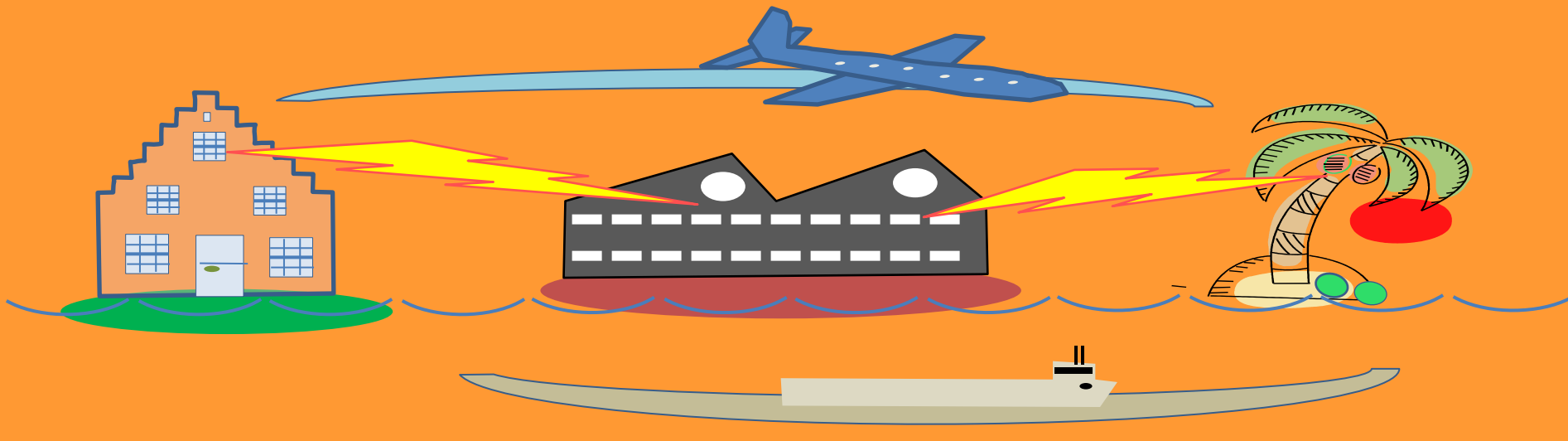




Intellectual Capital:

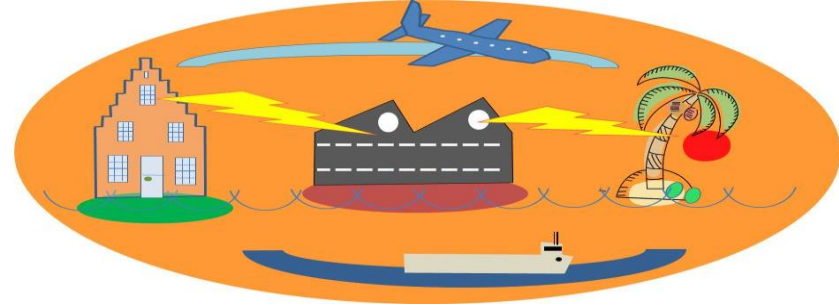
Its transfer by multinationals into tax havens

Draft 24 February 2014

Gio Wiederhold

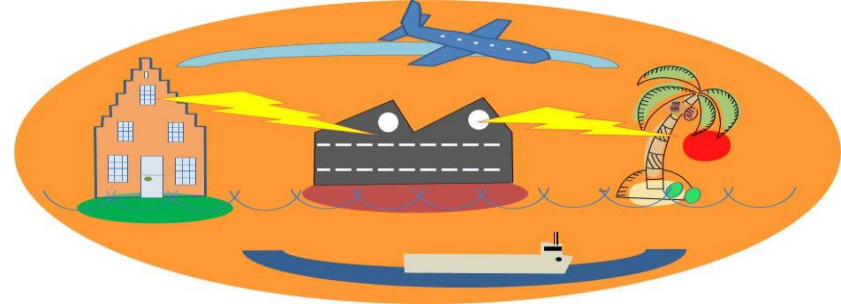
Stanford University, Stanford CA

<http://infolab.stanford.edu/people/gio.html>



Topics

1. Motivation, setting, & definitions
2. Intellectual capital and intellectual property (IP).
3. Separation of IP rights from the property itself.
4. IP generation: R&D and Marketing
5. The role of patents, copyrights, and trade secrets.
6. Valuation methods
7. Outsourcing and offshoring development.
8. Effects of using taxhavens to house IP rights.
9. Changing taxation?
10. Questions?



