Money

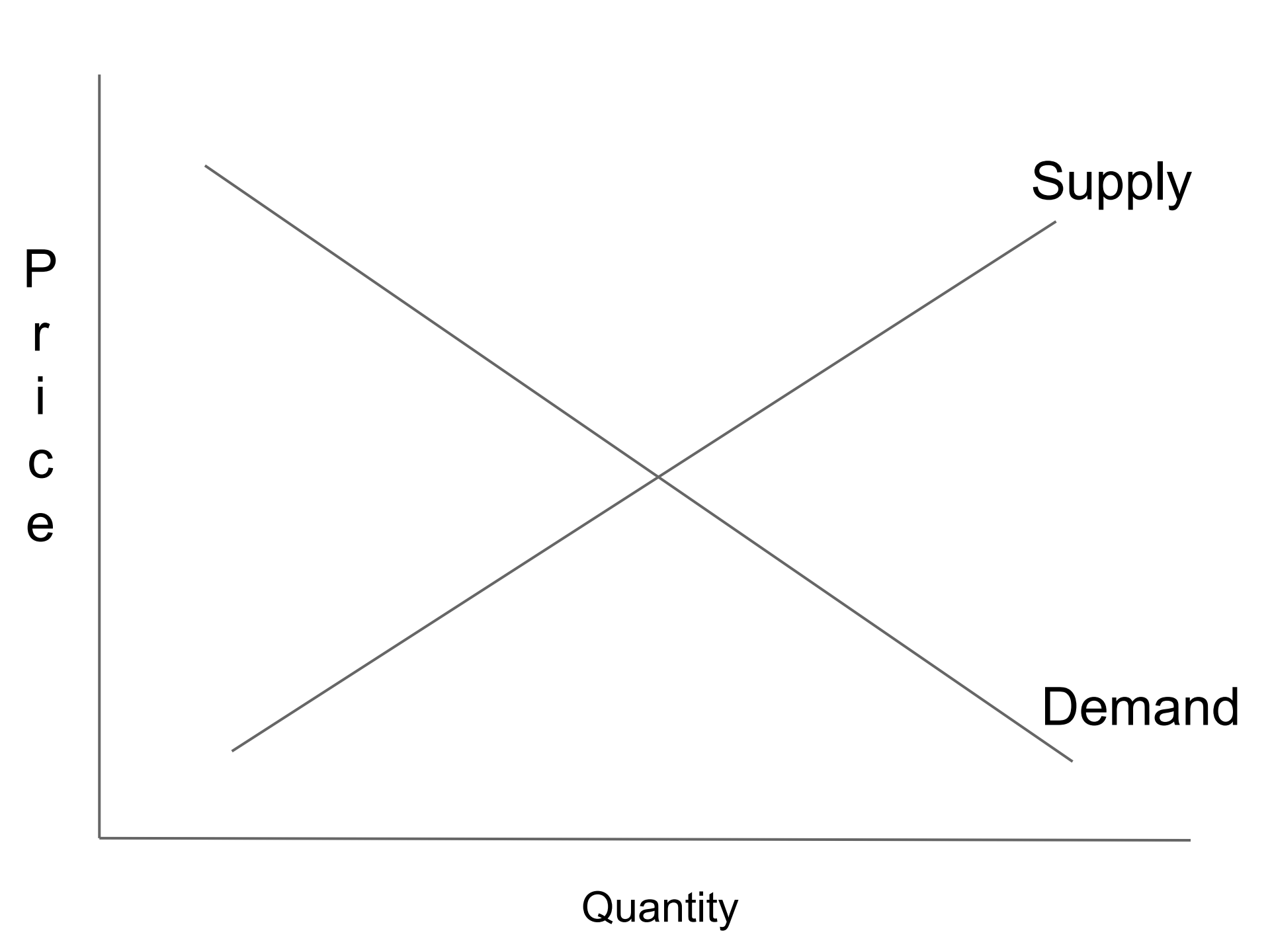
i290M Open Collaboration and Peer Production

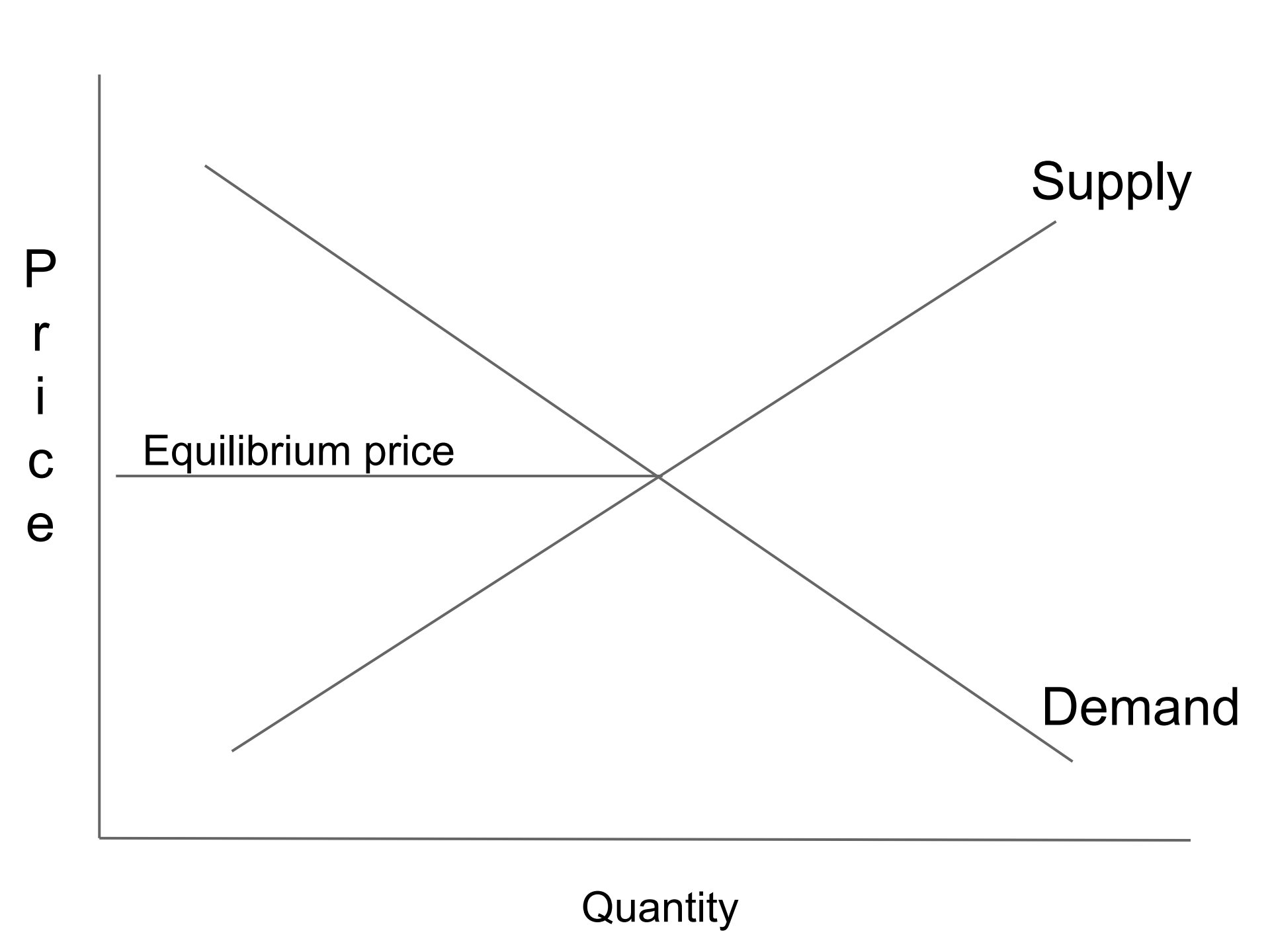
Sebastian Benthall

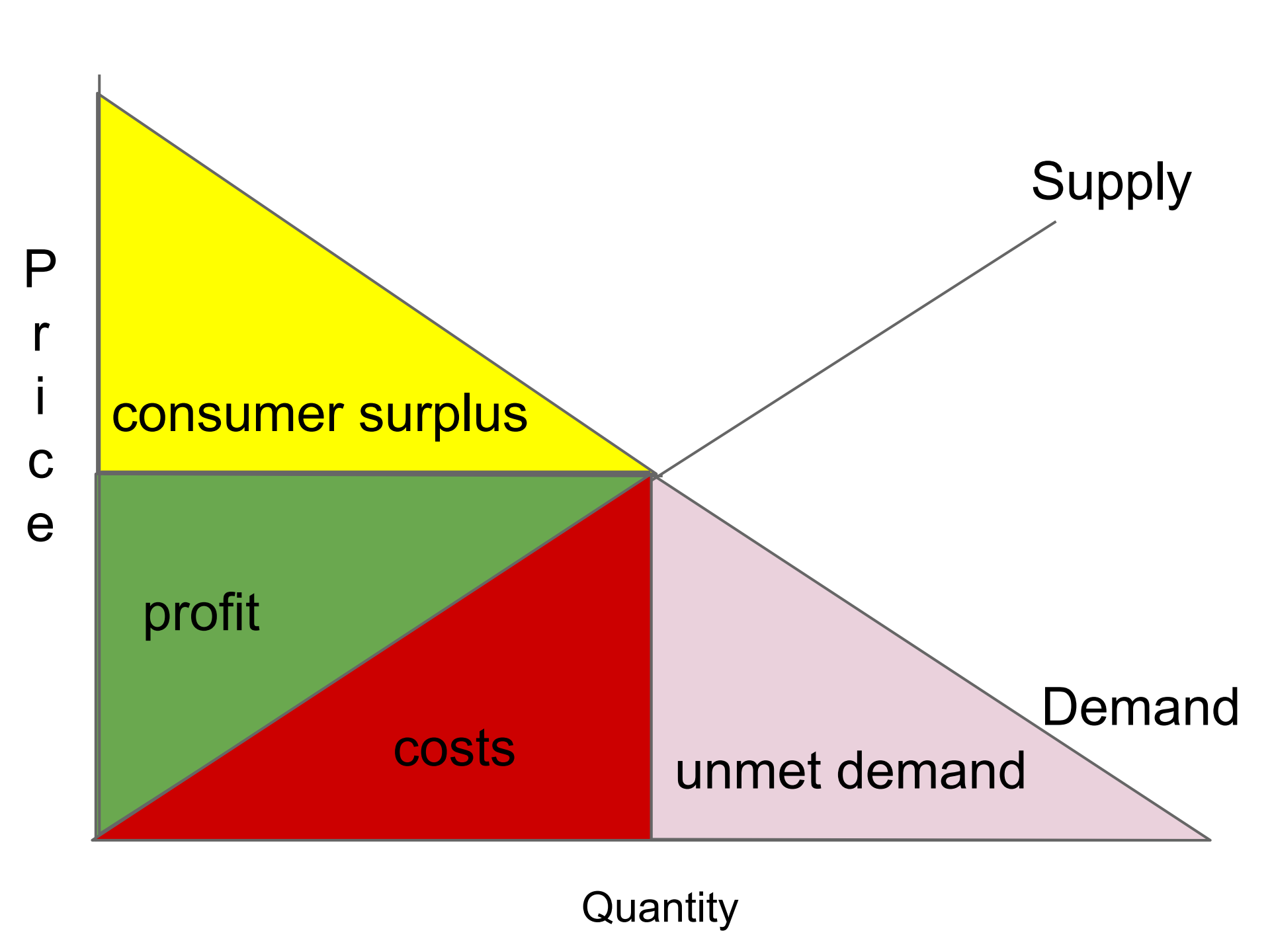
The two main points of this lecture:

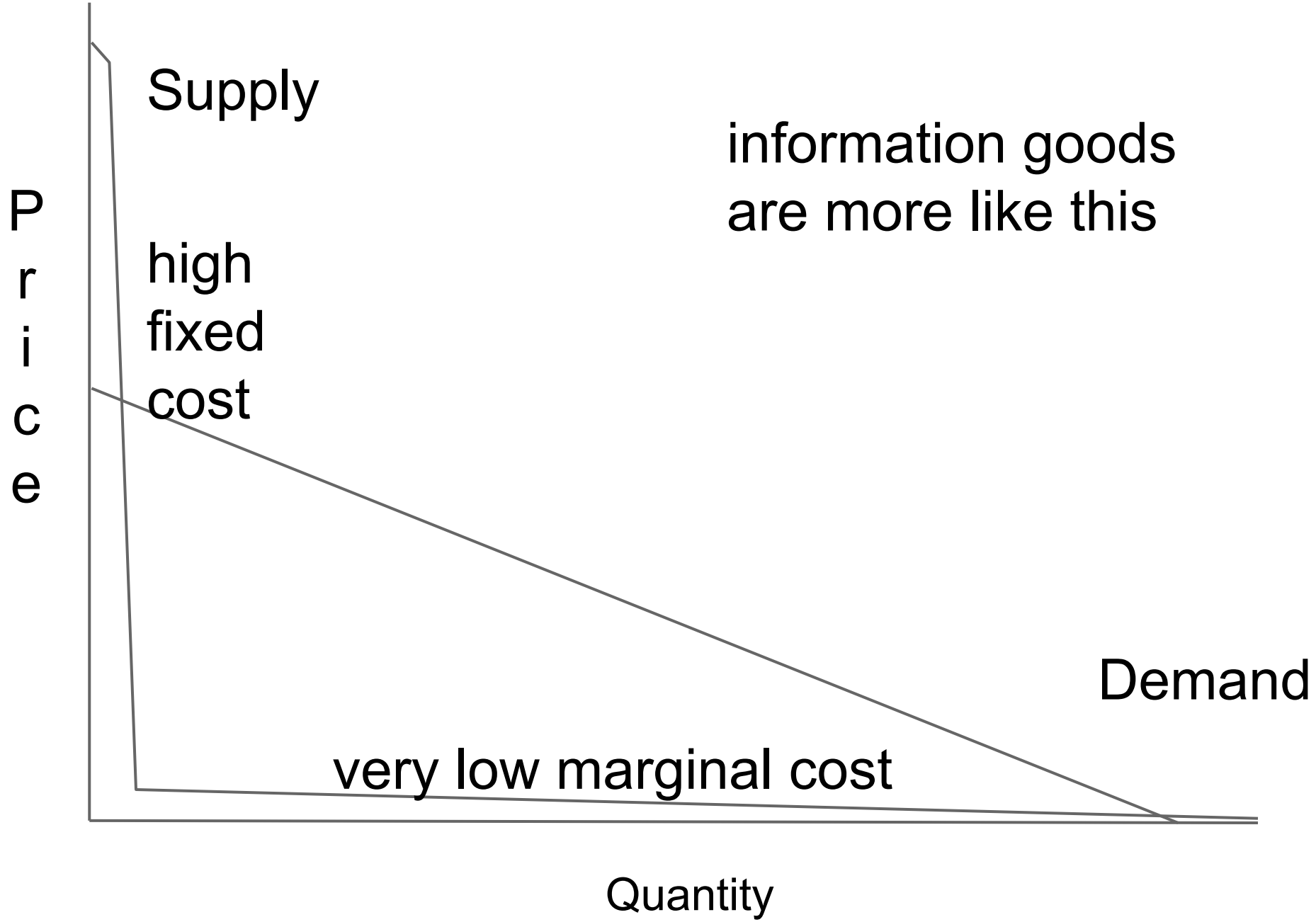
1) Learn how open intellectual property affects the information economy

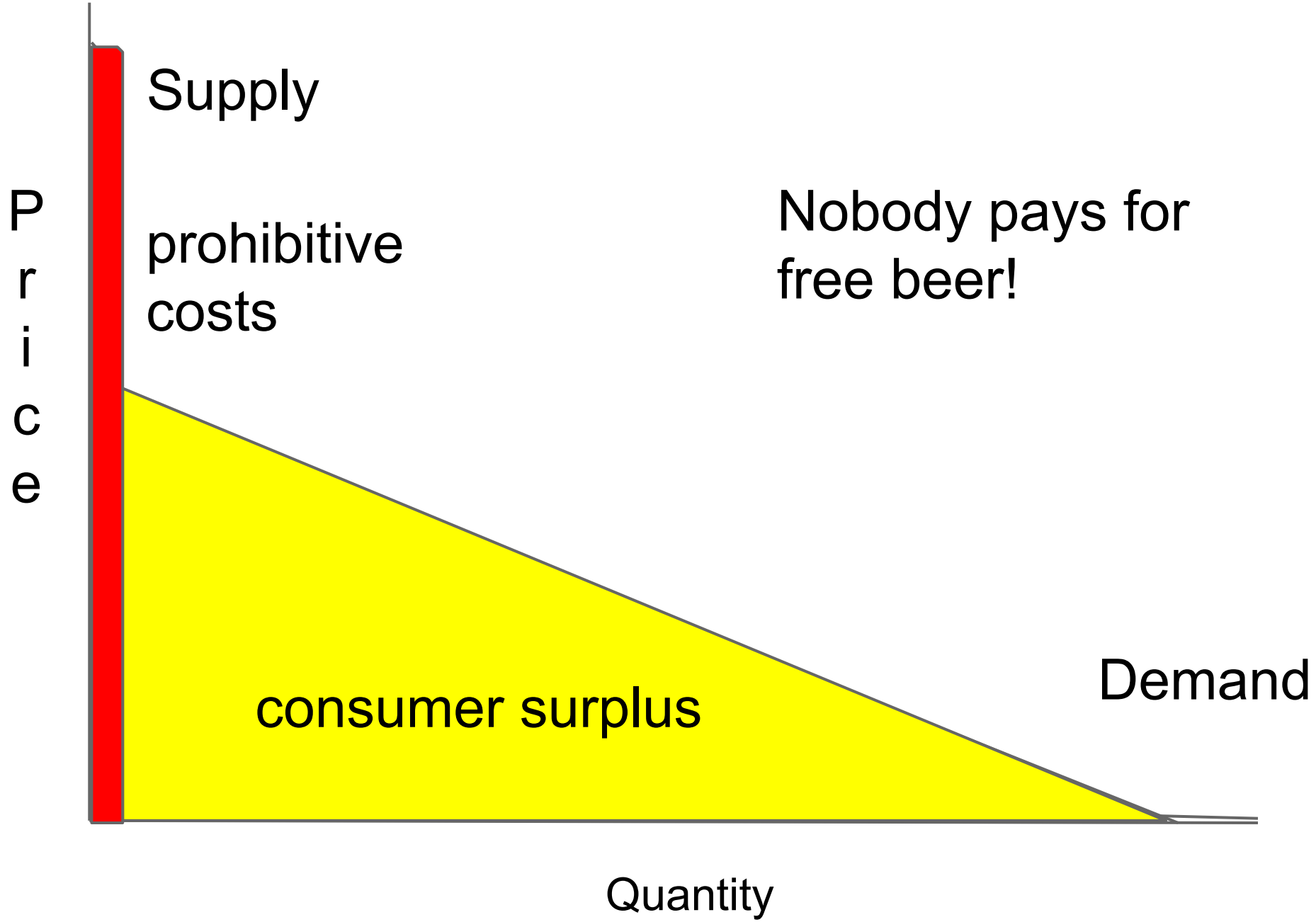
2) Strategies to make $$$ in an economy saturated in open IP


Supply
Demand
Price
Quantity


Supply
Price
Equilibrium price
Demand
Quantity


Price
Supply
consumer surplus
profit
costs
unmet demand
Demand
Quantity


Supply
information goods
are more like this
P
r
i
c
e
high
fixed
cost
Demand
very low marginal cost
Quantity


Supply
prohibitive costs
Nobody pays for free beer!
Price
consumer surplus
Demand
Quantity

A Myth

- Free as in free beer
- Created by volunteers “scratching their own itch”
- Only other option is artificial monopoly through intellectual property law

The information economy is *much more complicated* than that

We need to talk
labor and *capital*

la·bor

human activity that provides the goods or services in an economy *(2)* **:** the services performed by workers for wages as distinguished from those rendered by entrepreneurs for profits

Merriam-Webster

cap·i·tal

(1) : a stock of accumulated goods especially at a specified time and in contrast to income received during a specified period; also : the value of these accumulated goods (2) : accumulated goods devoted to the production of other goods (3) : accumulated possessions calculated to bring in income

Merriam-Webster

Labor	Capital
Hammering/Drilling	*Factory machines*
Cleaning	*Vehicles*
Coding	Software
Writing/Reading	Data (including Content)
Clicking?	

