HL7 FHIR is rewriting the Interoperability Paradigm

Partners in Interoperability

Charles Jaffe, MD, PhD
CEO HL7
18 October 2016

Advancing Interoperability

* Why is Interoperability taking so long?

* HL7 Fresh Look. Happy Birthday FHIR.

* HL7 Roadmap

* Making it all work together

Is the Holy Grail of Interoperability really Plug & Play?

Credit: Monty Python

The Interoperability Blame Game.

“How much easier it is to be critical than to be correct.”

Benjamin Disraeli

The Players

Government Agencies
& Regulators

SDOs

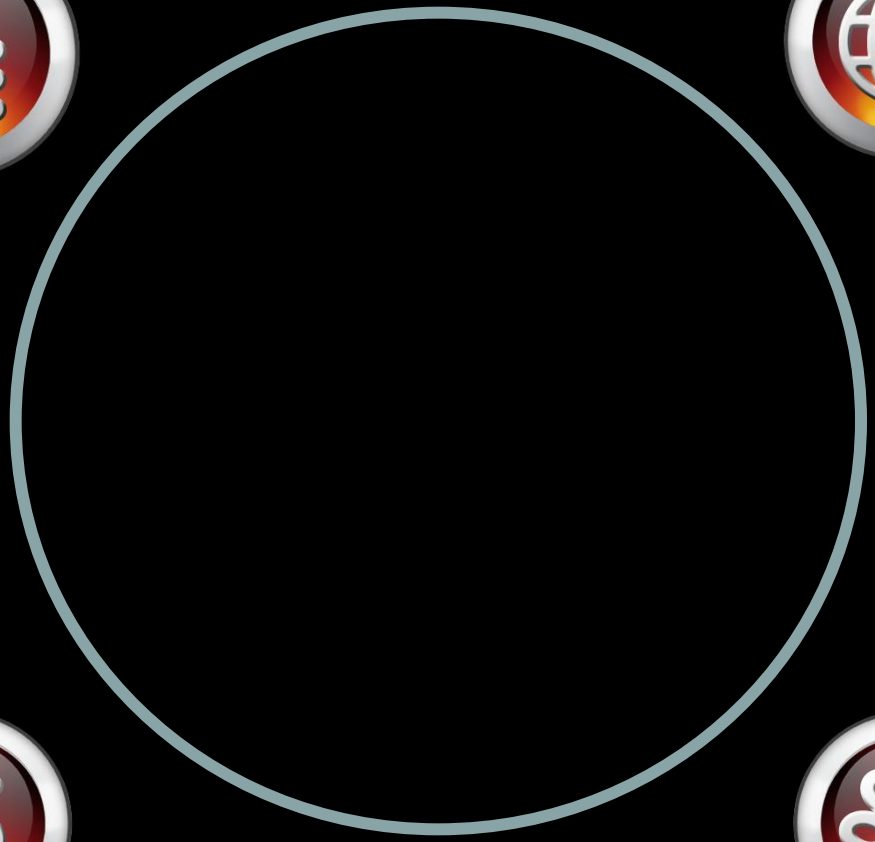
Healthcare Systems
& Hospitals

Clinicians

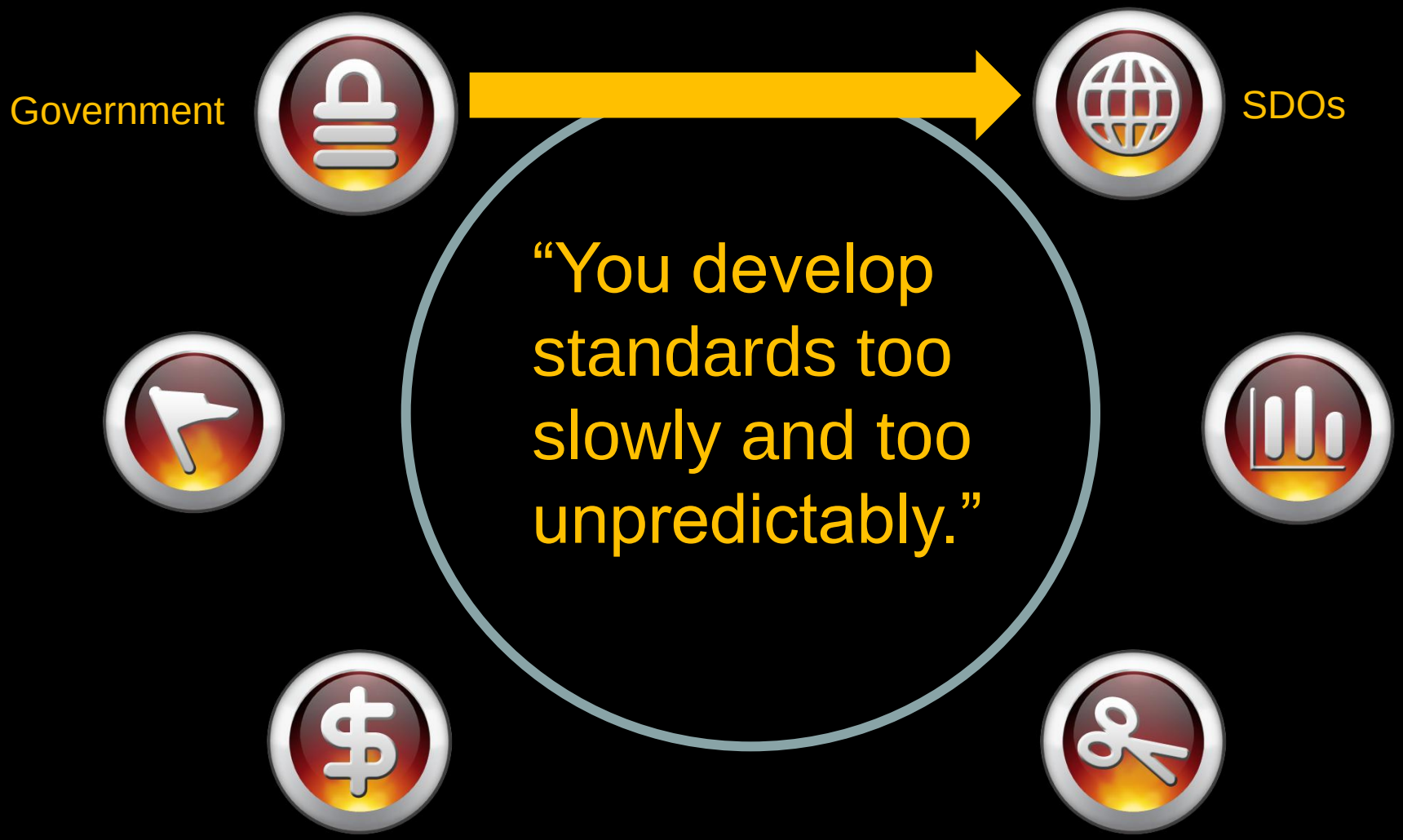
Technology Developers
& Vendors

Academicians

The Circle

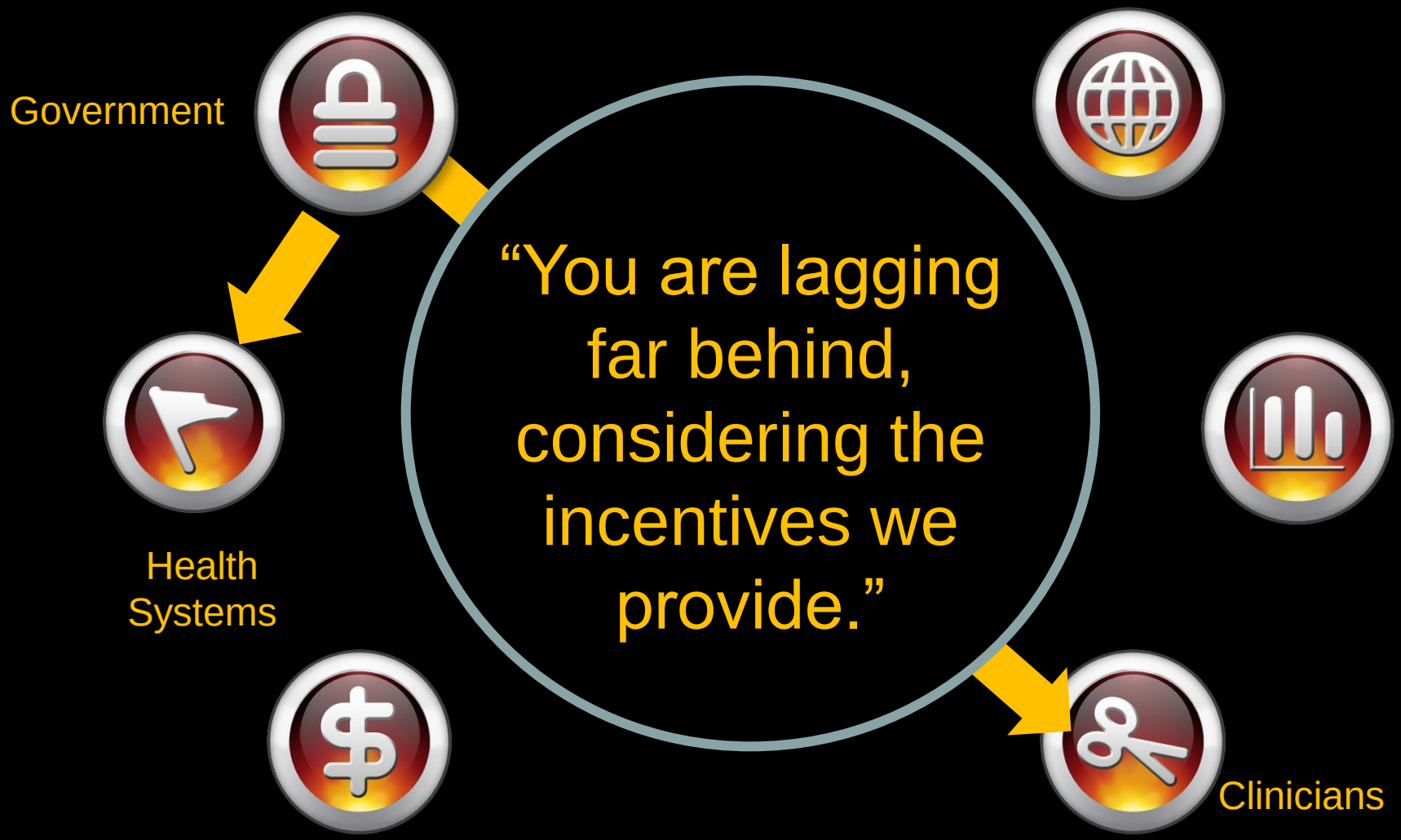


The Circle: Let the Games Begin



The Circle

The Circle


Government
Health Systems
Clinicians
"You are lagging far behind, considering the incentives we provide."