State of valuation in Computing

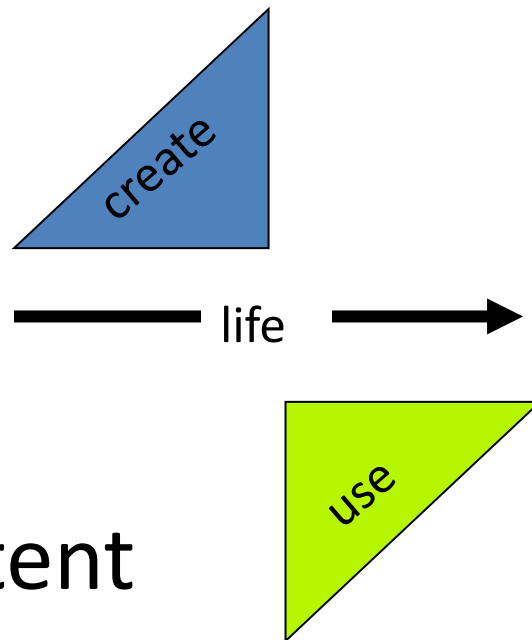
1. Software producers traditionally care about

- Cost of writing software
- Time to complete products
- Capabilities

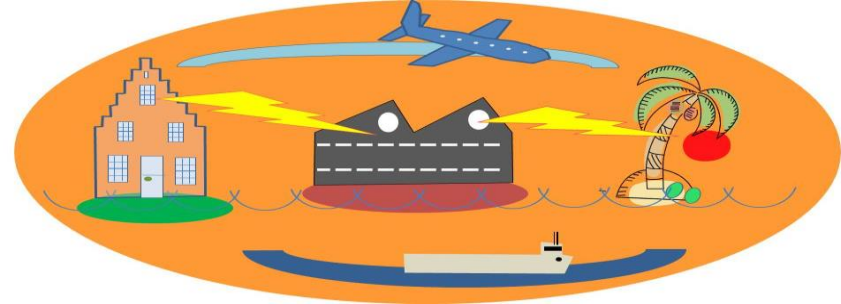
2. When the value is a concern

- Business people
- Economists
- Lawyers
- Promoters

} inconsistent



55. A LISP programmer knows the value of everything, but the cost of nothing. [A.Pertis]
101. A programmer doesn't know nor care about the value of his work [Gio Wiederhold]



Motivation for this talk

US multinationals hold over \$2 trillion in taxhavens

= ~ 15% of the US public debt or 40% of the US debt to foreign creditors

Many of these companies are technological innovators we love

The situation elicits many comments:

“It’s all perfectly legal”

1

If brought back to the US then ~40% would be lost to taxes.