Labor

Hammering/Drilling

Cleaning

Coding

Writing/Reading

Clicking?

Capital

Factory machines

Vehicles

Software

Data (including Content)

Skills, Knowledge, Social Connections...

Labor

Hammering/Drilling

Cleaning

Coding

Writing/Reading

Clicking?

Capital

Factory machines

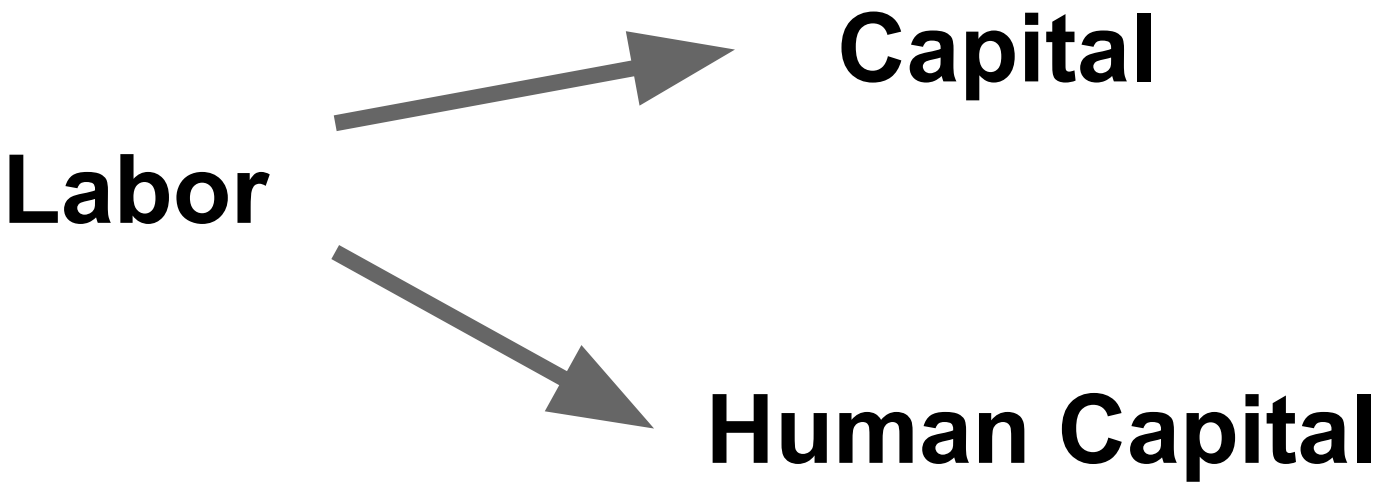
Vehicles

Software

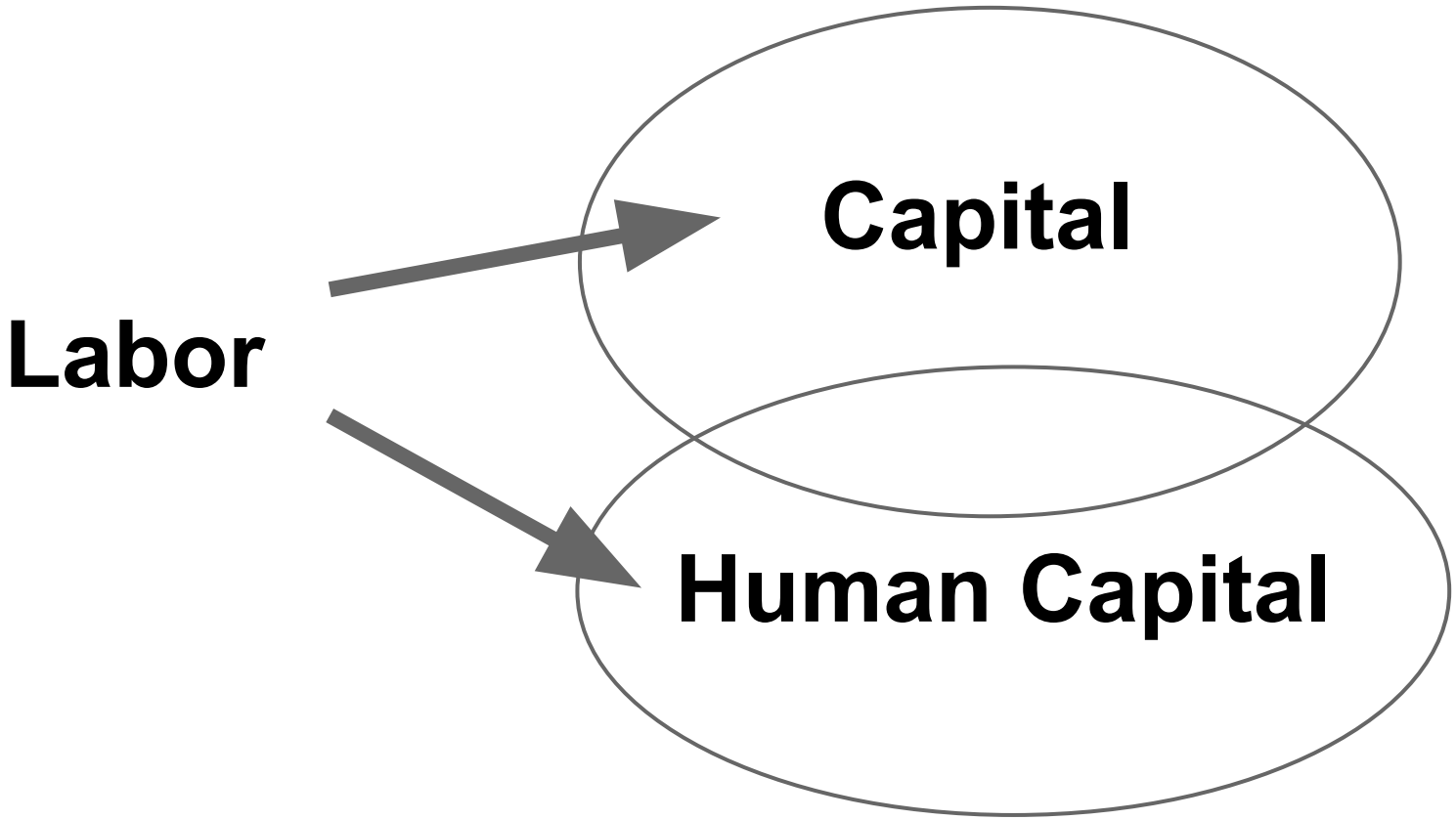
Data (including Content)

Human Capital

Skills, Knowledge, Social Connections...

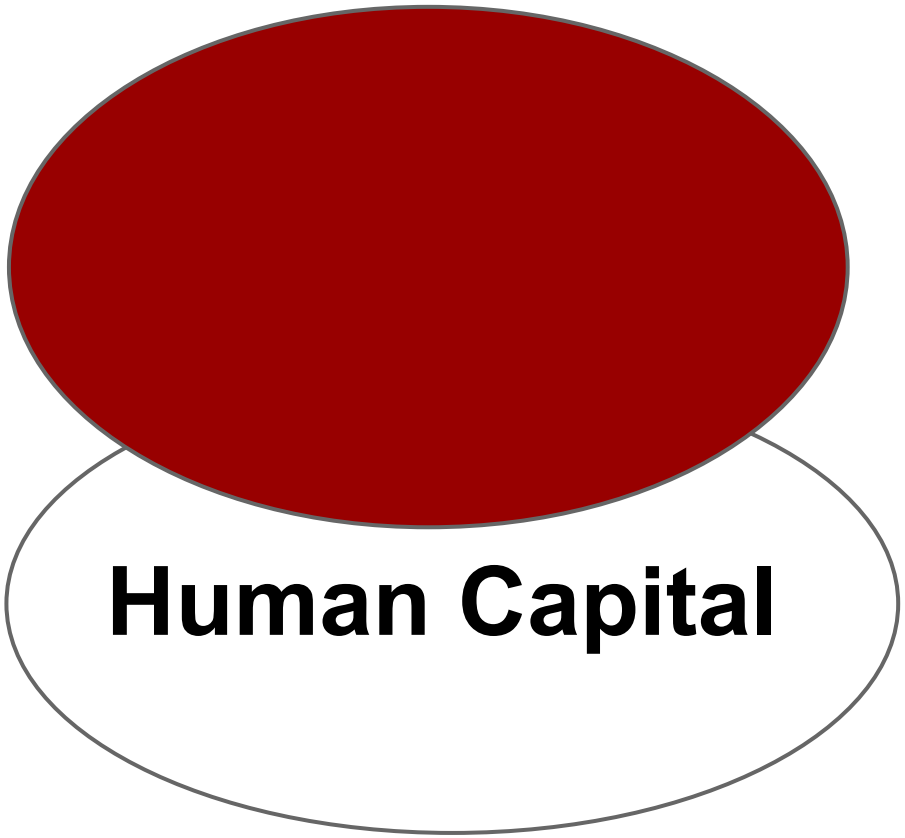


As you work, you create capital and human capital.



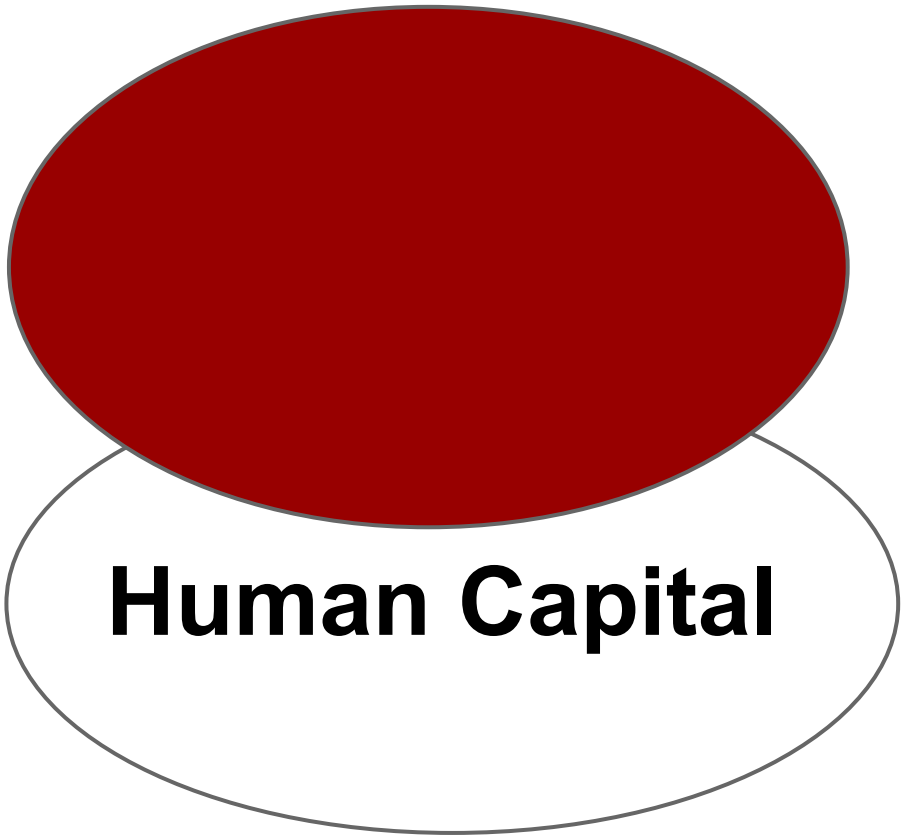
Your human capital will partly be expertise in the particular capital you work with.

Labor



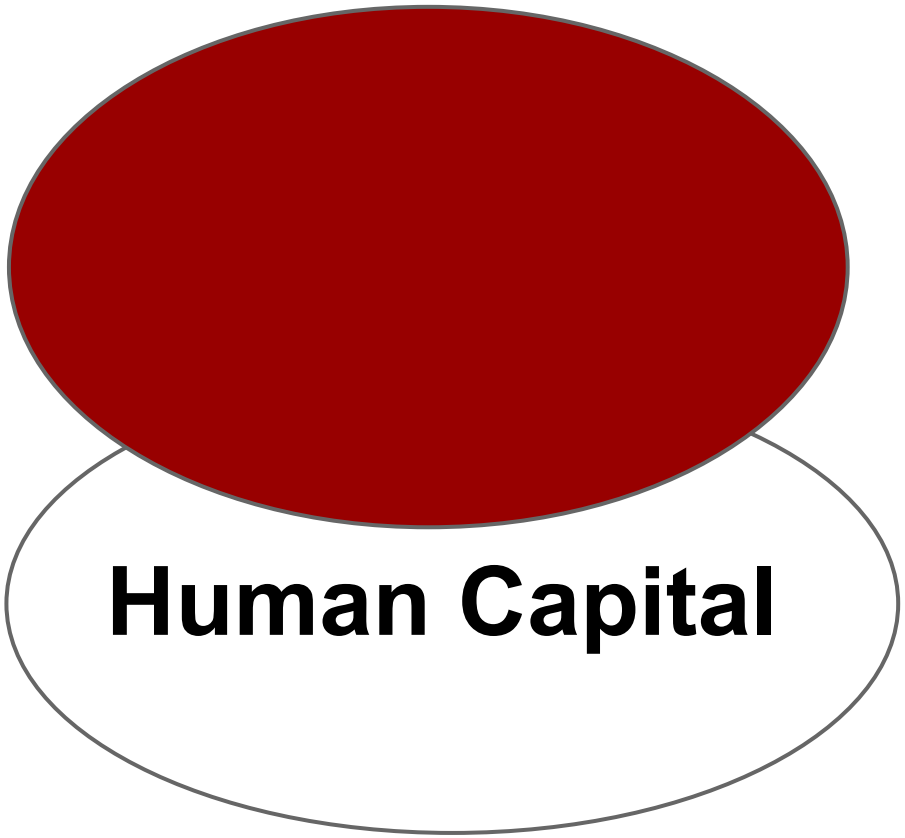
If you lose access to the capital, you lose access to the human capital that depends on it.

Labor



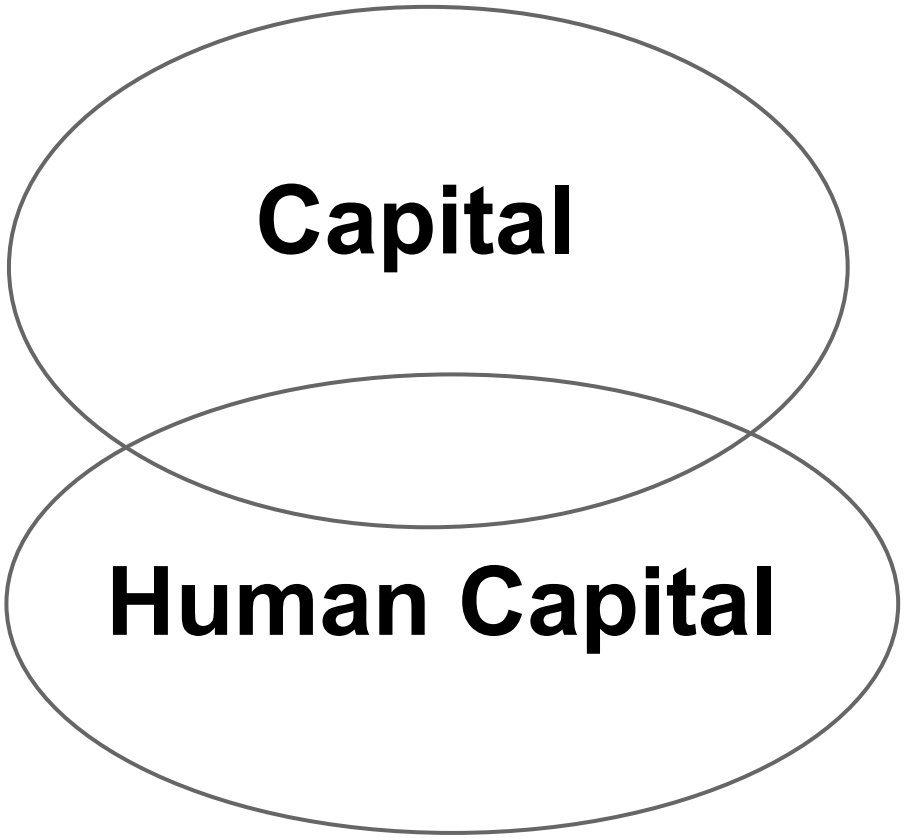
For example, some proprietary software developers feel this way when they change jobs.