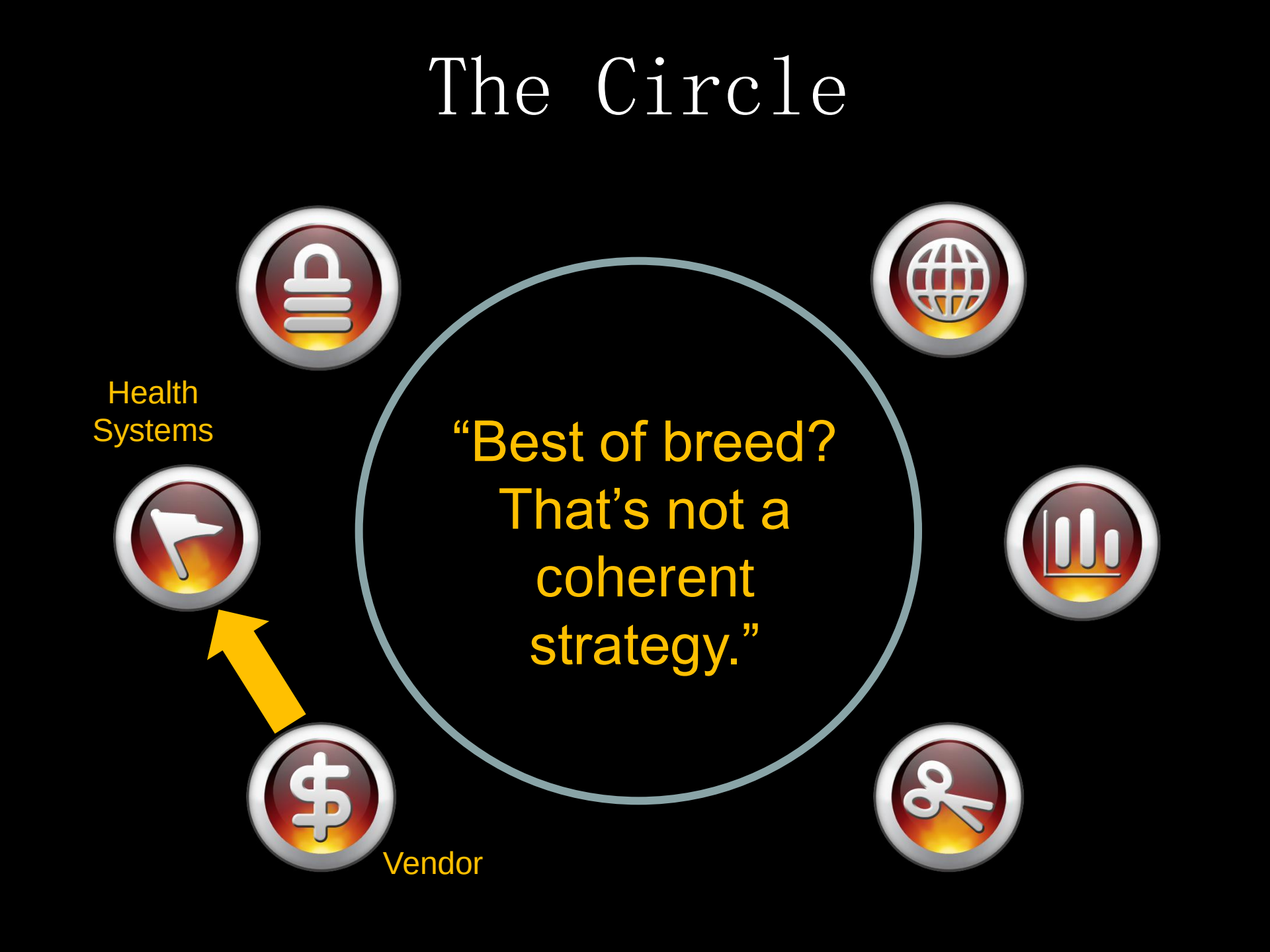
The Circle

Government
Health Systems
Vendors
"The regulations are obtuse, vague and overwhelming."