2

The IRS let’s corporations off the hook

3

Those loopholes should be plugged

4

Ireland should not have a 12.5% corporate tax rate

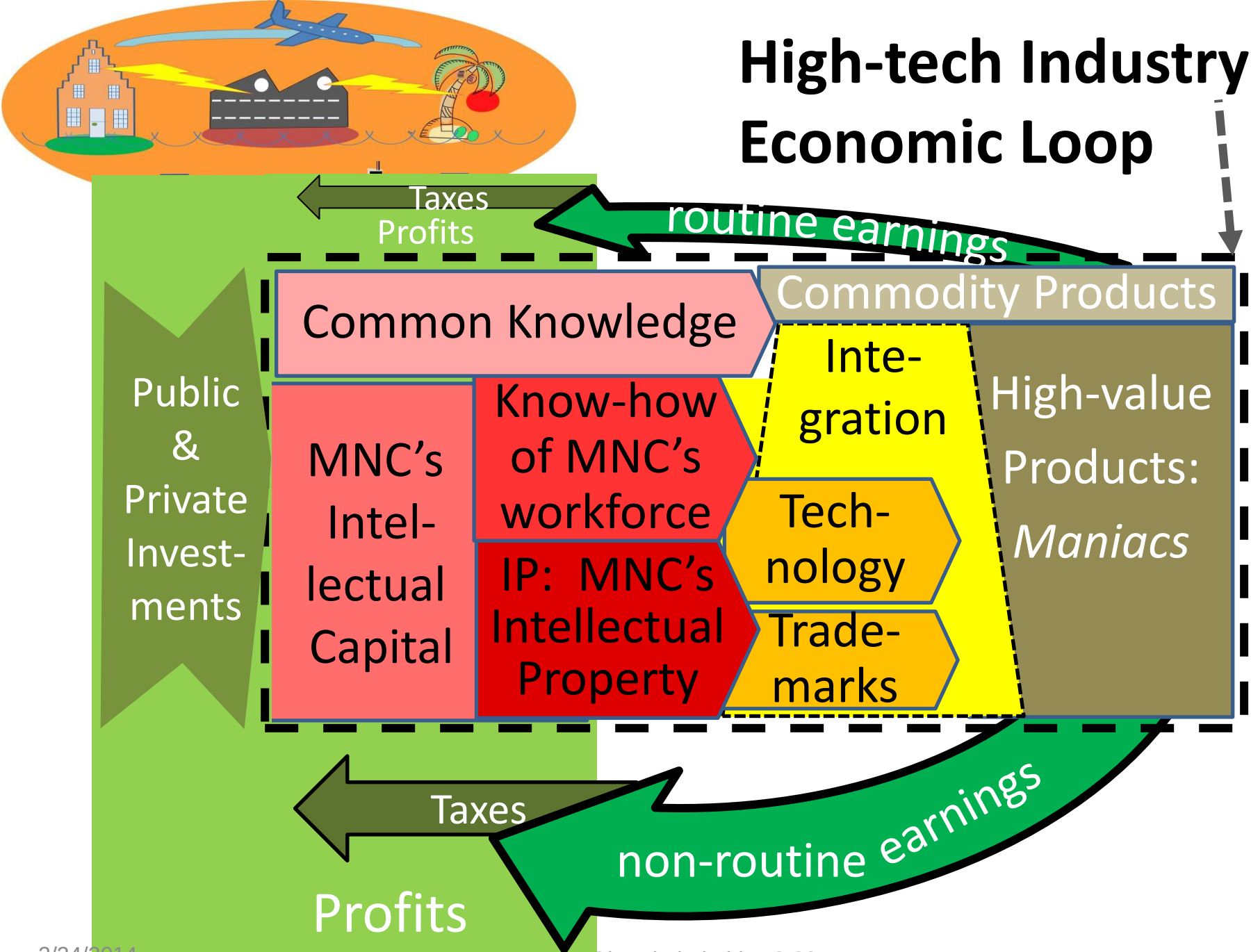
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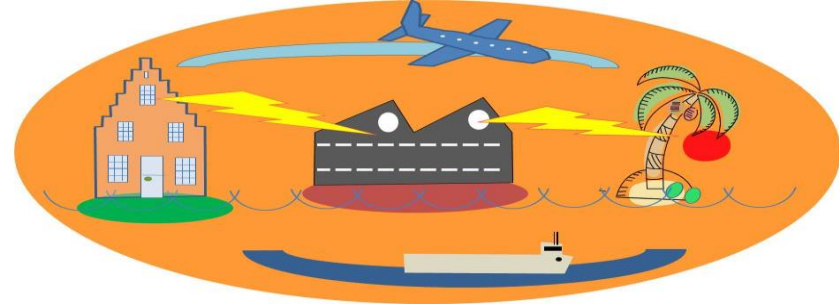
Just allocate taxable revenue to countries by local sales!