Labor



This means they take a pay cut if they change jobs. This weakens their bargaining power overall.

Labor



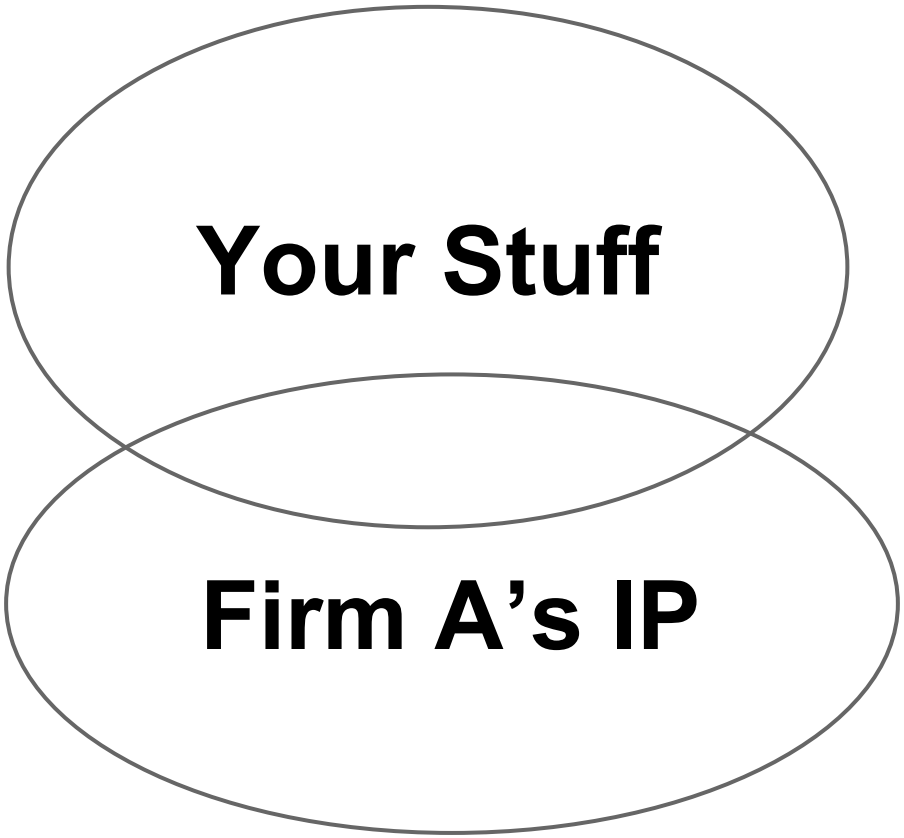
Whereas people who work with open capital get to keep that capital and their human capital wherever they work.

This is one reason many skilled people would rather work in the open

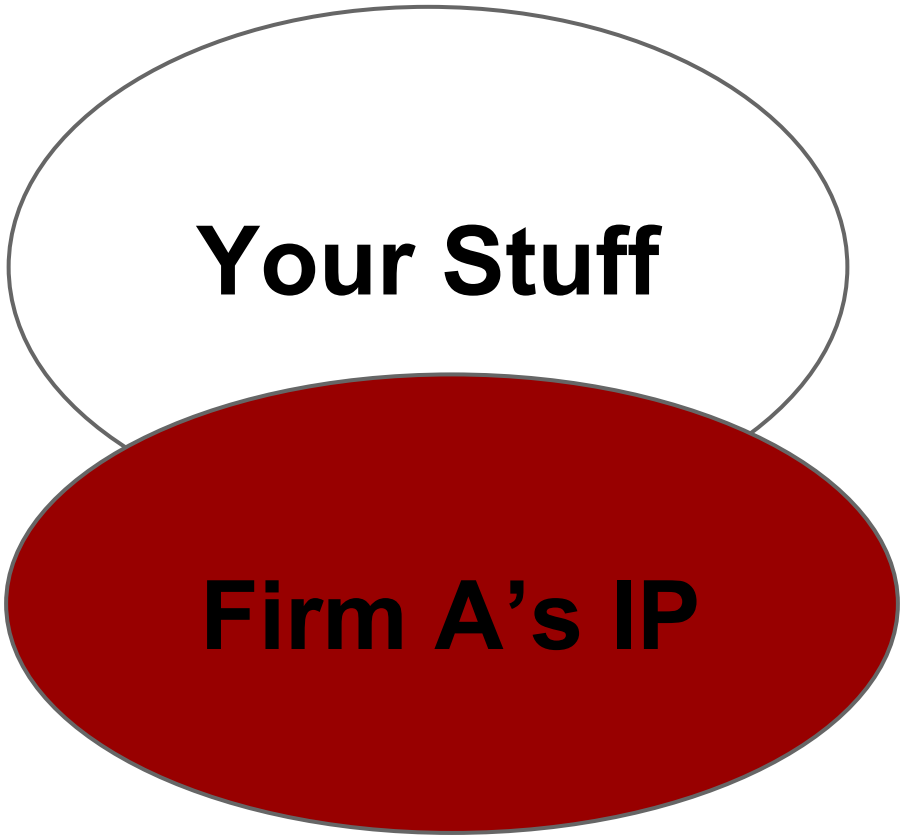
Another is **visibility**: human capital is worth more when others can see it (compare with LinkedIn, etc.)

We also need to talk about *vendor lock-in*

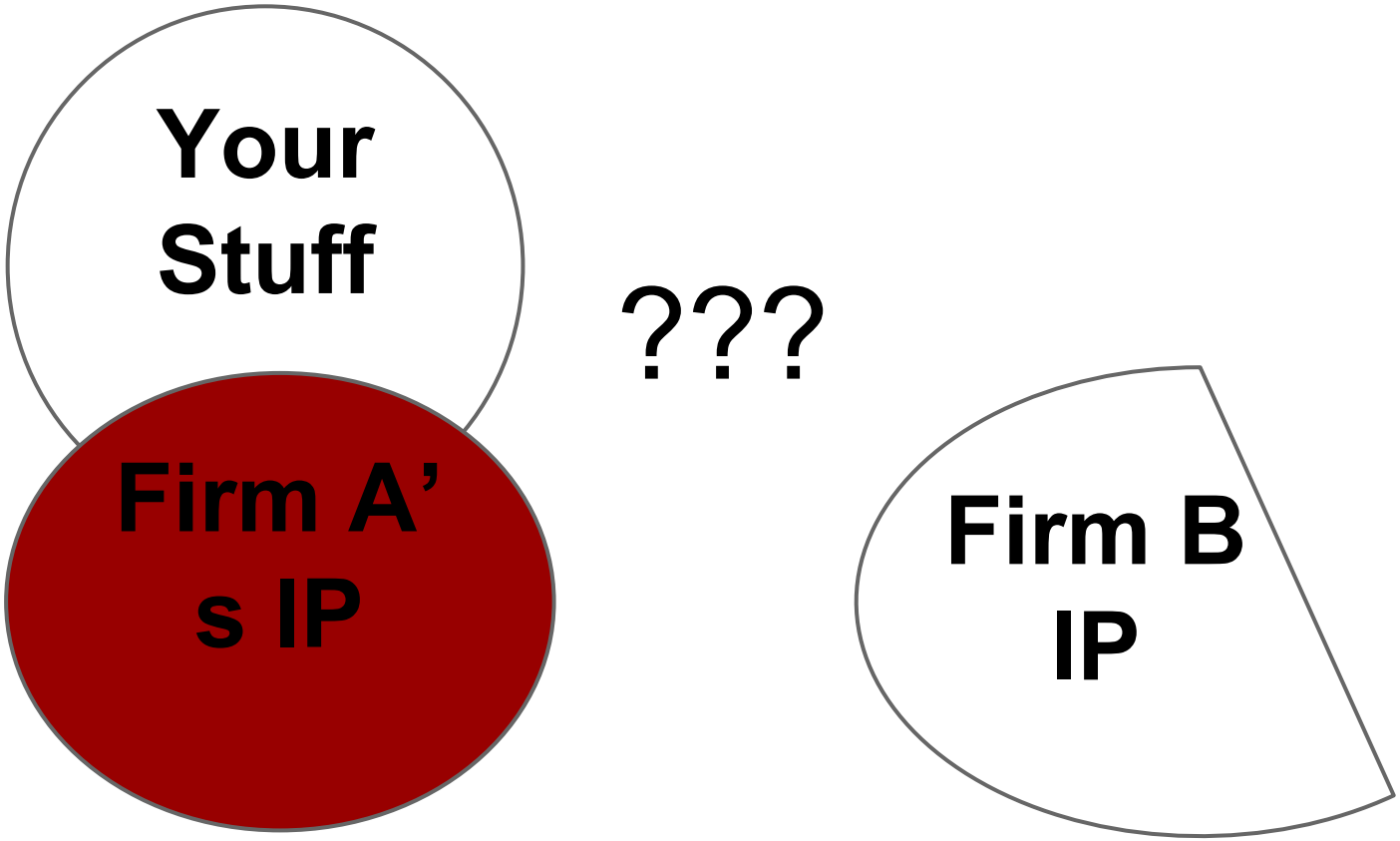
Say you want to create some new technology or organization. You want to start with Firm A's IP.



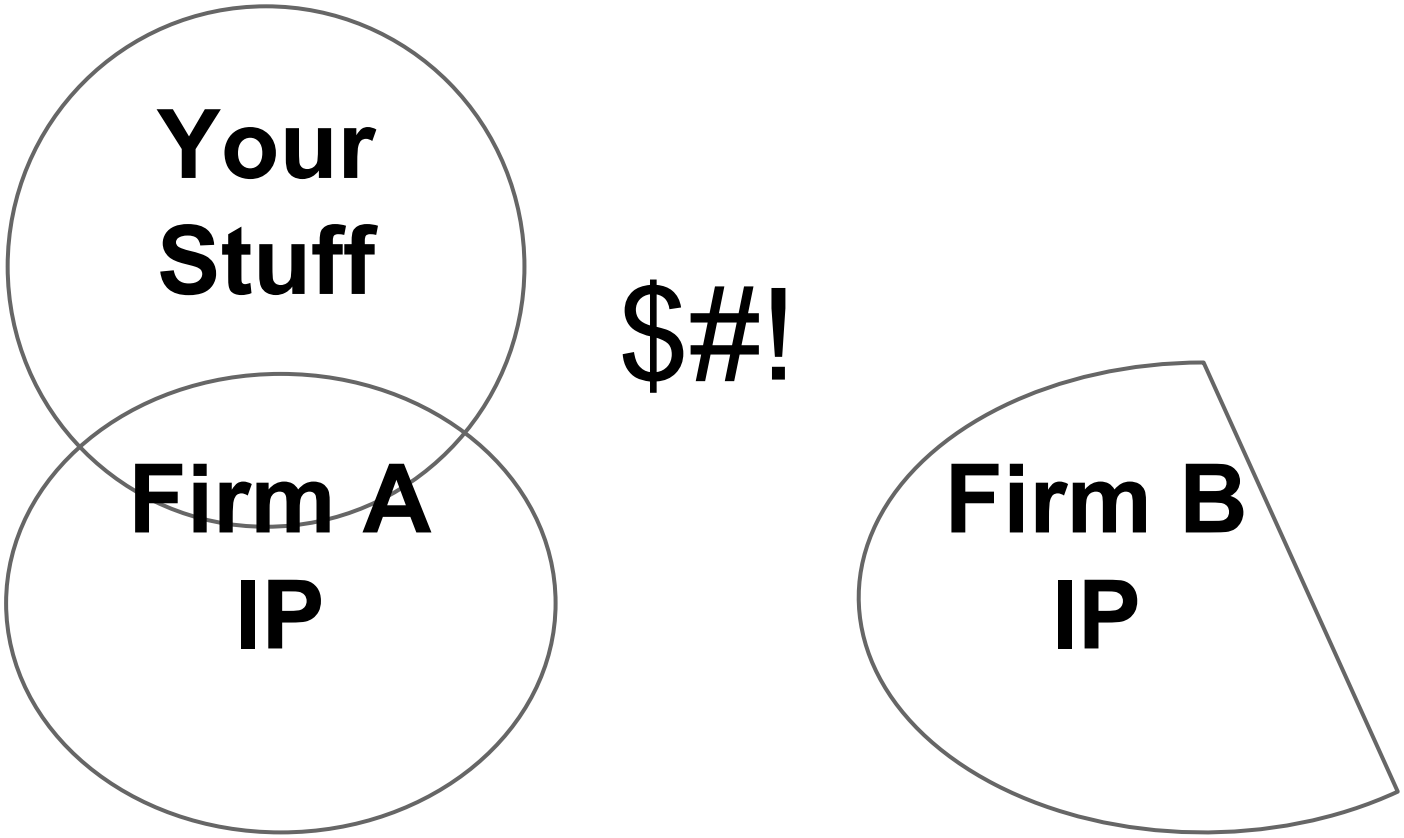
When you create your thing, it is intertwined with Firm A's IP.



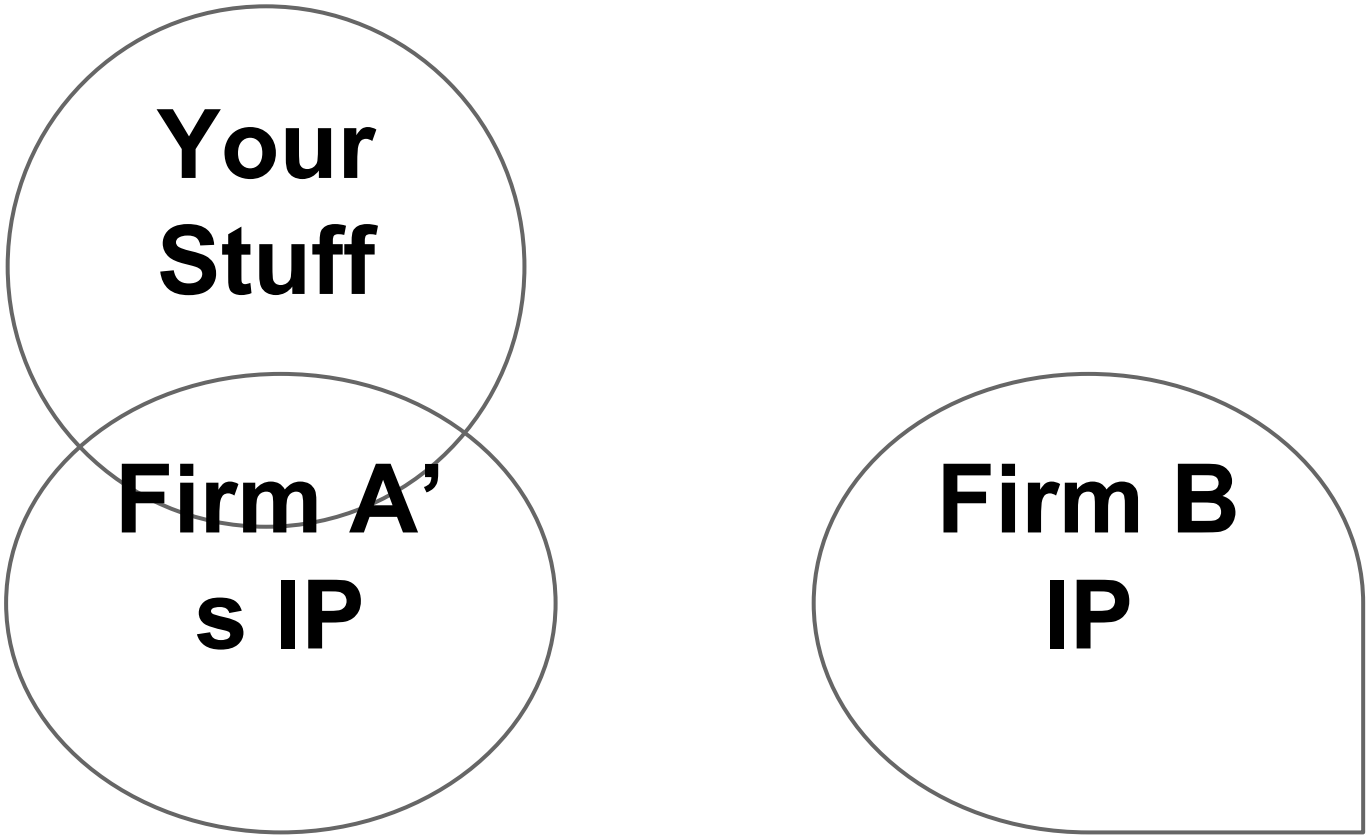
Firm A can take it away.
Then you lose your foundation.