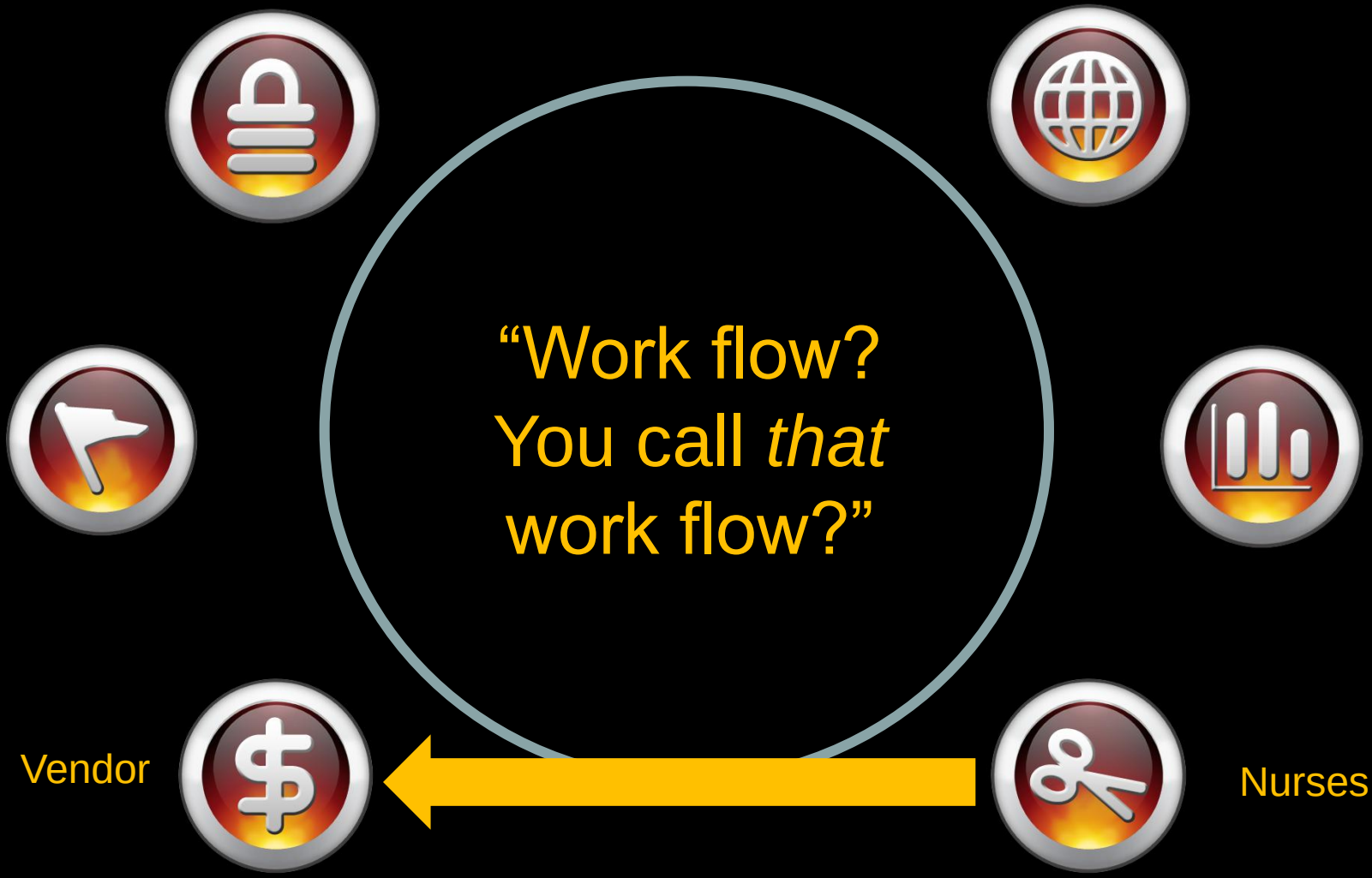
The Circle

Health Systems
"We need everything customized, and we need it yesterday."
Vendor

The Circle


Health Systems
"Best of breed? That's not a coherent strategy."
Vendor

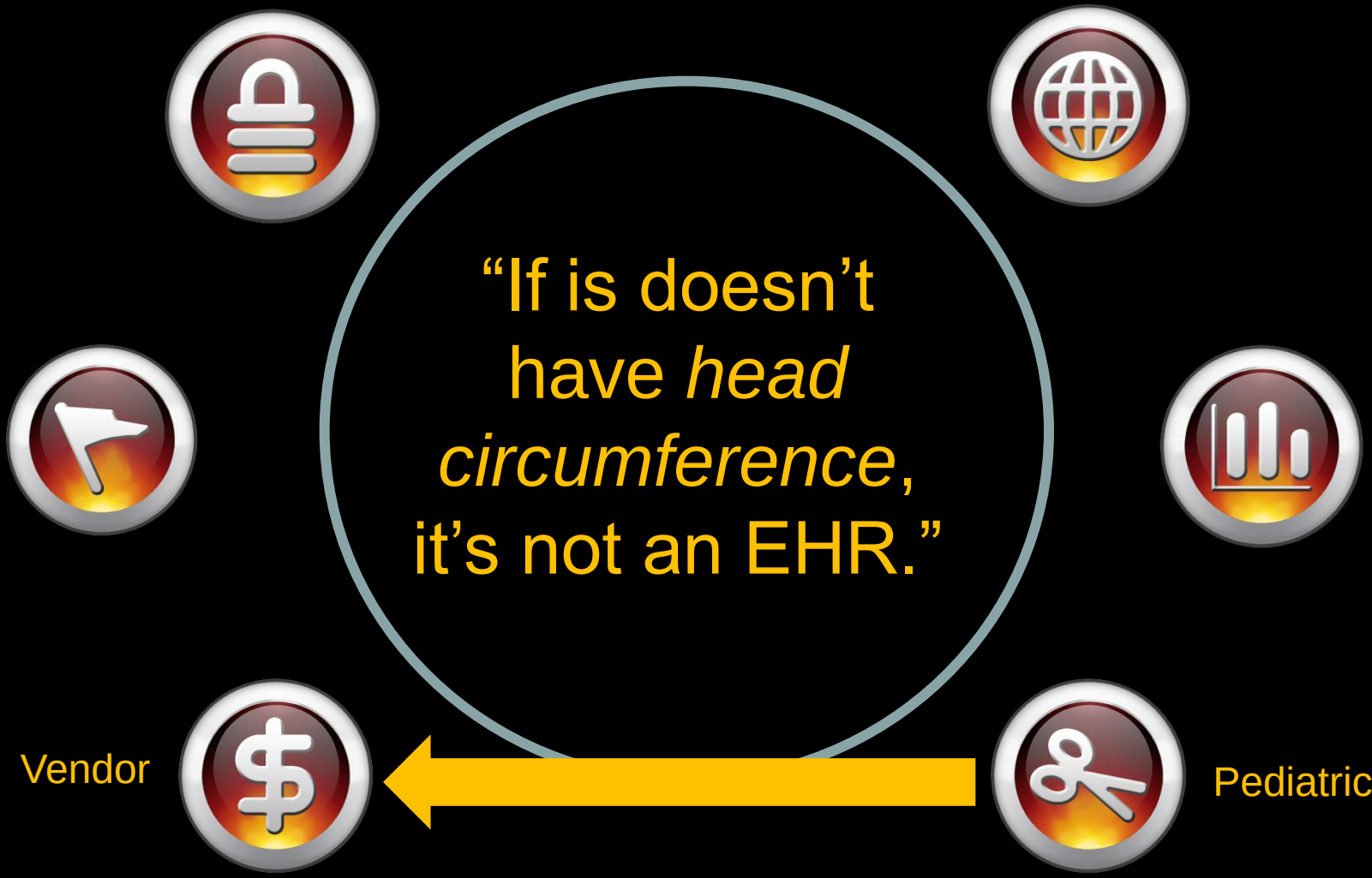
The Circle



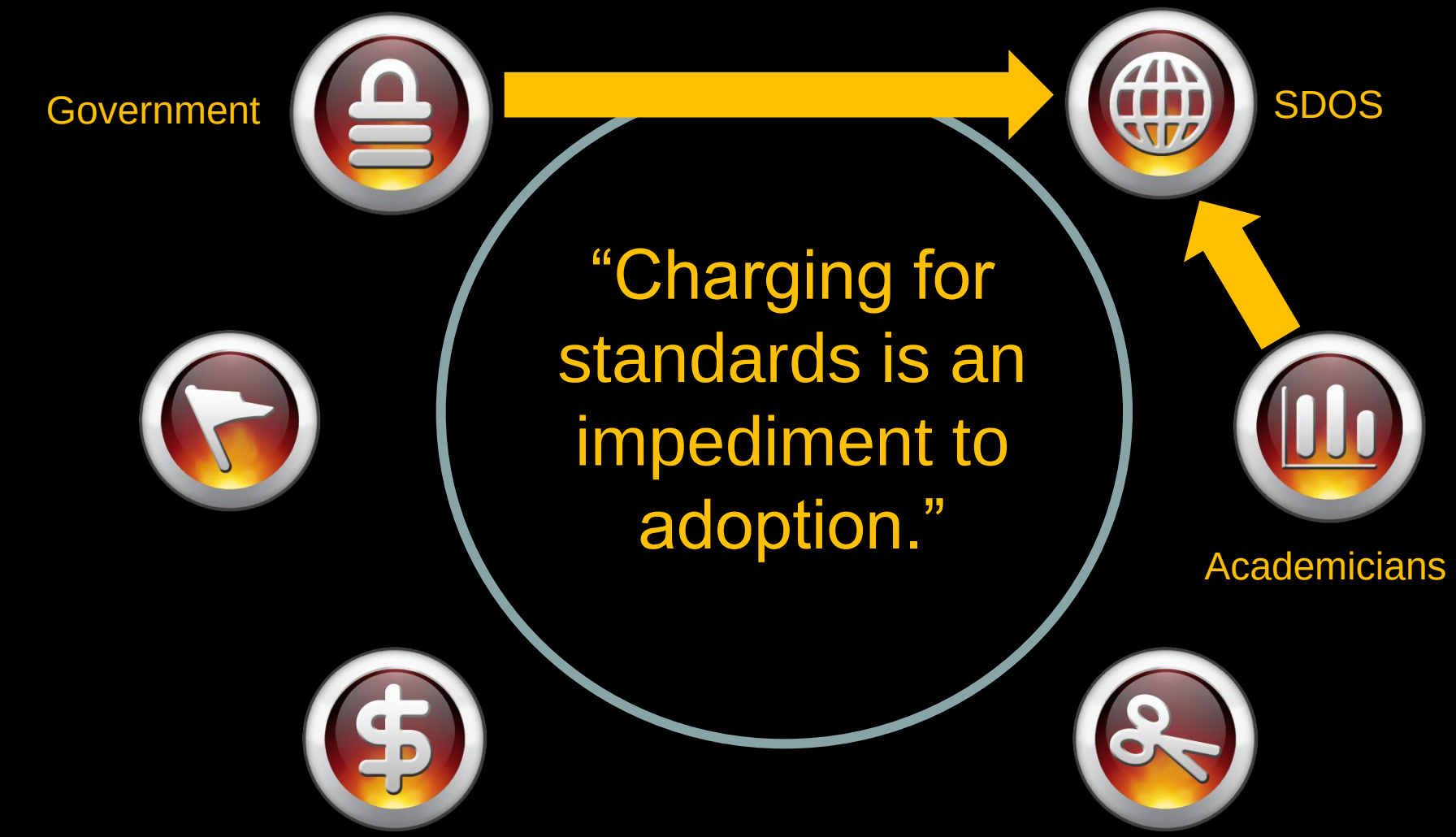
The Circle

"You put
3 surgeons in a
