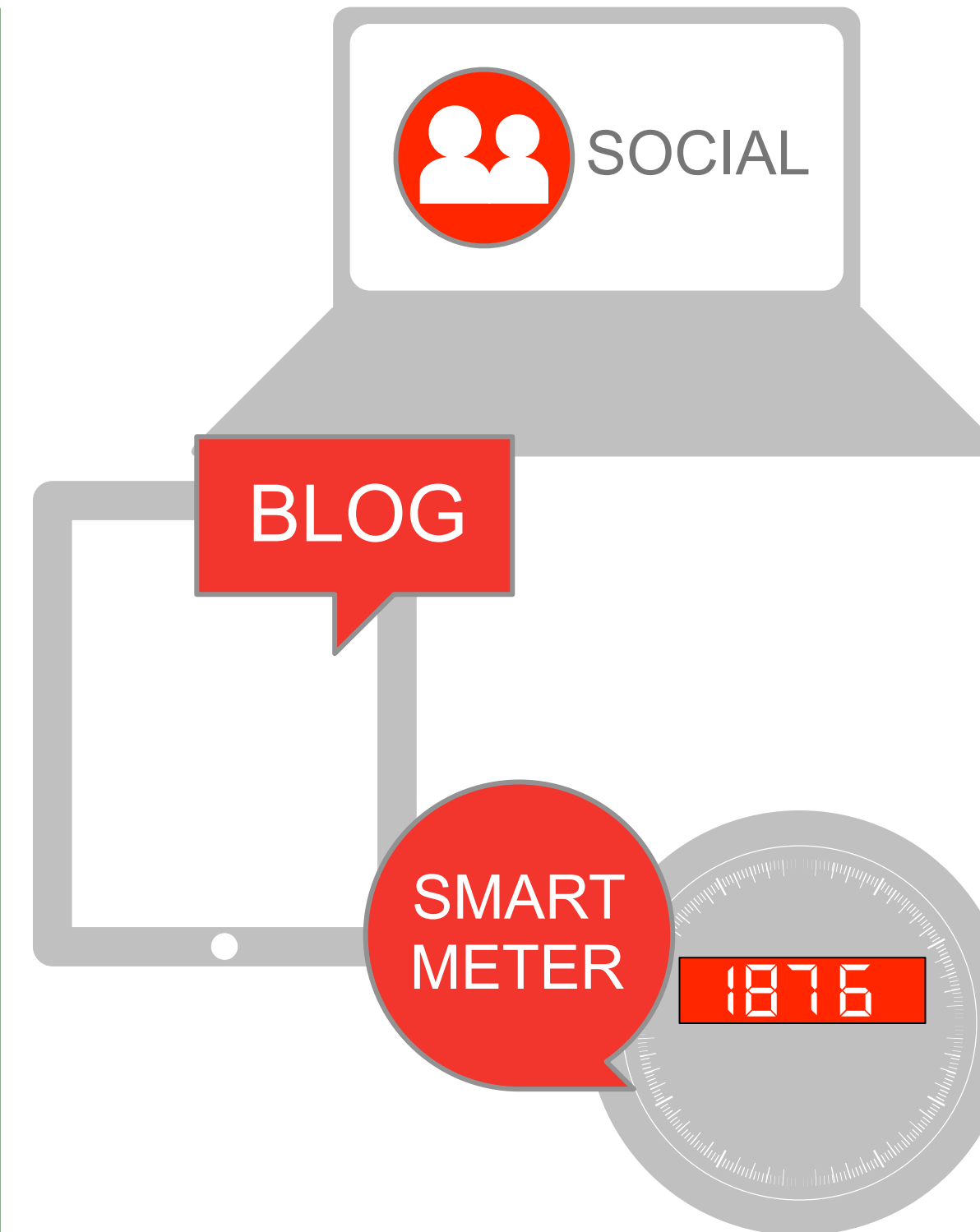
What about “Big” Data?