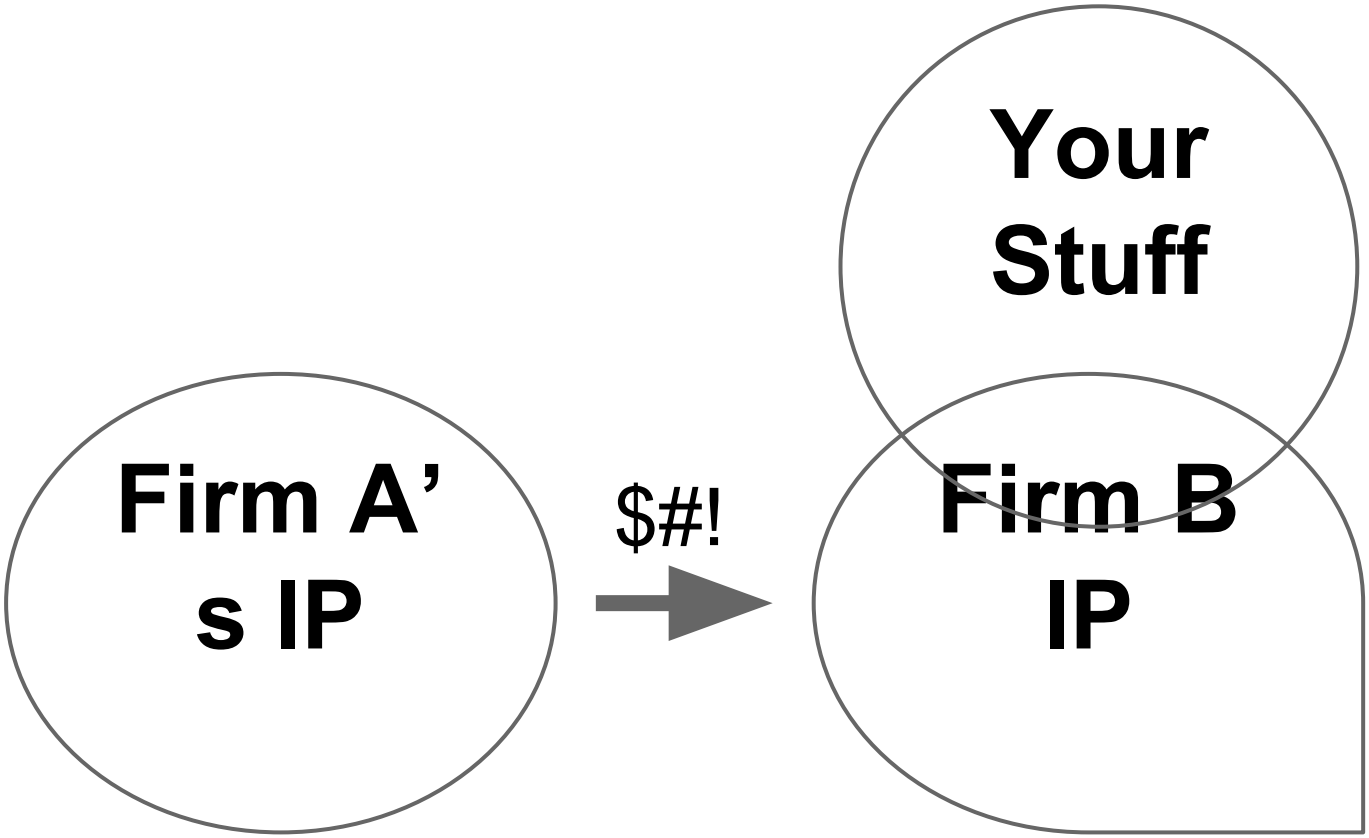
Firm B may offer a substitute, but it's the wrong shape.



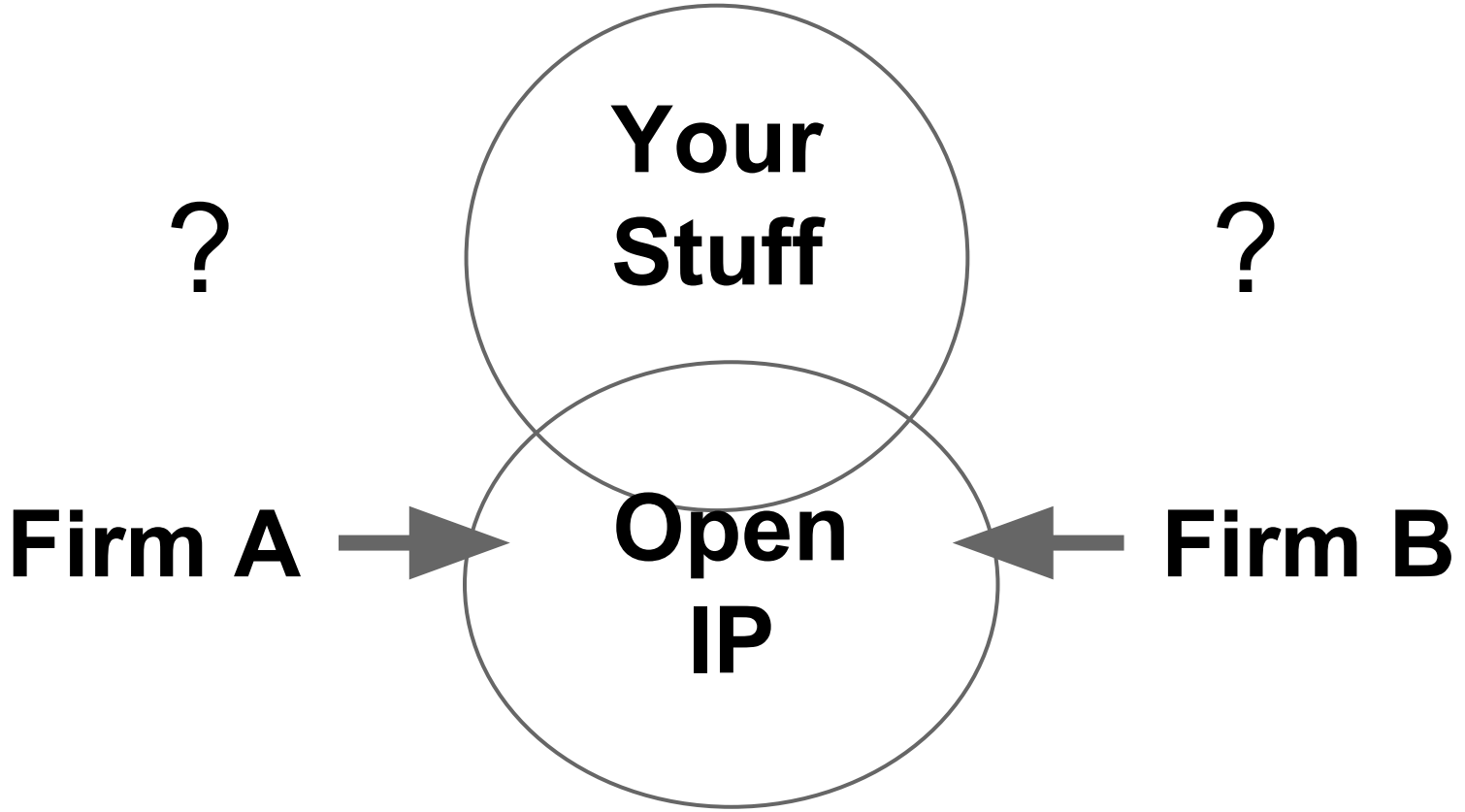
Firm A, the vendor, has you “locked in”.



If the two firms use the same interface, like an “open standard”, there is less switching cost.



But you still had to change the underlying foundation. That can cause trouble.



If the foundational IP is open,
firms A and B compete to support it for
you with less lock-in.

Vendor lock-in and *employee lock-in* are two sides of the same coin

In both cases, open IP results in more market liquidity for skills and IT support

liq·uid·i·ty

The degree to which an asset or security can be bought or sold in the market without affecting the asset's price.

Investopedia

Claim:

This is a more meritocratic system

Consequence:
Few enterprises switch *away* from open source solutions

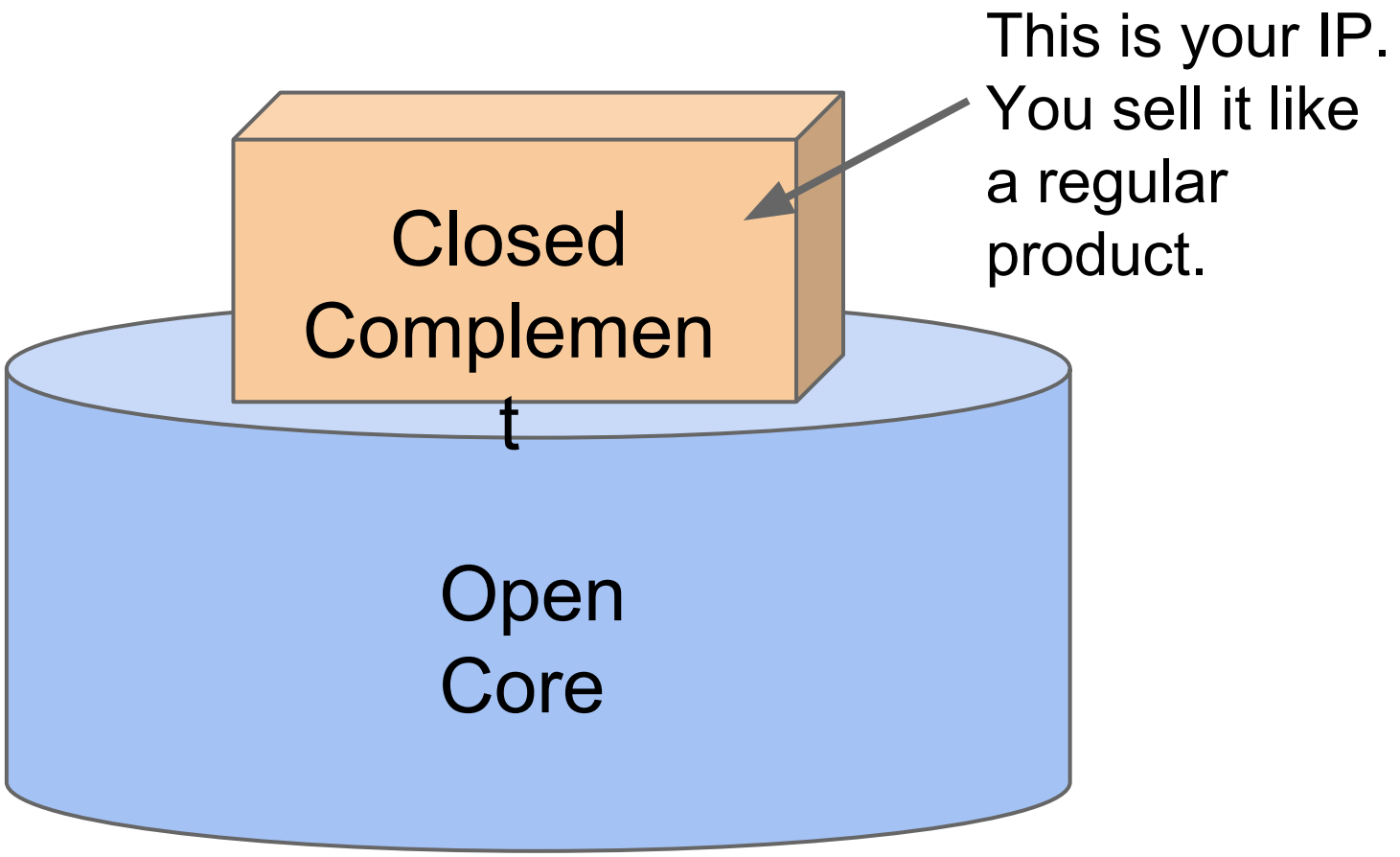
Business models

Industry Jargon

- *Software as a Service* - a way of selling software; you host it and the data on “the cloud” and users access it through a client
- *Enterprise software* - software sold to organizations like businesses, governments, non-profits, as opposed to individual consumers.

Proprietary Frosting

a.k.a. the “Open Core” model



“Open Core” Model

- You get to use lots of free technology
- You can make money
- You have the option of investing back into the open core, or free riding
- Incompatible with GPL unless SaaS

Examples: Most enterprise software using open libraries/languages, Twitter, GitHub, ...

Probably most software on the market now is “open core” loosely

That’s like saying “employees at most companies check Wikipedia”

More subtle: should a company ever *contribute* to open IP?

Reason 1:
Employee retention (no employer lock-in)

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Employee retention (no employer lock-in)
Preston-Werner Paradox?

Reason 2:
"Giving back to the community"

For PR reasons

Reason 3: Attracting participation/investment from other firms

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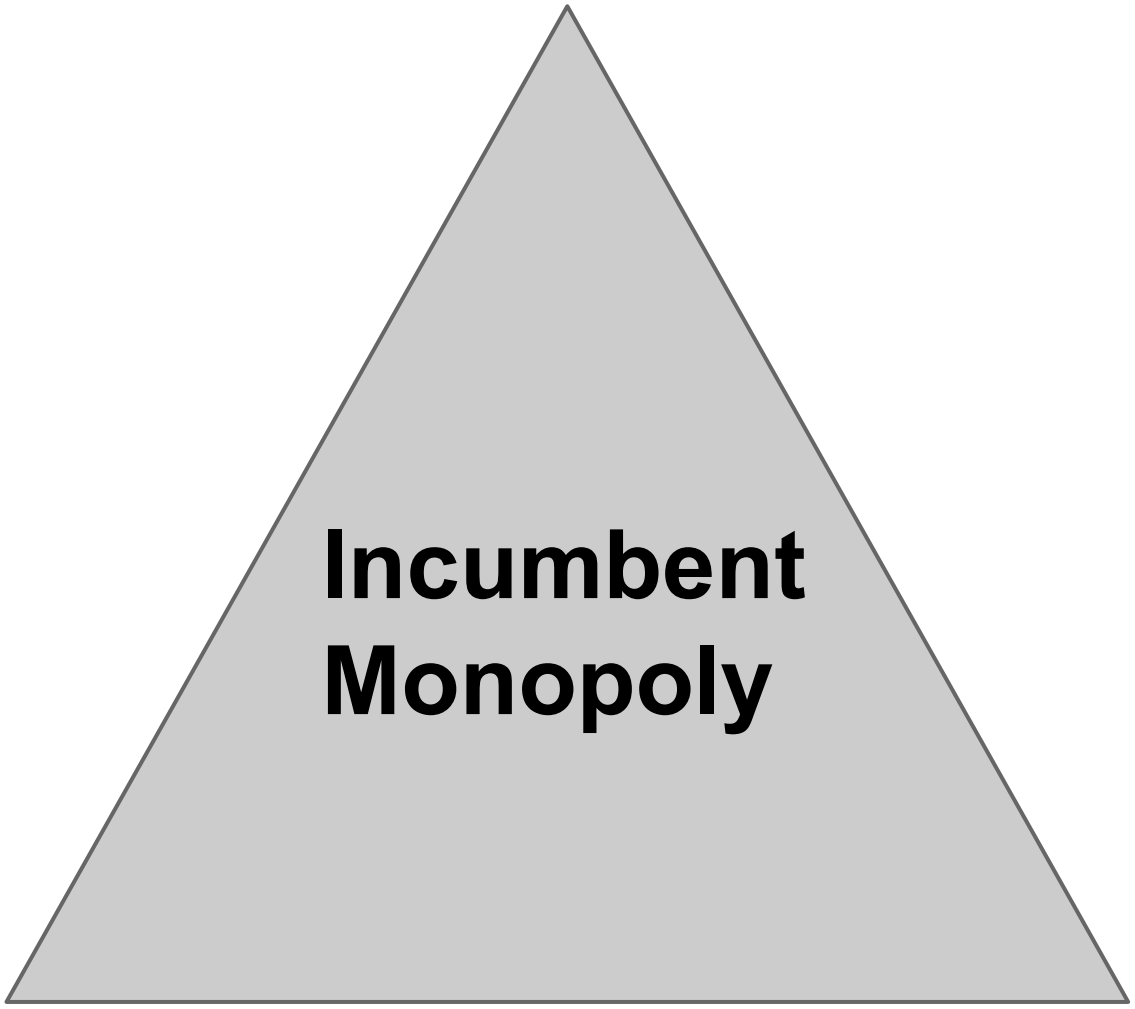
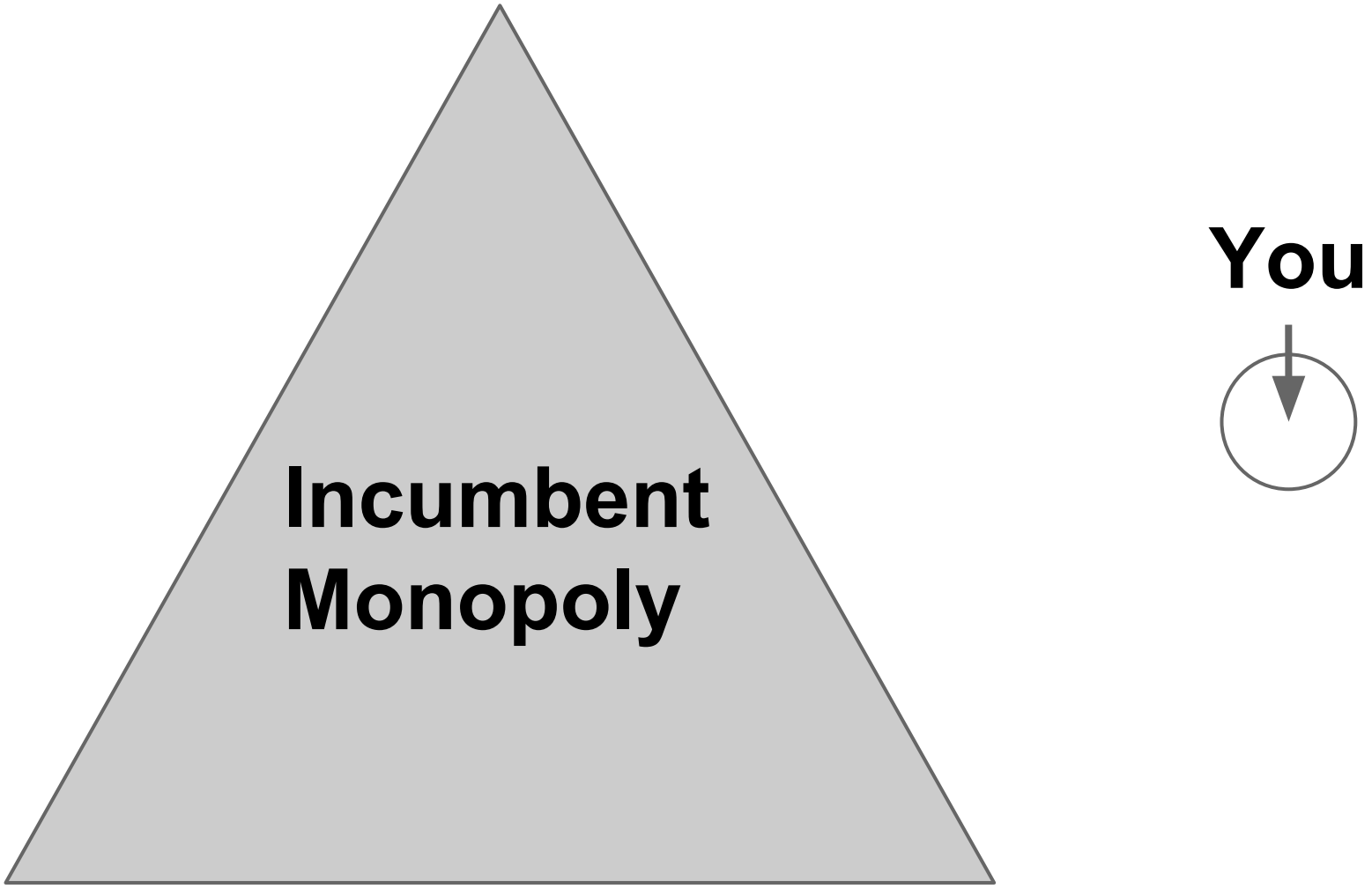
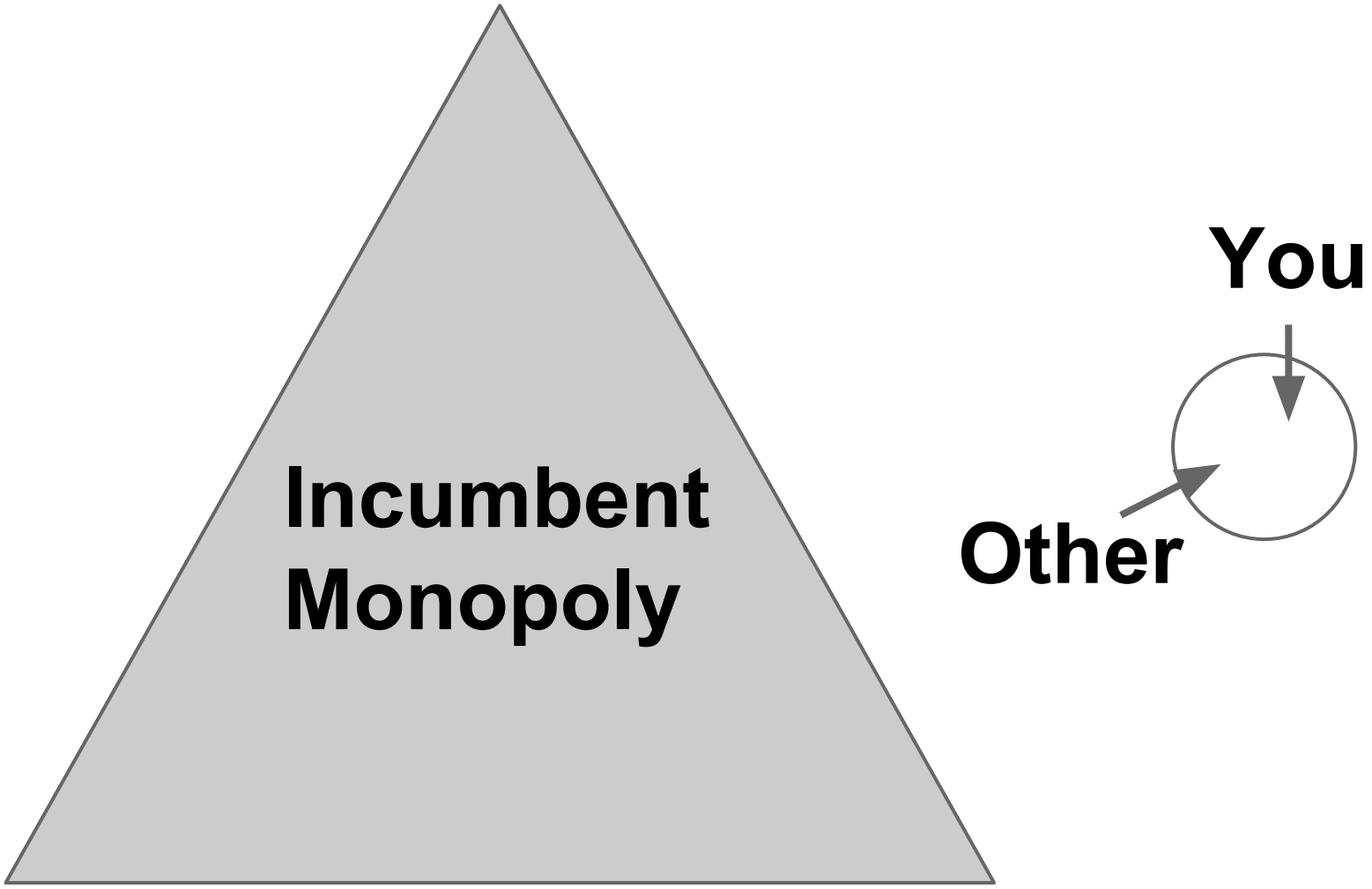
Attracting participation/investment from other firms
e.g. trust busting