room, you get
4 (strong) opinions."
Vendor
Surgeons

The Circle

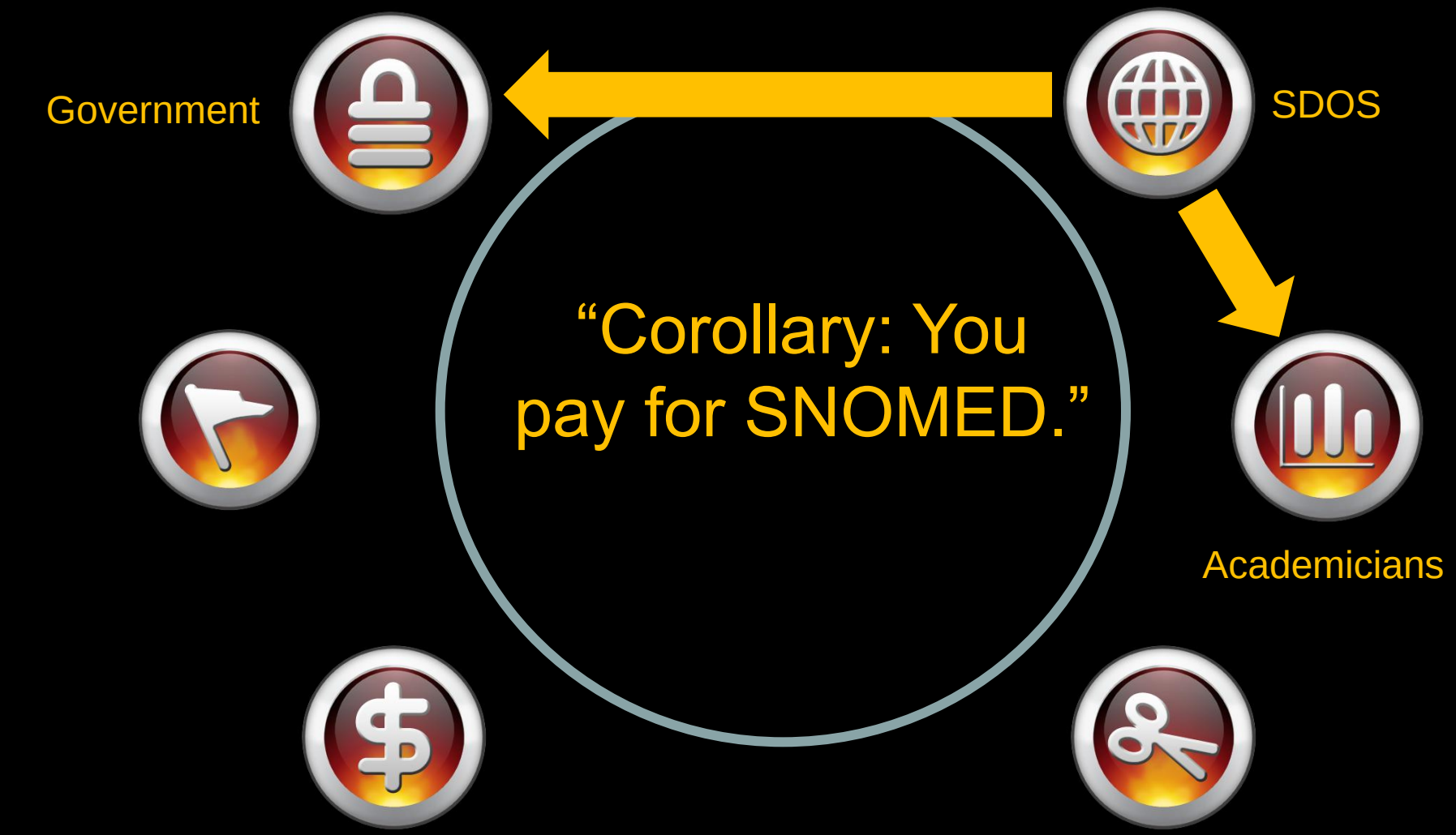

"If is doesn't have *head circumference*, it's not an EHR."
Vendor
Pediatricians

The Circle


Government
SDOS
"Charging for standards is an impediment to adoption."
Academicians

The Circle

The Circle


Government
SDOS
"Corollary: You pay for SNOMED."