6

These 6 comments are based on a lack of understanding

High-tech Industry Economic Loop





Quick definitions: Tangibles / Intangibles

In a business 3 parts have value (contribute to profit)

1. Tangible goods: buildings, computers, capital
2. Know-how of management & employees
3. Intellectual property: Designs, software, methods, trademarks, etc.

2. & 3. make up the Intangible Capital of a company.

If owned then it is **Intellectual Property**
or **Intangible Property**

similar – distinction is source vs ownership

Intangibles (IP)

Product of knowledge

Cost of original >> cost of copies

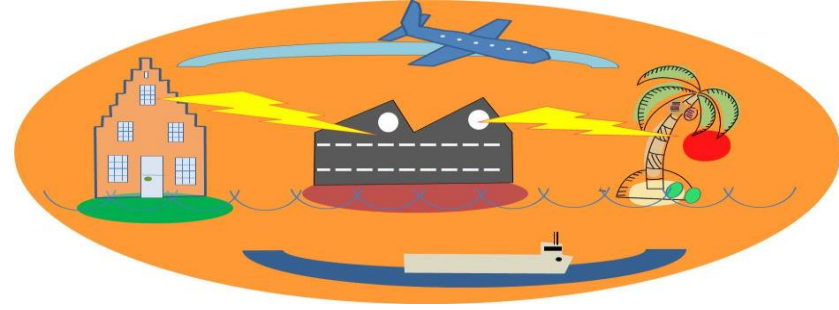
1. Books
2. Software
3. Inventions
4. Trademarks
5. Knowhow
6. Customer loyalty

*Ever
Even
Less
Tangible*

by

*authors
programmers
engineers
advertisers
managers*

— *Interacts with long-term quality*



Value in a business

‘It’s one thing to sell Coke and another thing
to sell the formula for Coke’

[Jay Flatley of Illumina]

But you must make and sell Coke to profit
from its formula.

A commodity bottler makes the Coke for you.

Who gets what profits? 

Intellectual Capital

Intellectual Resources

Public
&
Private

Intellectual Capital

Rights owned by the business

Intellectual Assets

Available for transfer

Intellectual Property

Legally protectable

Patents

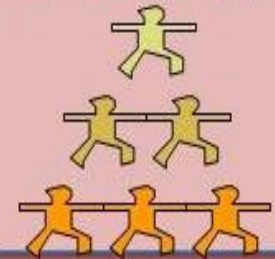
Copyrights

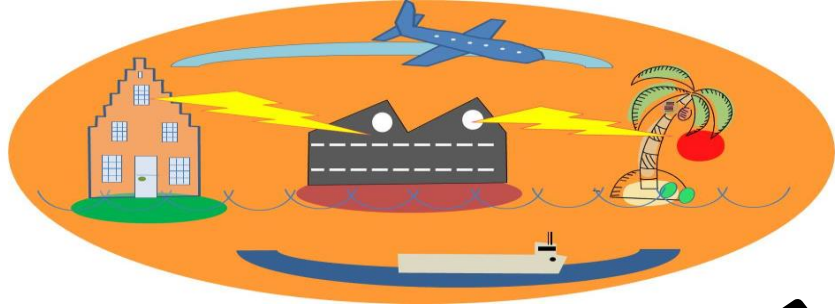
Trade secrets

Trade marks

Contracts covering intellectual capital

Intellectual Capital





Two sources of profits

1% - 8% of sales

routine earnings

Common Knowledge

Commodity Products

Machines & buildings

Intel-
lectual
Capital

Know-how of
workforce

Intellectual
Property

High-value
Products:

**20% - 60%
of sales**

non-routine earnings

Overview IP protection

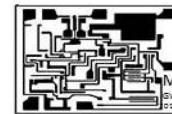
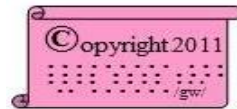
1. Patents



Federal Law

- Use only if the invention is visible in the product
- Or use to hinder others “blocking patents”

2. Copyright



Federal Law

- Protects software and chip masks
- Not the underlying ideas

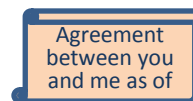
3. Trade Secret



State law

- If it can be kept secret, best choice
- Must be defended: NDAs, action when violated

4. Contractual Rights



- to suppliers, people, customers, ...