VOLUME



VELOCITY

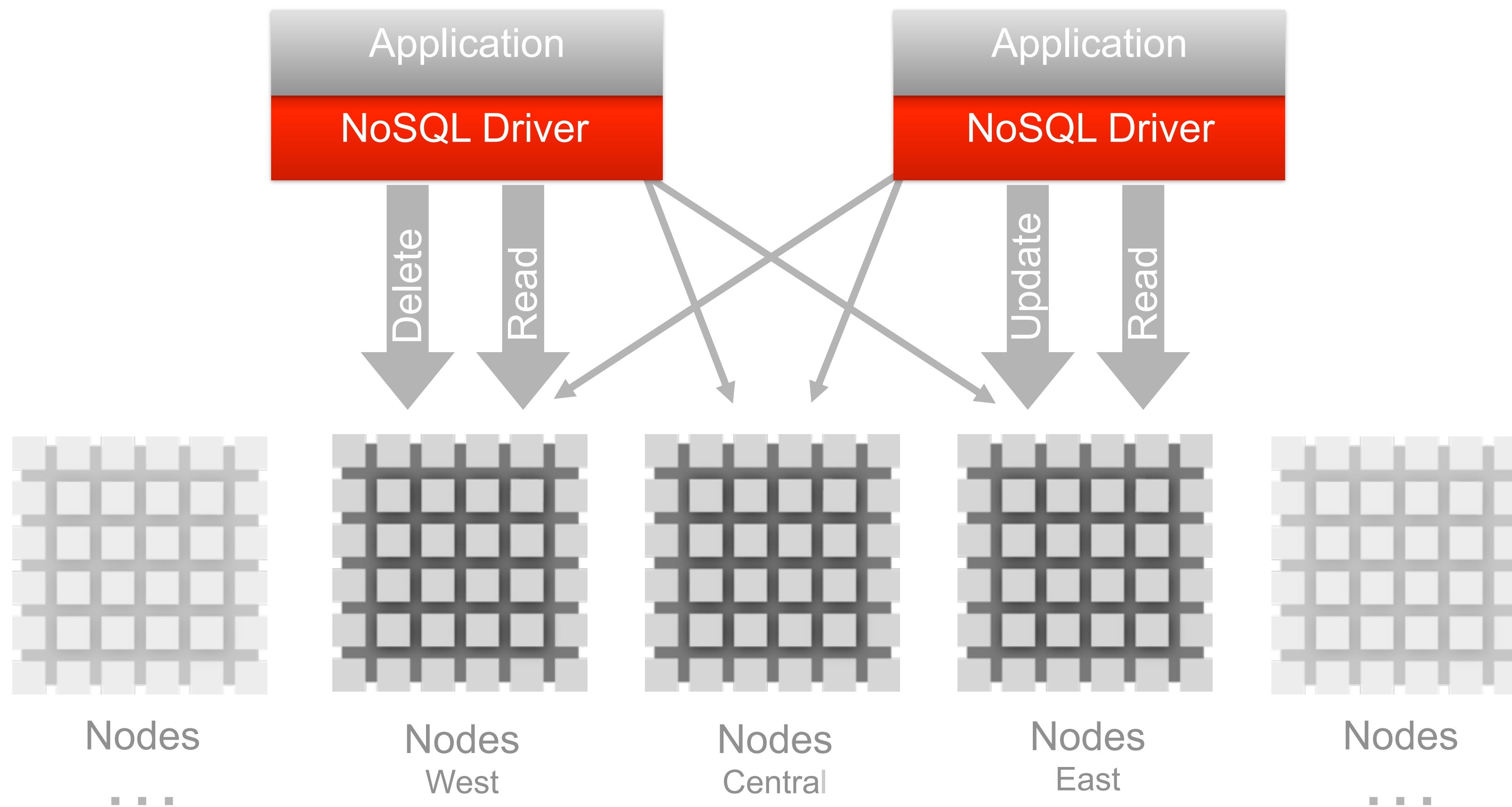


VARIETY



VALUE

Oracle NoSQL Database



Key value pair database

Dynamic data model

Highly scalable, available

Transparent load balancing

Built using BerkeleyDB

Oracle Big Data Appliance Hardware

- 18 Sun X4270 M2 Servers
 - 48 GB memory per node = 864 GB memory
 - Optional 144 GB memory per node = 2.5 TB memory
 - 12 Intel cores per node = 216 cores
 - 36 TB storage per node = 648 TB storage
- 40 Gb p/sec InfiniBand
- 10 Gb p/sec Ethernet



ORACLE®
BIG DATA APPLIANCE

Oracle Big Data Appliance **Software**

- Oracle Enterprise Linux
- Oracle Hotspot Java Virtual Machine
- Cloudera's Distribution Including Apache Hadoop
R Distribution (CDH)
- Cloudera Manager
- Open Source Distribution of R
- Oracle NoSQL Database Community Edition
- Oracle Big Data Connectors (licensed separately)



What The Analysts Are Saying: Ovum

“Clearly, Oracle's release of Oracle Big Data Appliance signifies a full commitment to Hadoop as a first-class citizen of the Oracle data platform. Its price, \$450,000 for 216 CPU cores backed by 648TB of storage and the same Infiniband backplane used by Oracle Exadata and Oracle's other engineered systems, is definitely competitive.”