Academicians

The Circle

SDOS
"Do we really need a license? What happened to *Open Source*?"
Hospitals
Academicians
Vendors

The Circle

SDOs
"Standards are an impediment to innovation."
Academicians

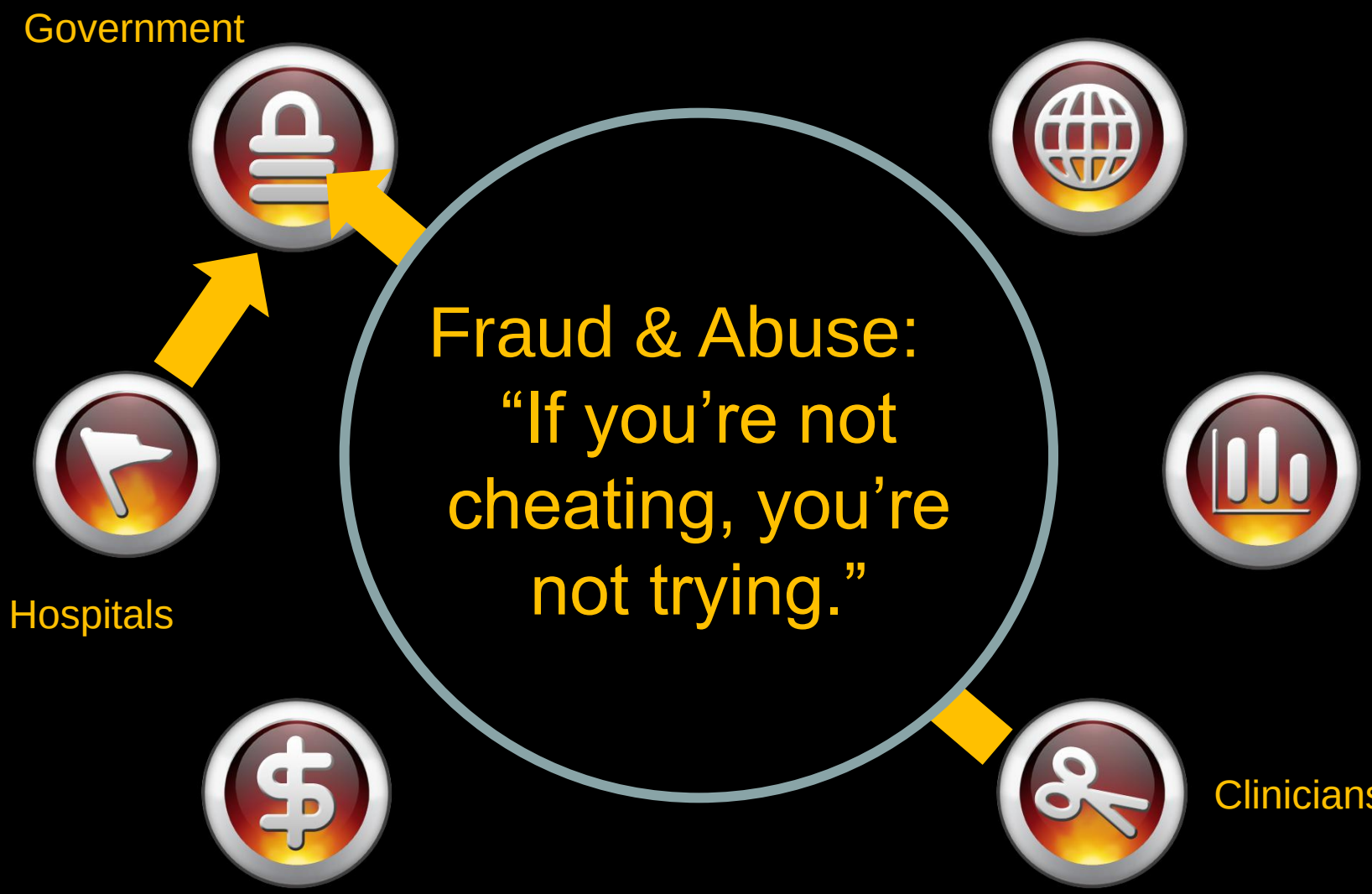
The Circle

The Circle

Government
Hospitals
Vendors
"Can that be postponed until 2020?"