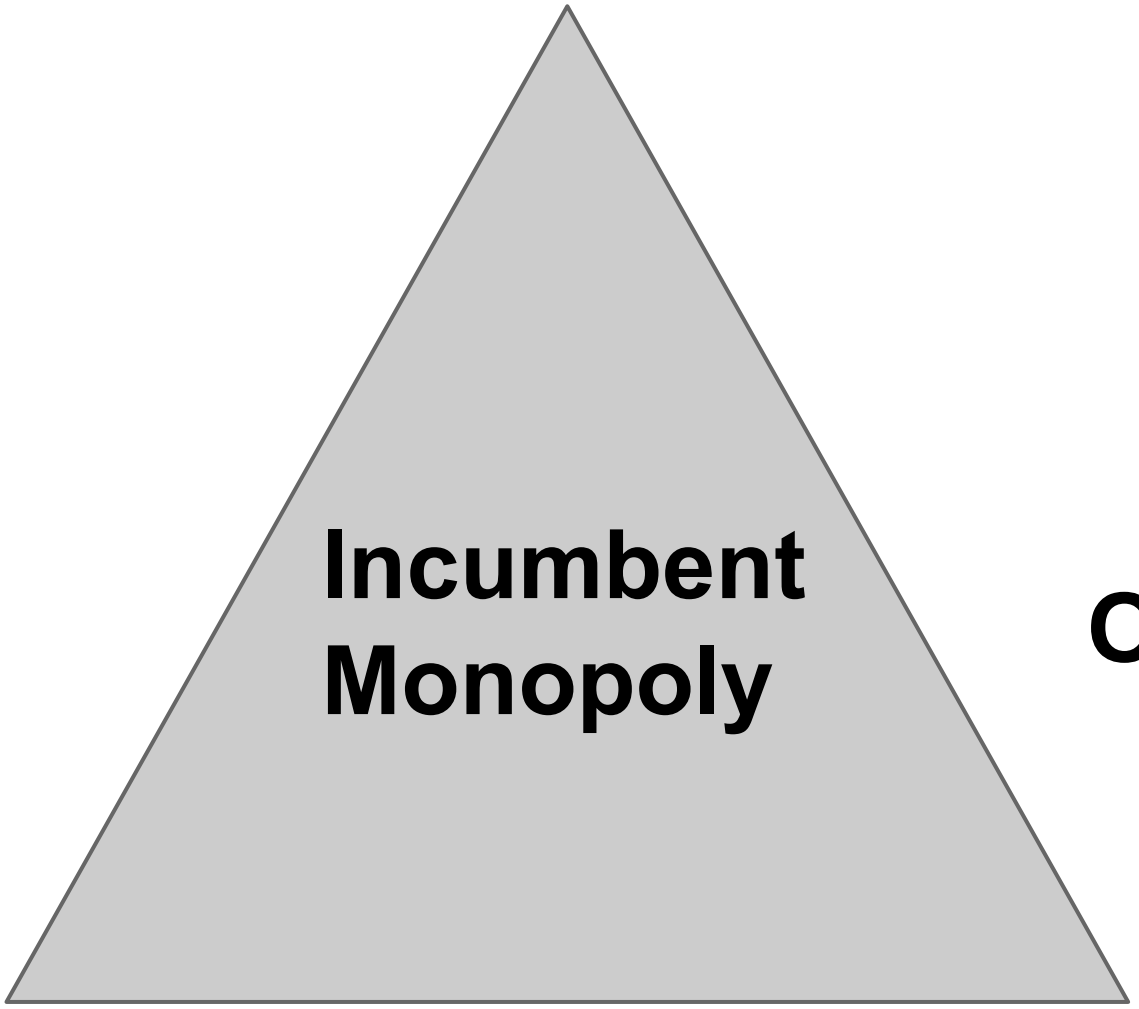
Suppose you have a market dominated by a large incumbent monopoly

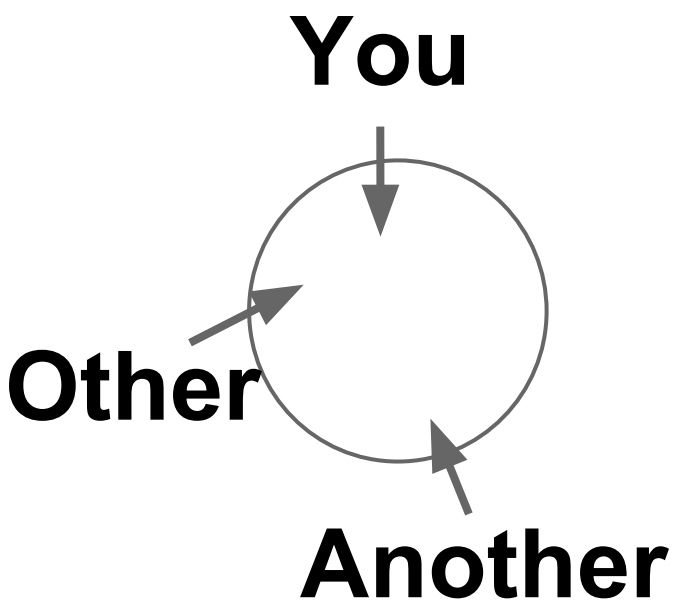


You might try to compete by introducing an open source alternative



You might not be able to go it alone, but the open solution encourages other market entrants.





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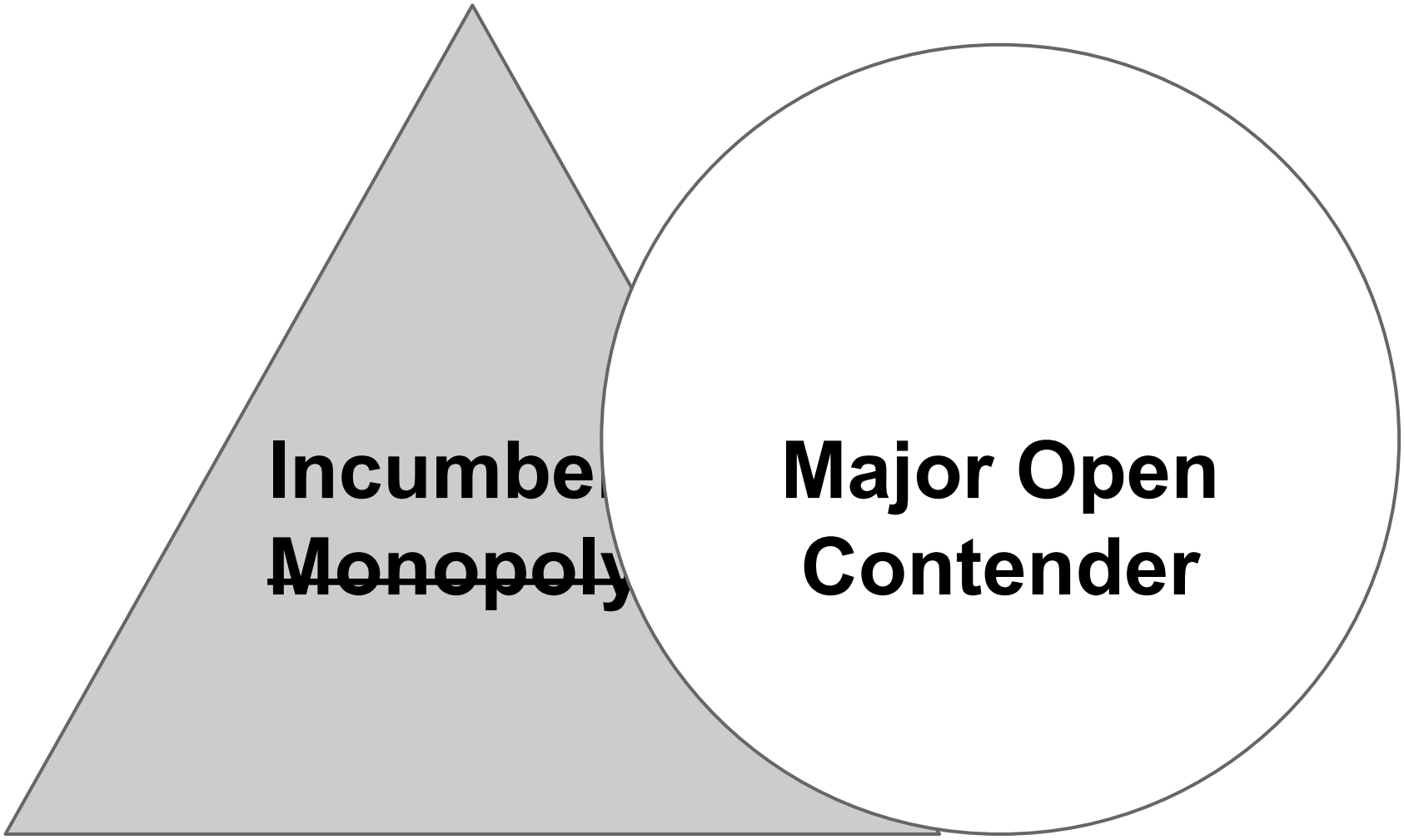
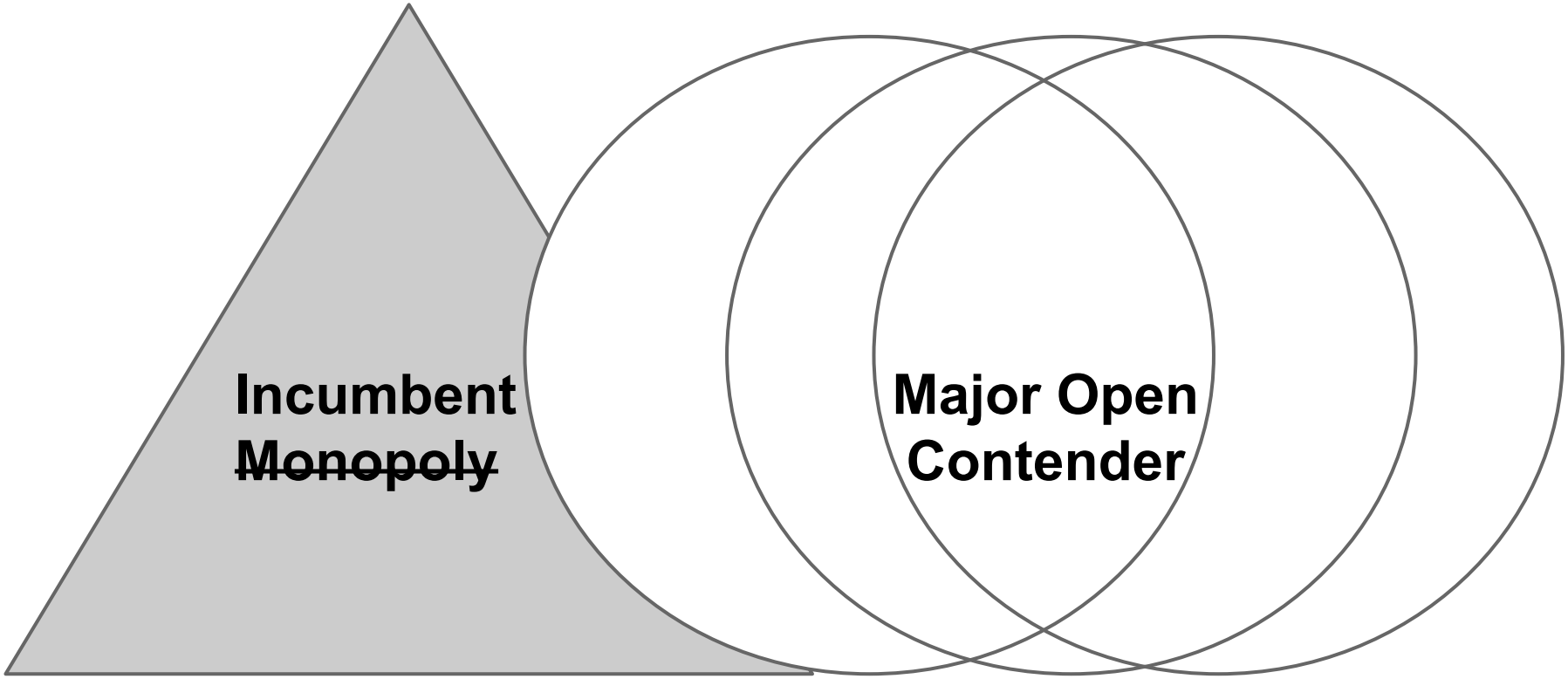


These project can become a big deal.
c.f. Android



These more competitive markets are more efficient and cheaper for consumers

Not just software. Arguable, this is like what happened to encyclopedias.