All

must

be

defended

when

violated

Costly

Value Protection

We assume it is protected

Intellectual Capital

People: “Operational capital”
encourage loyalty



hard to protect
pride, stock options

Intellectual Property

Should be protected against misappropriation

- a) Patents
- b) Copyright
- c) Trade Secret

Right to access
your staff

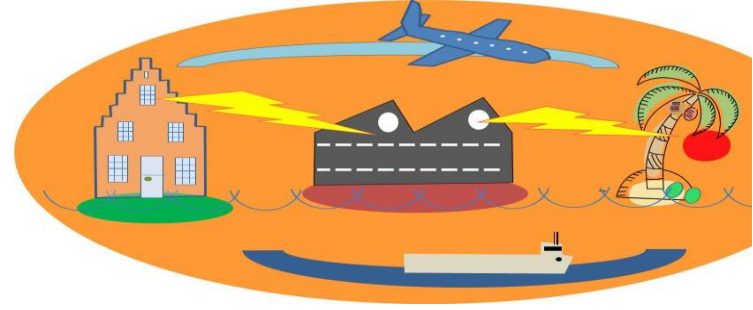
IP BOX



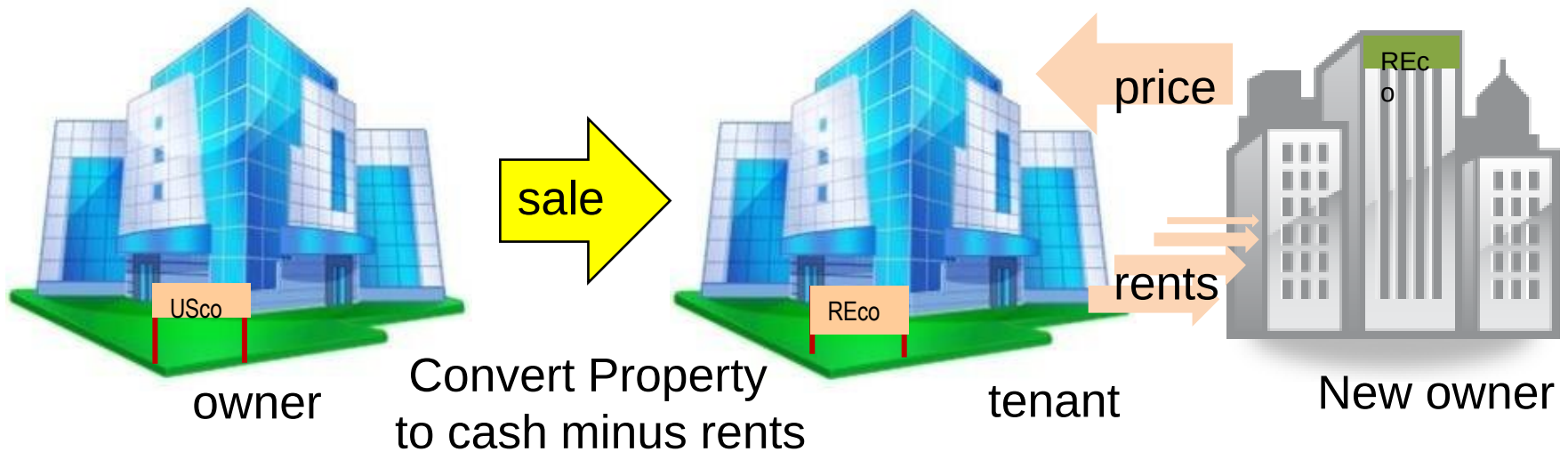
Can be

- Sold if you cannot use them profitably - no control
- Licensed some control
 - specified rights to the IP box are rented
 - *Sales of a product in Europe, Japan*