– Ovum ⁽¹⁾

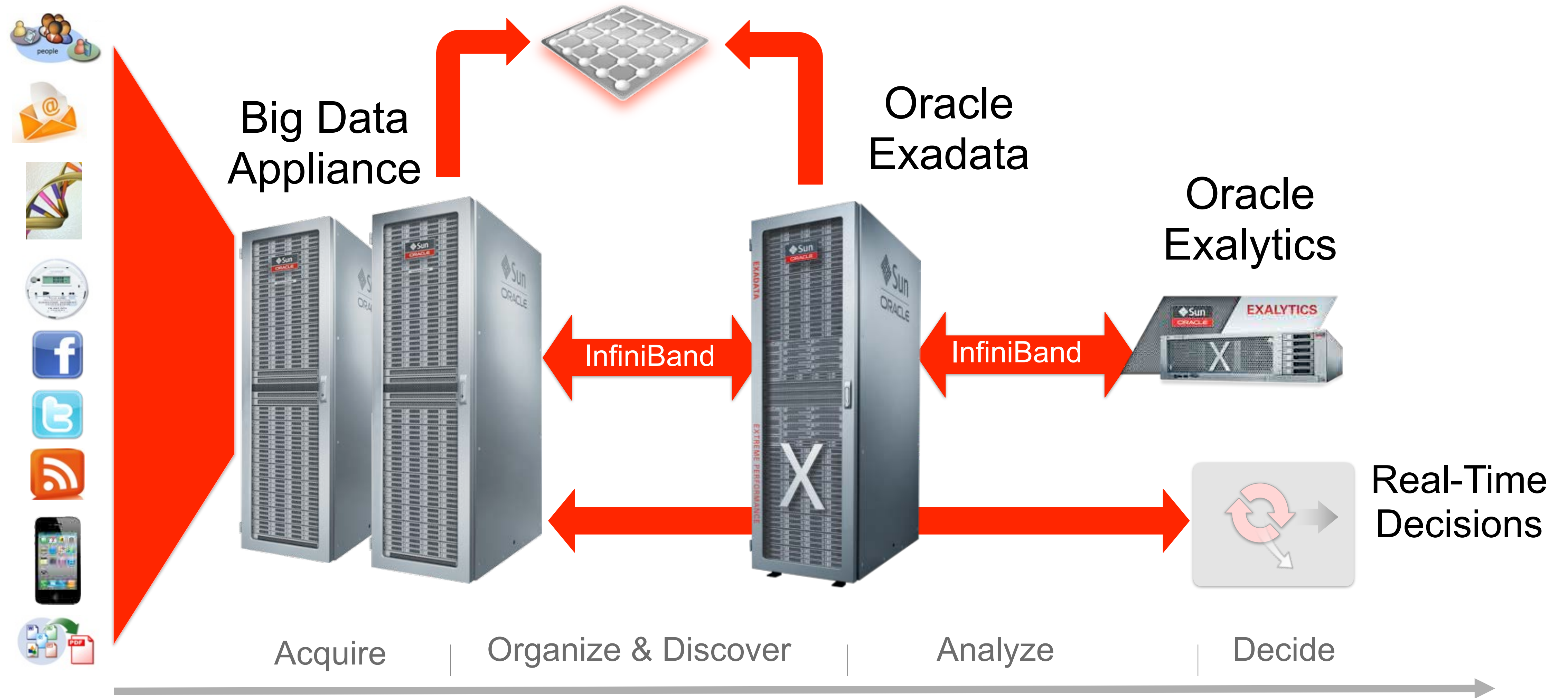


(1) Oracle mainstreams its Hadoop platform with Cloudera OEM deal, January 2012, Tony Baer

ORACLE

Oracle's Big Data solution

Endeca Information Discovery



ORACLE

To Deliver The **Power of Place** Drive Complexity Out of Your IT Equation



Hardware and Software

ORACLE®

Engineered to Work Together

Oracle & **The Power of Place**

Peter Doolan

GVP Oracle Public Sector



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