Sometimes, an open solution becomes market dominant.

Let's discuss:

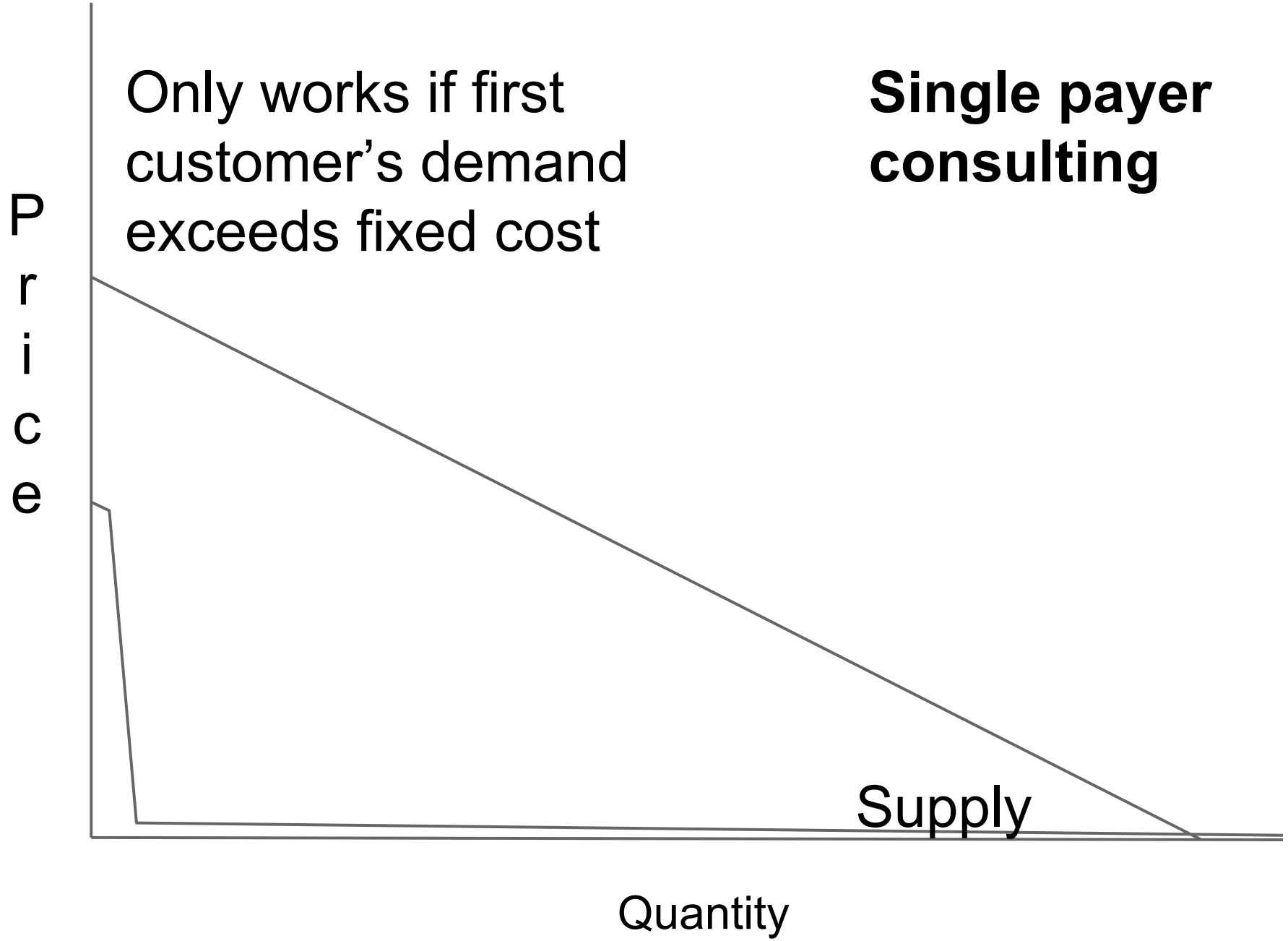
The
Open Core
model is
effective,
but unsatisfying

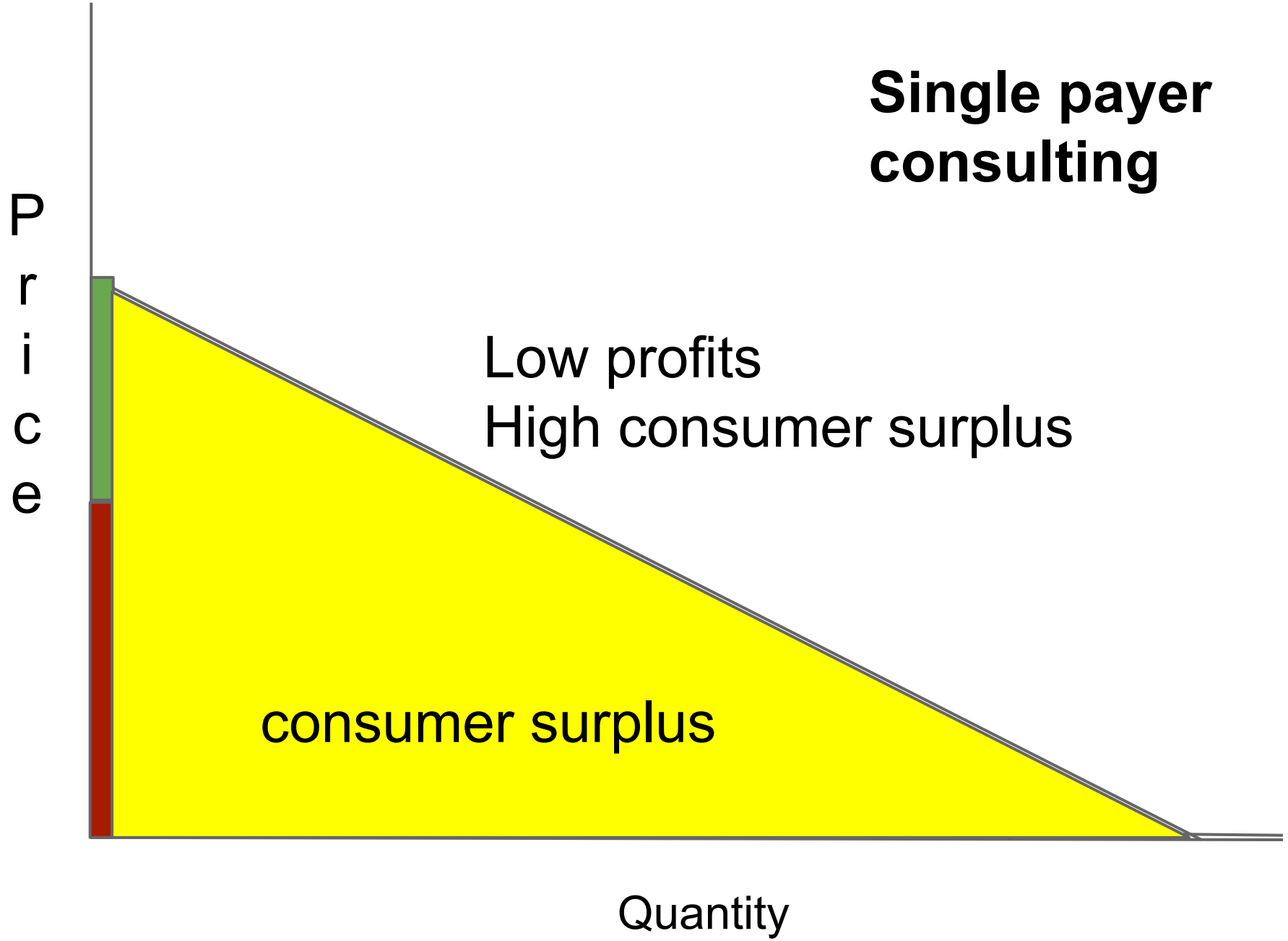
The
Open Core
contains the
seeds of its own
revolution

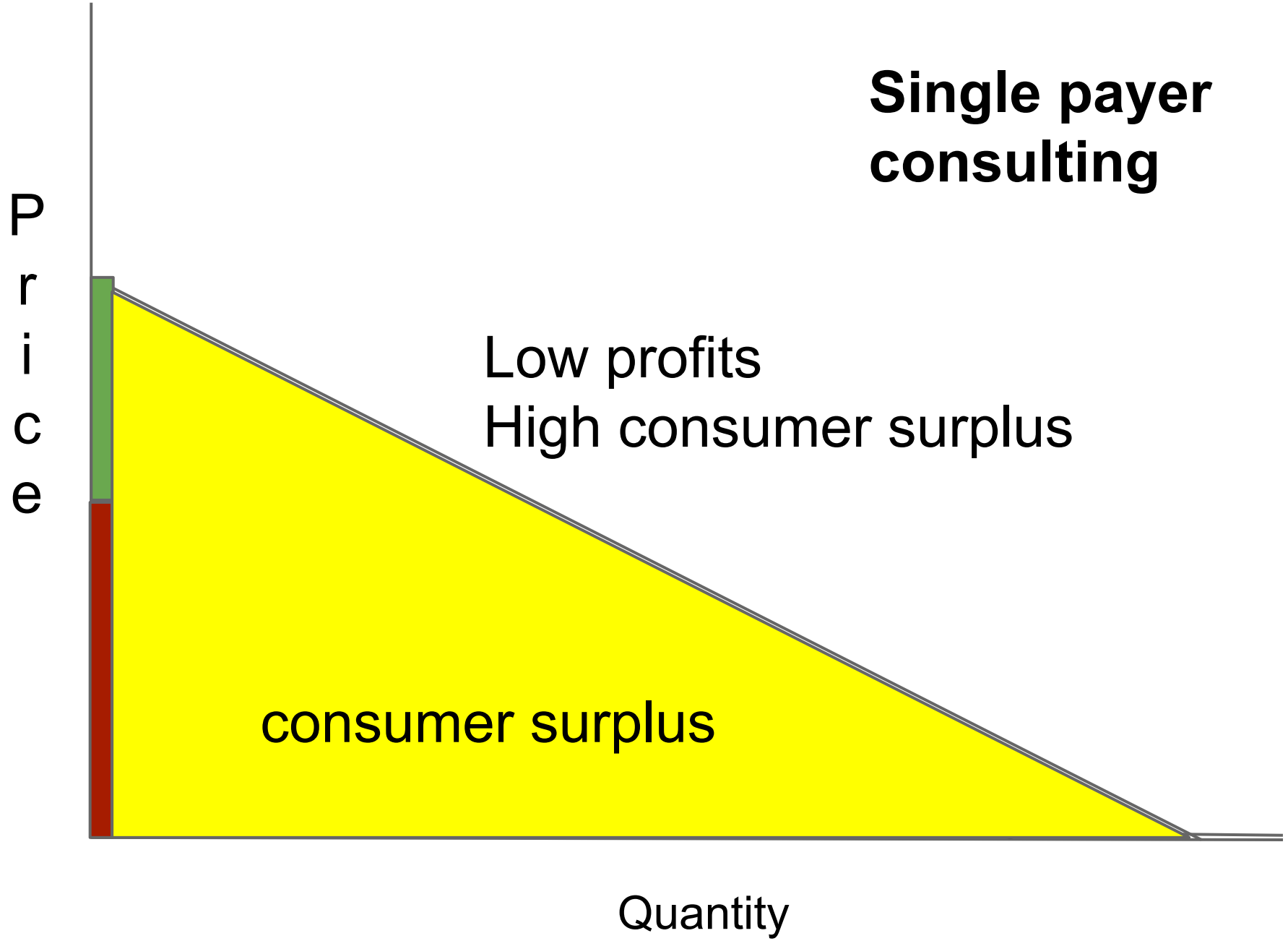
Purist business models

Consulting - pay for contribution

- You can be paid directly to improve open capital
- Lots of freelancers and small companies
- Often for narrow or application specific extensions of something general. e.g. theming
- **Key strategy: Include contributions to "core" in contract.**
- Sell the big picture.


Only works if first customer's demand exceeds fixed cost
Single payer consulting
Price
Supply
Quantity


Single payer
consulting
Price
Low profits
High consumer surplus
consumer surplus
Quantity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Support packages

- Guaranteed tech support, bug fixes, training, extra features, extra features, etc.
- Mix and match features into ‘bundles’ that target different market segments
- Economics of this are fascinating...take John Chuang’s IT-ESP class!

Example: Boundless Geo Pricing

Pricing Options

Plus

$8,000

Supports most basic enterprise installations.

Get Started

Includes support for:

- PostGIS and GeoServer deployments
- Basic vector and raster formats
- Priority bug fixes

Professional

$16,000

Supports common enterprise installations.

Get Started

All the features of Plus, and:

- Proprietary spatial databases, including Oracle and Microsoft SQL Server
- More raster formats
- Unlimited bug fixes

Platform

$45,000

Supports complex enterprise configurations.

Get Started

All the features of Professional, and:

- Scale with clustering
- Enterprise Java environments
- More proprietary databases
- More advanced raster formats

Strategic

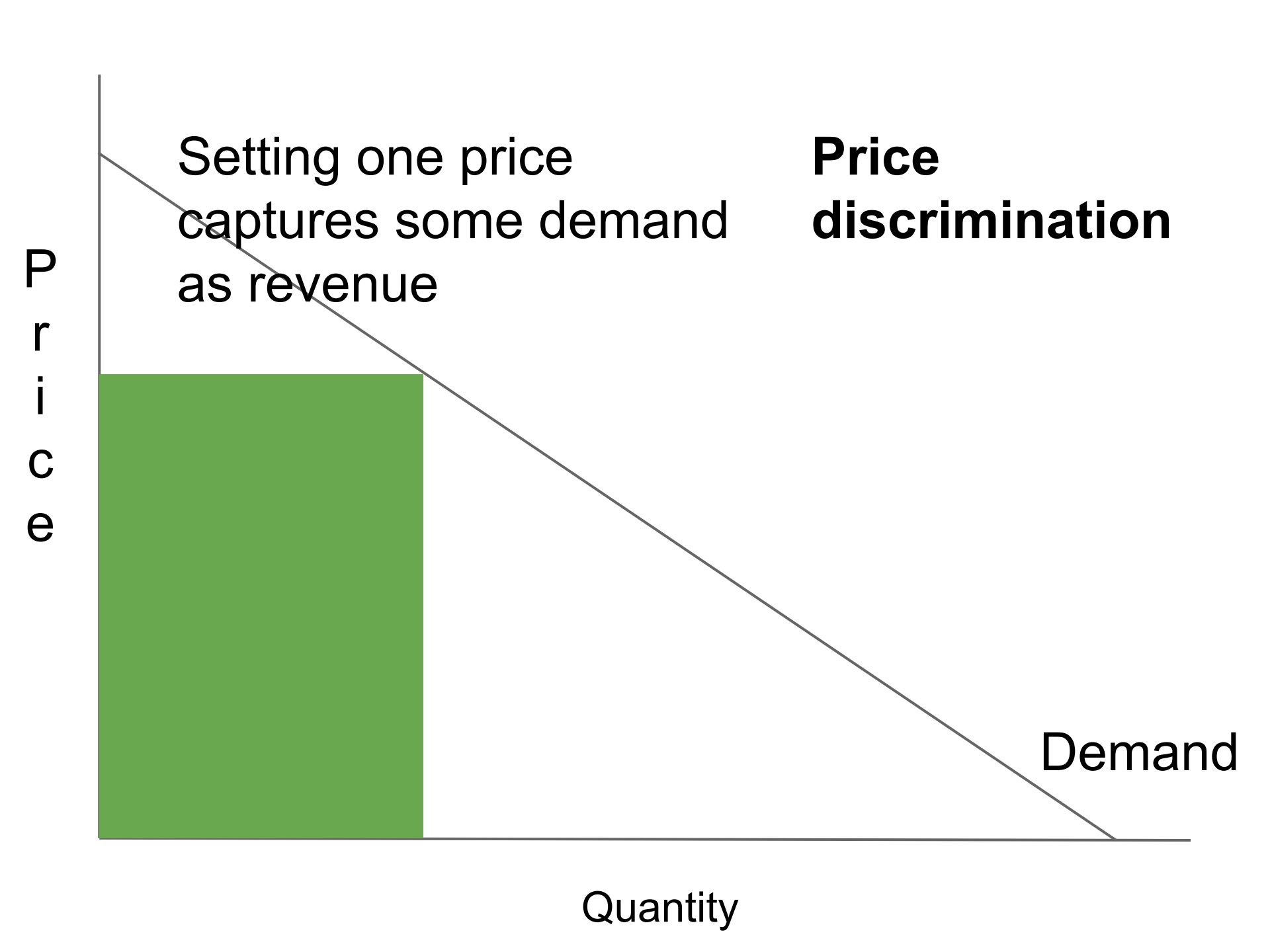
$98,000

Supports complex enterprise configurations.