The Circle

The Circle


Government
Hospitals
Clinicians
Fraud & Abuse:
"If you're not cheating, you're not trying."

If you're not guilty of *any* of these
elements of the *Blame Game*,
you shouldn't be in the room.

The principles underlying
FHIR development
are meant to address the
challenges learned in
30 years of
open standards development.

Here are several principles
we learned the hard way.
I think they are the best kind
of lessons.

Principle #1

It's not architecture;
it's city planning.

Remaining relevant.

…not just interesting.

Principle #2

A standard is not used
because we created it.
It is a standard because people
use it.

“I can’t understand why people are frightened of new ideas. I’m frightened of the old ones.”

John Cage

Principle #3

Government regulation only codifies standards. Standards bring value when they are adopted in the marketplace.

Principle #4

For information models,
one size never
fits all.

Principle #5

The only standard that
never changes
is the standard you never use.

“Knowledge is knowing that a tomato is a fruit.
Wisdom is not putting tomatoes in a fruit salad.”

Peter Kay

Principle #6

There is an inherent
Standards Life Cycle,
either stated or implied.

The entire community of
stakeholders
rely upon that knowledge.

Principle #7

Emerging standards require a Maturity Model.

Mature standards need a timeline for enhancement or sunsetting.

“Perfection is achieved,
not when there is nothing
more to add,
but when there is nothing left
to take away.”

Antoine de Saint-Exupery

The HL7 Roadmap must be visionary and keep promises.

FHIR enables an
evolutionary
development path
with
other HL7 standards*

* Many are embedded in Federal regulation

CDA on FHIR

* Consolidated-CDA is embedded in Meaningful Use

* Inconsistent implementation of C-CDA has been an impediment to interoperability

* CDA on FHIR project has been developed to overcome that challenge

HL7® FHIR®

Collaboration

JASON
Task Force
&
the Argonauts

SMART on FHIR

* SMART is a 6-year project at Boston Children's Hospital, funded by ONC, based upon an API model to enhance health data interoperability

* SMART has adopted FHIR as its standards-based API model

* The goal of SMART is the creation of an "App Store" for healthcare

SMART®

HL7® FHIR®

Sync for Science

* Joint project of ONC, Harvard Medical School, EHR vendors and NIH

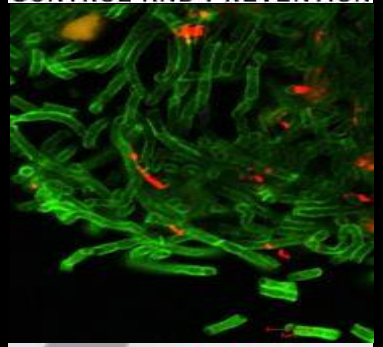
* Leverages patient-donated genomic data for clinical research and Precision Medicine

* Relies upon open APIs and FHIR

openFDA Initiative

CMS is coordinating a diverse ecosystem of developers for creation of the Blue Button on FHIR

Public Health Reporting



Mobile Health is…

…more than clinical data on a smart phone.

More than three hundred clinical organizations, IT developers, government agencies and healthcare systems *worldwide* are now committed to developing FHIR applications

Clinical Professional Societies

Payer Summit
Implementing FHIR

HL7 International Genomics Summits

Next Summit: October 26-28, Washington

HL7® FHIR®

Partners in Interoperability™

FHIR Applications Roundtable

* Showcase for FHIR Apps & Development tools

* Platform for best practices & collaboration

* Apps & tools in demonstration environment

* Harvard Medical School, July 27-28
  Duke University, March 8-9, 2017

HL7 FHIR Foundation

FHIR.ORG

- Non-profit community for Implementers
- Implementation Registry
- Reference implementations & task tracking
- Community Forum & Help Desk
- Resources for conformance testing and public reference implementations