Get Started

All the features of Platform, and:

- Core development hours from the experts


Setting one price captures some demand as revenue
Price discrimination
Price
Demand
Quantity


Setting *two* prices captures *more* demand as revenue
Price discrimination
Price
Demand
Quantity


The trick is getting the more demanding to pay more
Price discrimination
???
Price
Demand
Quantity


Especially when there is “free beer”
Price discrimination
Price
???
Demand
Quantity

Pentaho's "Beekeeper" Model

- Clients need *solution* not *software*
- (Consider: government procurement policies)
- Analogy:
  - The community makes honey
  - The business jars and markets it
  - Costs include jars, signs, and feeding the bees
- Sell "whole products" built *around* open capital
- Tailor the products to different market segments

Dual Licensing

Dual Licensing

Dual Li

Dual Licensing

- Own the copyright
- Pick a virally open license: GPL or Affero GPL for the *community*
- Sell a “proprietary” license to customers that want to stay closed
- **Pro:** Have your cake and eat it
- **Con:** Central ownership can turn off collaborators, skew governance
- **Examples:** Sencha’s Ext JS, MySQL

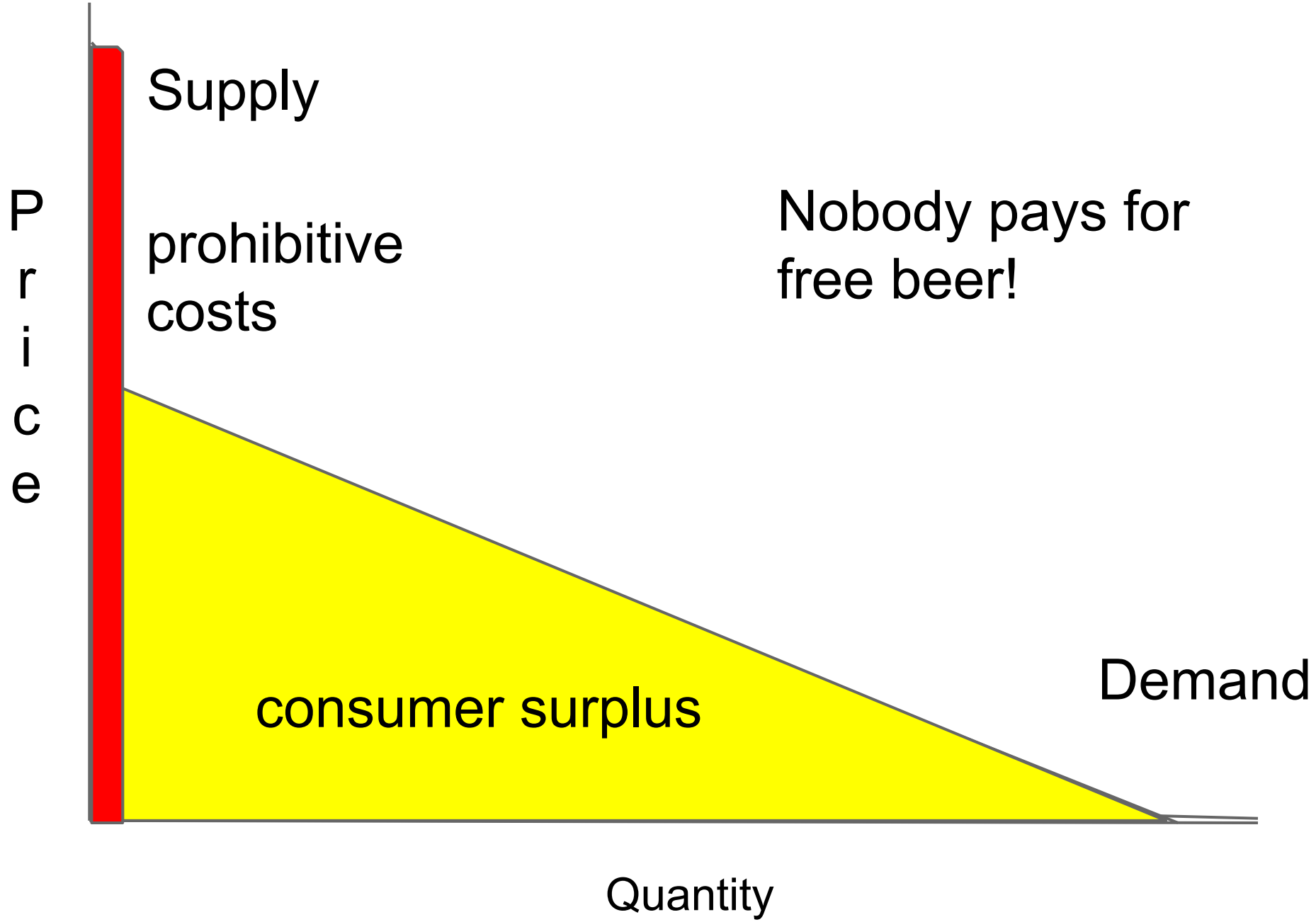
Selling Open Data

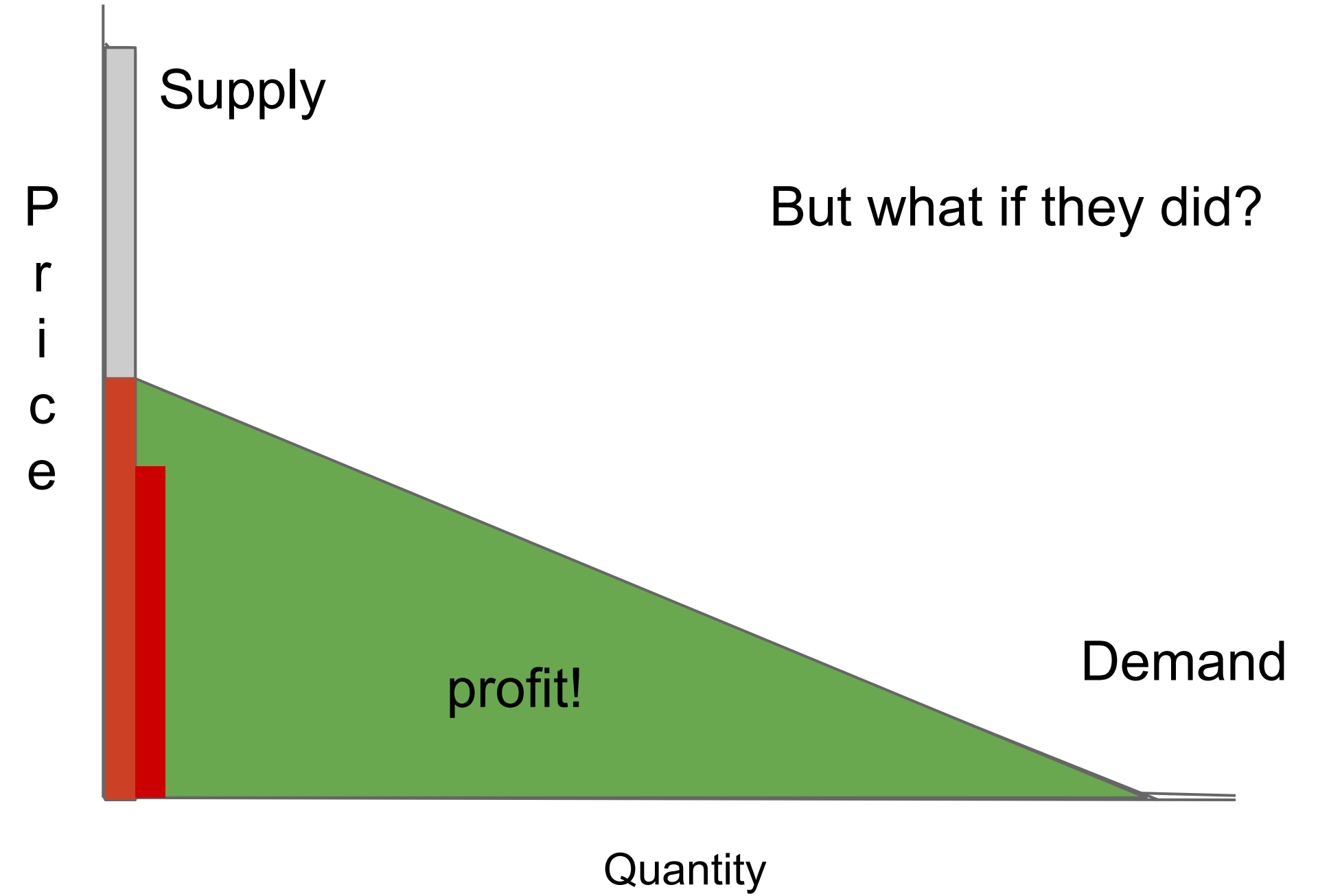
- Water is cheap, water pressure and plumbing is expensive
- Charge for stable albeit rate-limited API's to pay for storage, collection, and uptime talks

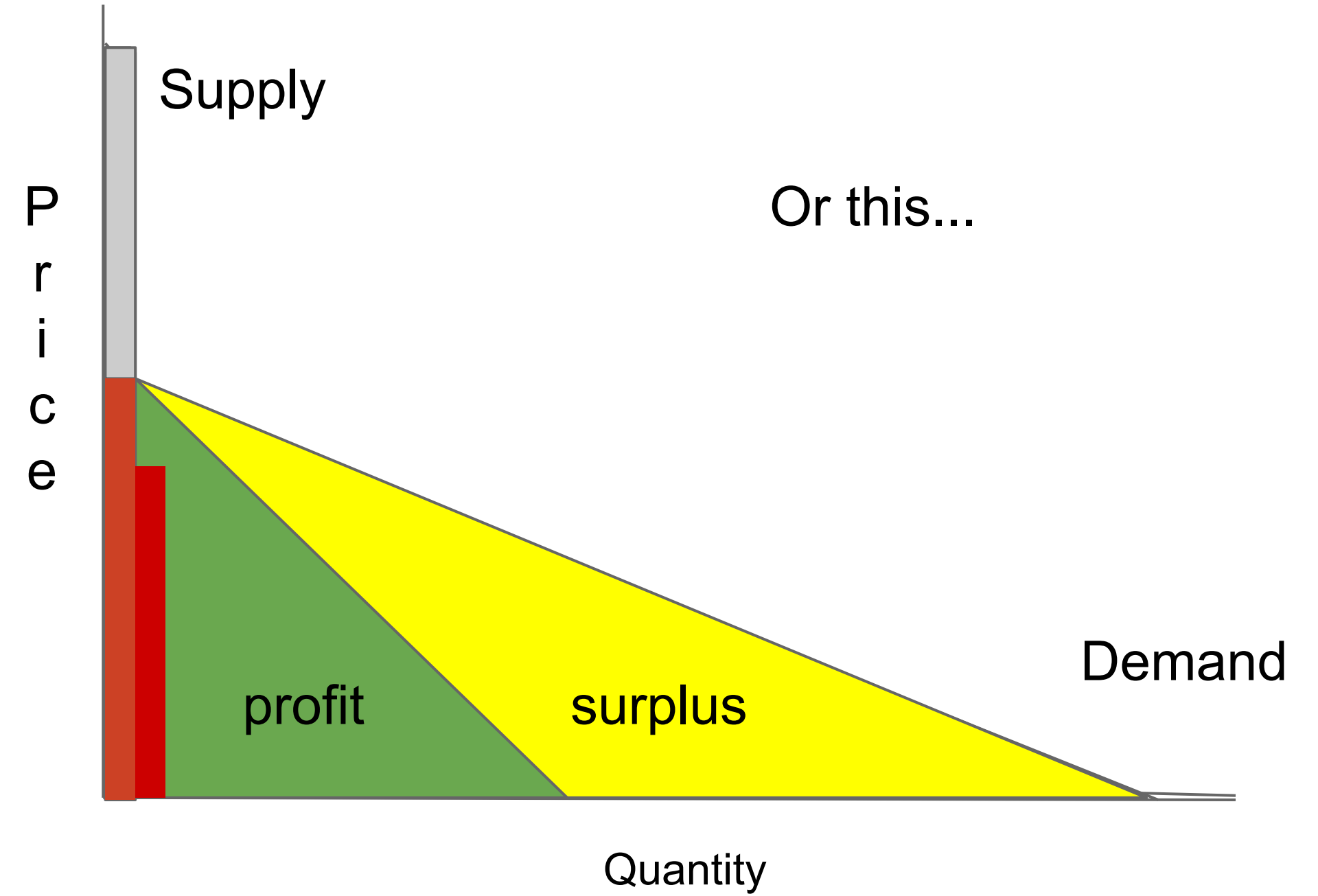
Fantasy Model: Federated Data Hog

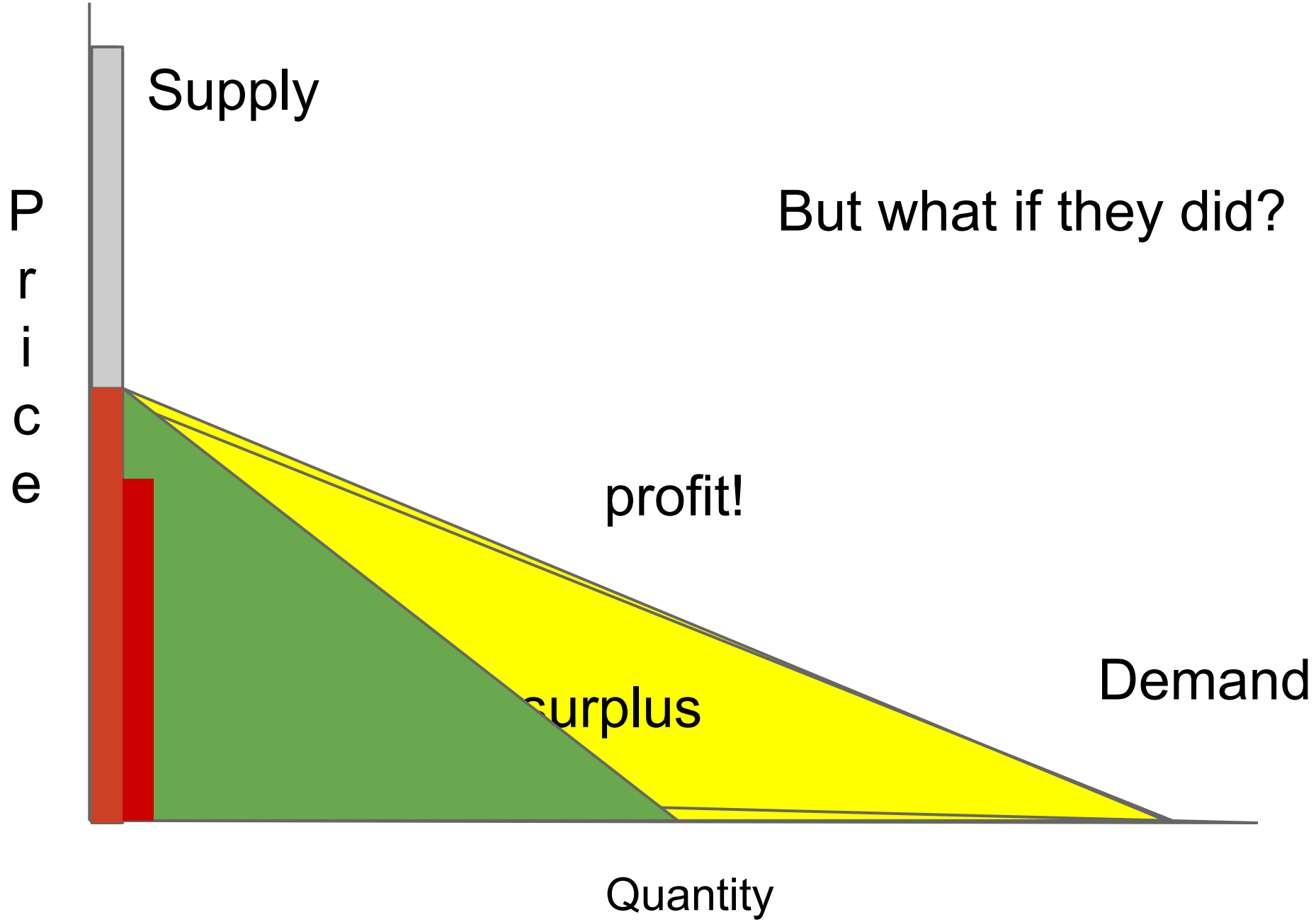
- Offer SaaS solution on open source core a la Wordpress
- Optionally federate data from distributed nodes back to central site for additional functionality e.g. search
- Leverage data locality for profit
- **Example:** GeoNode (one early vision)

crowdfunding


Supply
prohibitive costs
Nobody pays for free beer!
Price
consumer surplus
Demand
Quantity


Supply
But what if they did?
Price
Demand
profit!
Quantity

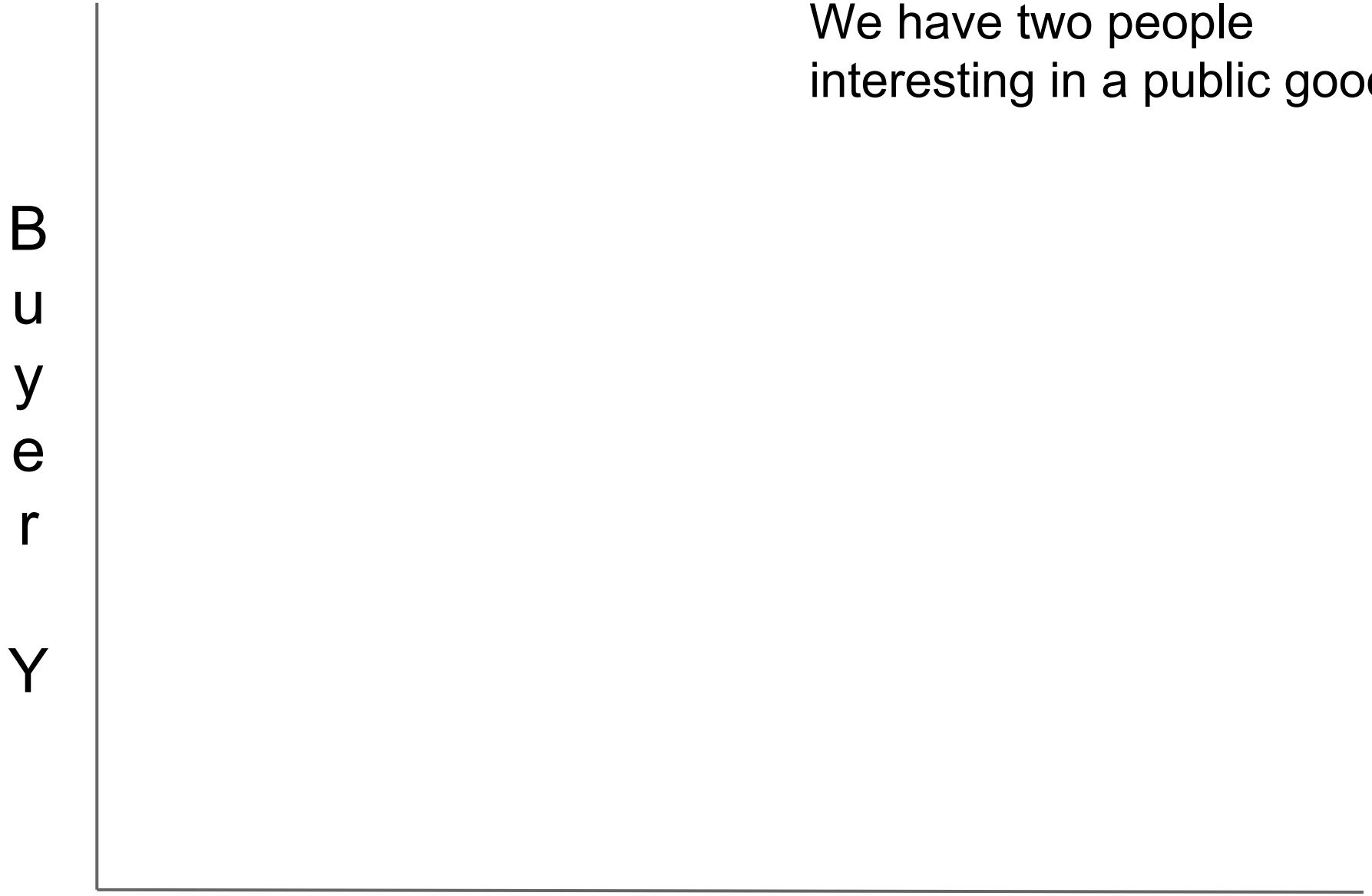

Supply
Or this...
Price
Demand
profit
surplus
Quantity

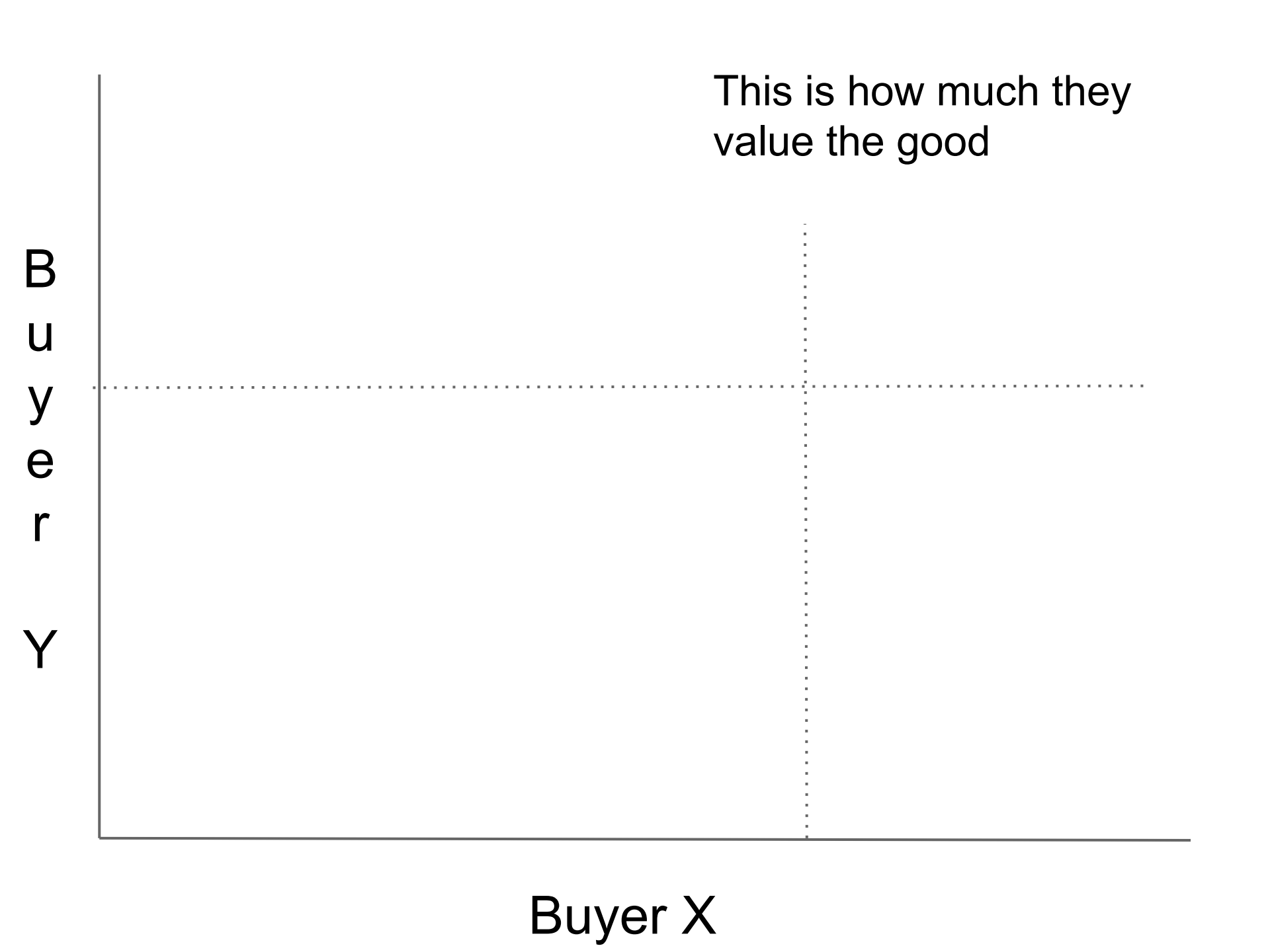

Supply
Price
But what if they did?
profit!
surplus
Demand
Quantity

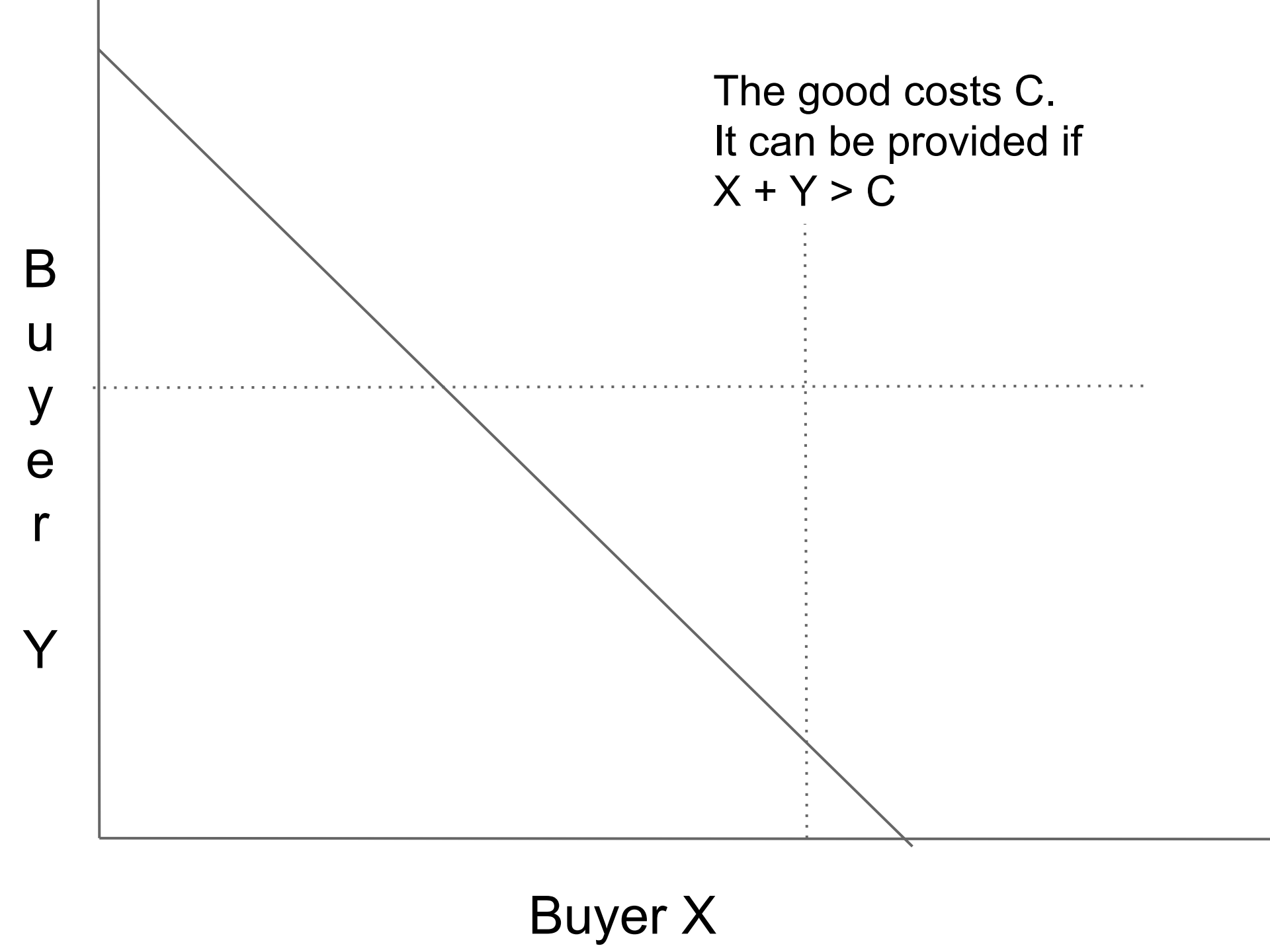
Crowdfunding

- We are seeing the rising use of crowdfunding, cooperative bounty, and patronage sites for open collaborators
- It’s an exciting time
- Improving crowdfunding mechanisms could dramatically improve the world!
- It’s not without its challenges

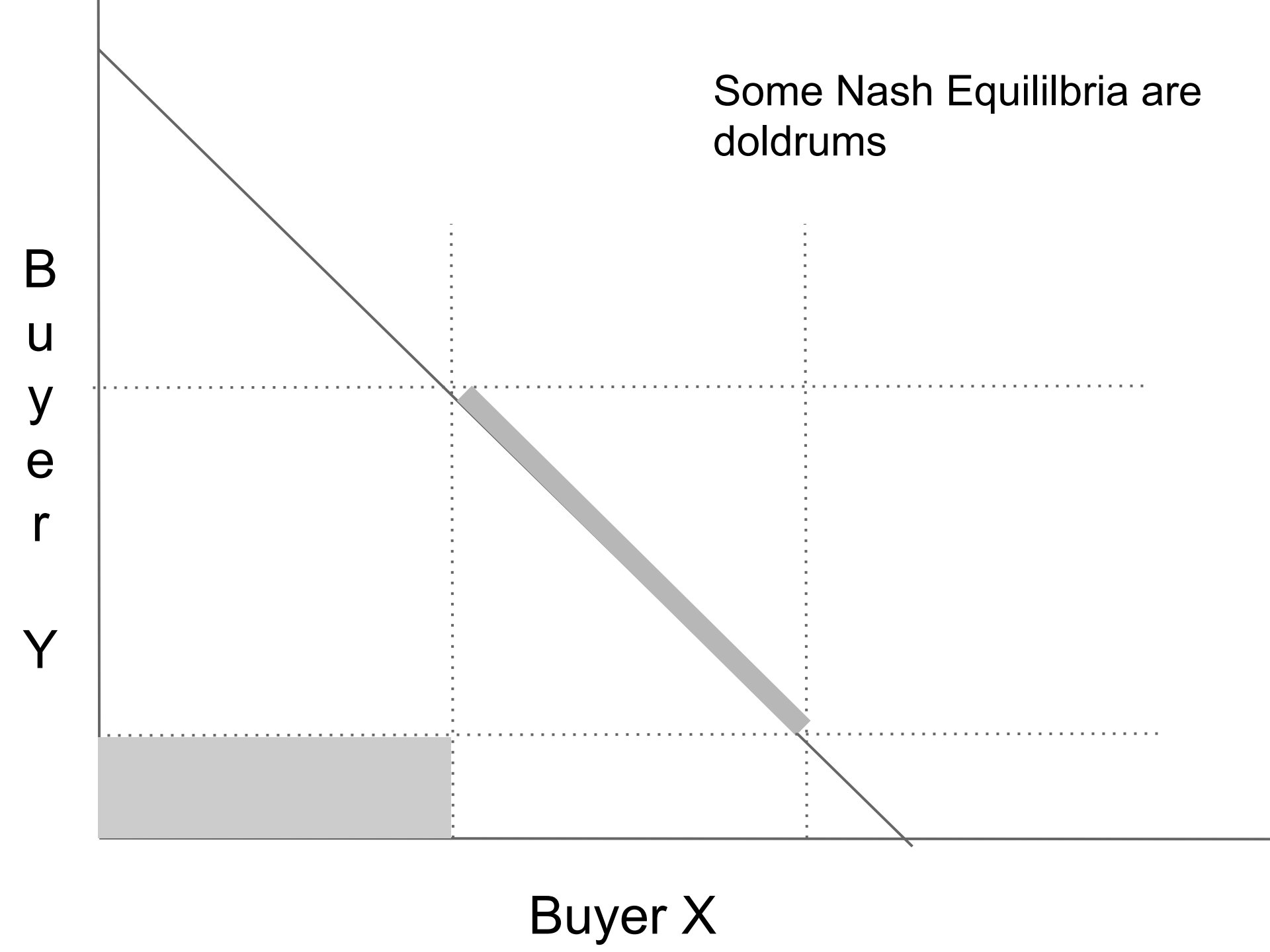
We have two people interesting in a public good

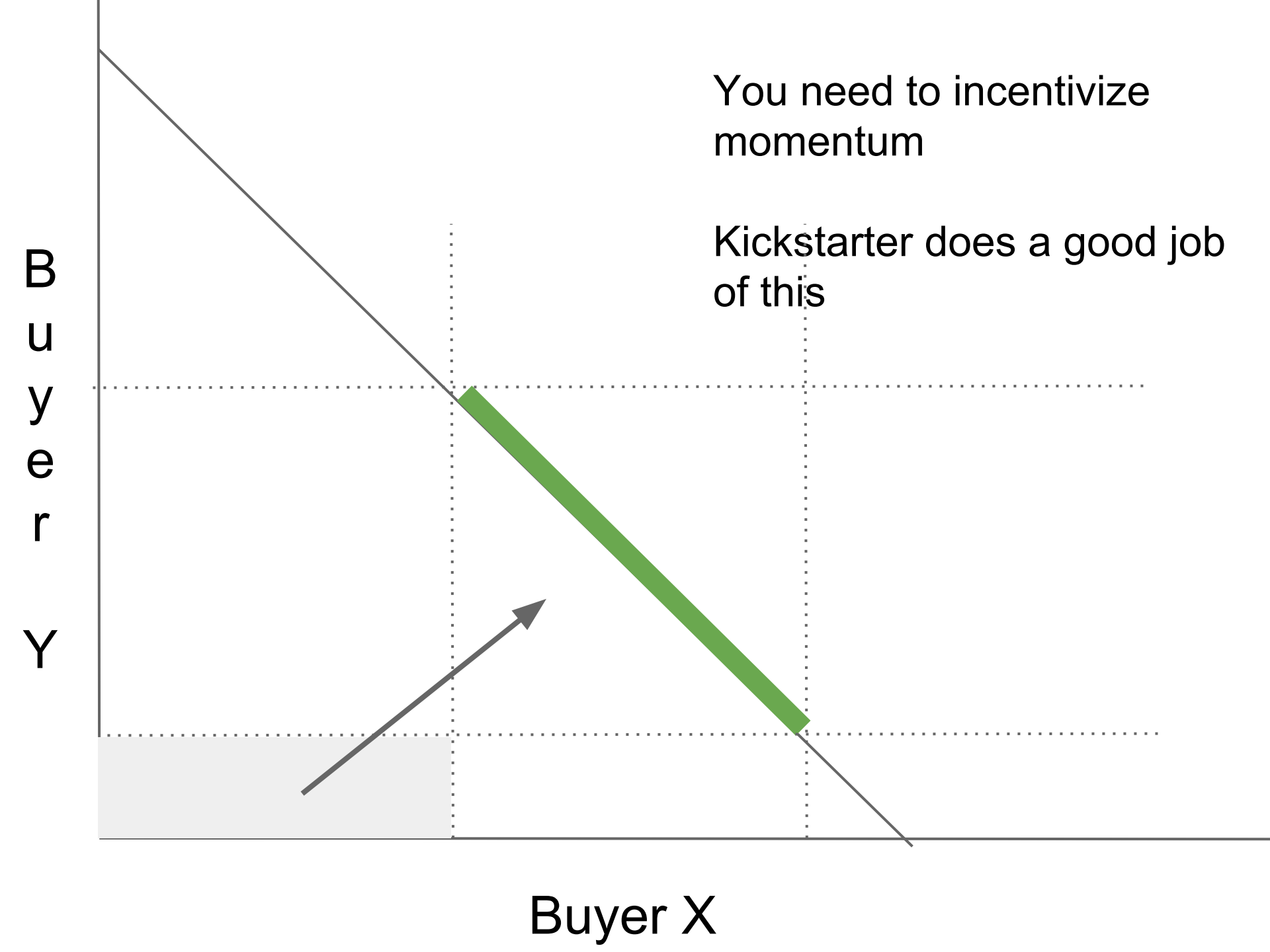



This is how much they value the good
Buyer Y
Buyer X


The good costs C.
It can be provided if
X + Y > C
Buyer Y
Buyer X


So it's all good right?
Buyer Y
Buyer X


Some Nash Equililbria are doldrums
Buyer Y
Buyer X


You need to incentivize momentum
Kickstarter does a good job of this
Buyer Y
Buyer X

Other crowdfunding challenges

- Risk on investment / insurance
- Discuss