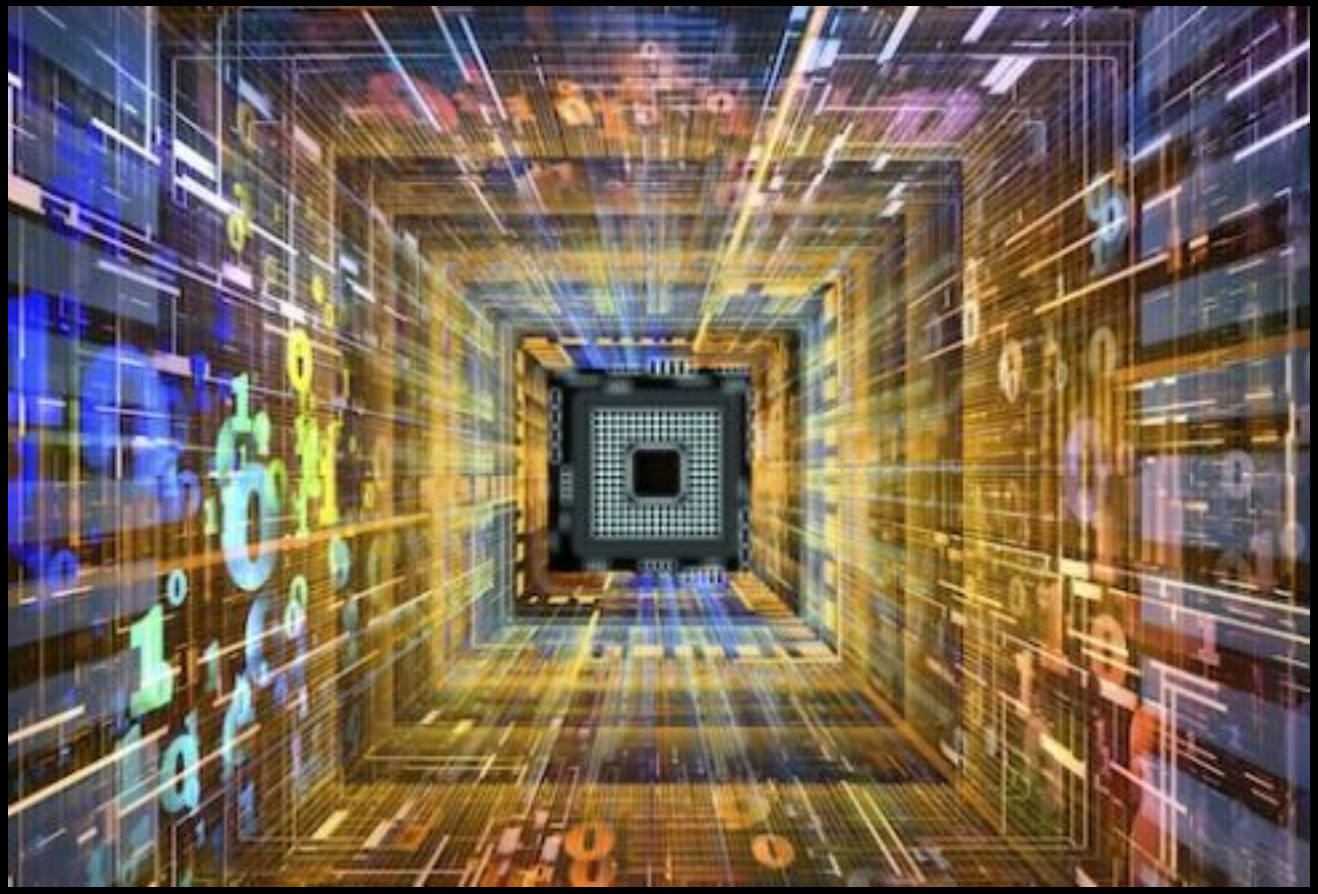
HL7® FHIR®

"We can't solve problems with the same kind of thinking when we created them."

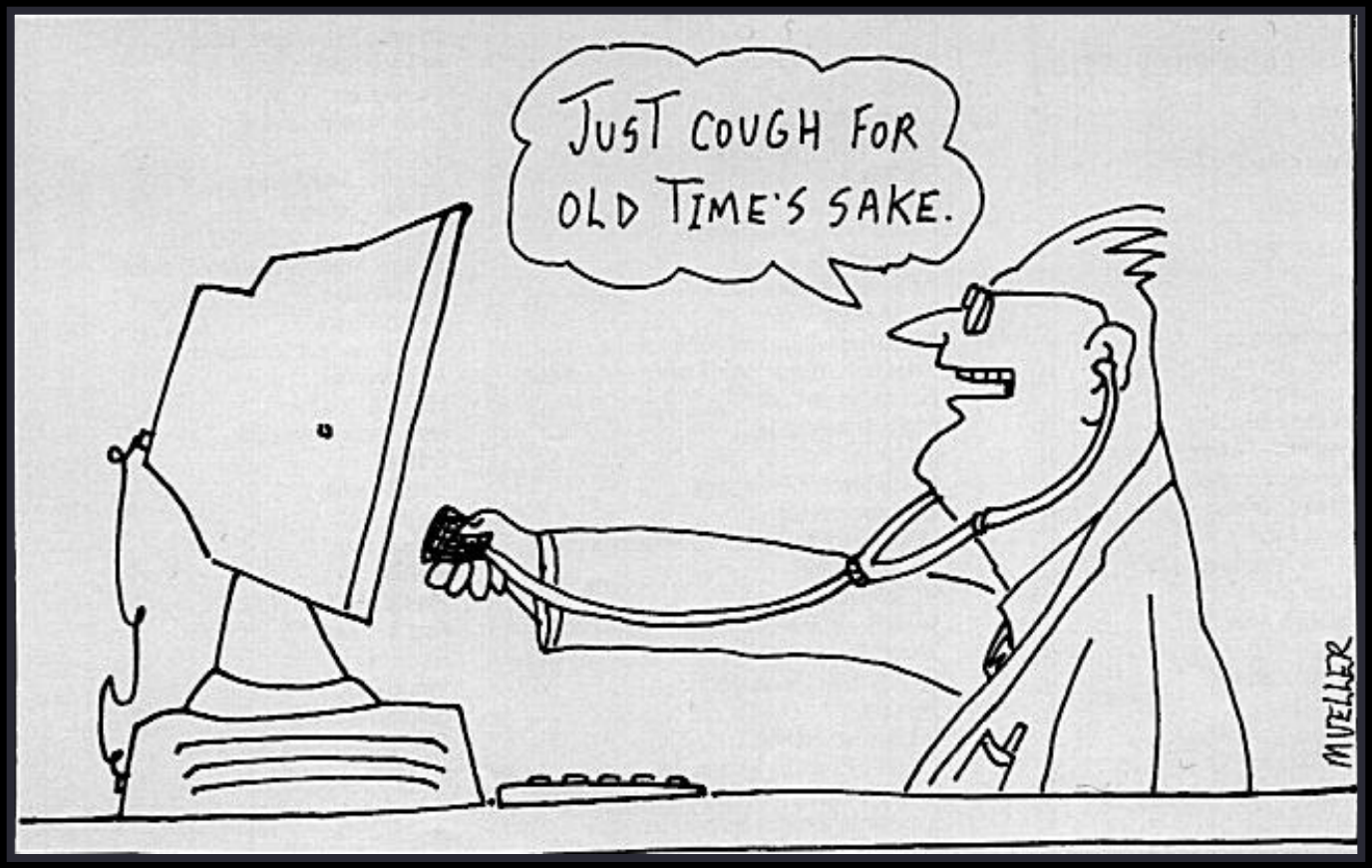
Albert Einstein

“It’s not enough to show up.
You’ve got to have a Business Plan.”

Analytics may be the answer, but you can't get there with bad data.



Thanks



cjaffe@hl7.org