tranches



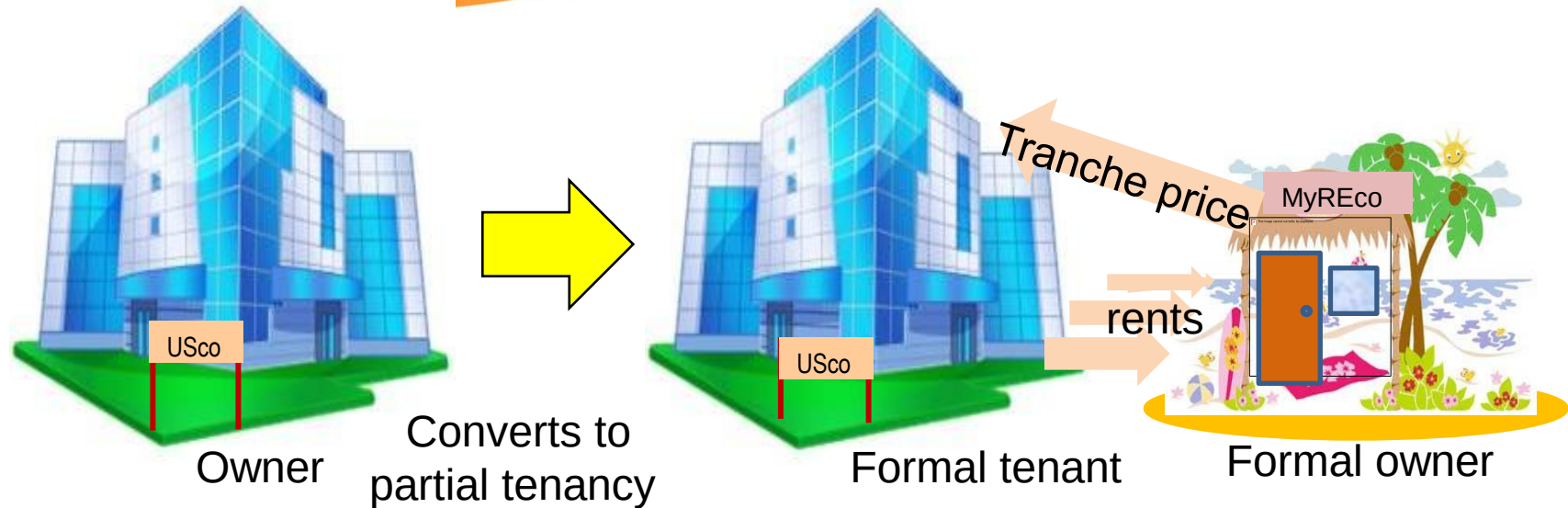
Tangibles and intangible assets can be converted to rights, an intangible



After the sale, the new owner holds the rights to collect income from its investment

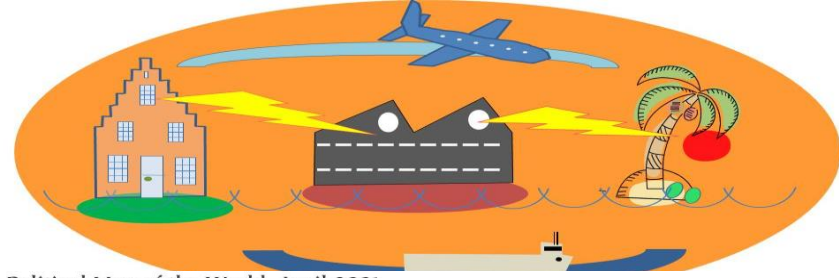
**Even easier to do with intellectual property
And invisible – not on public corporate books**

Rights* can be offshore *or selected *IP* rights

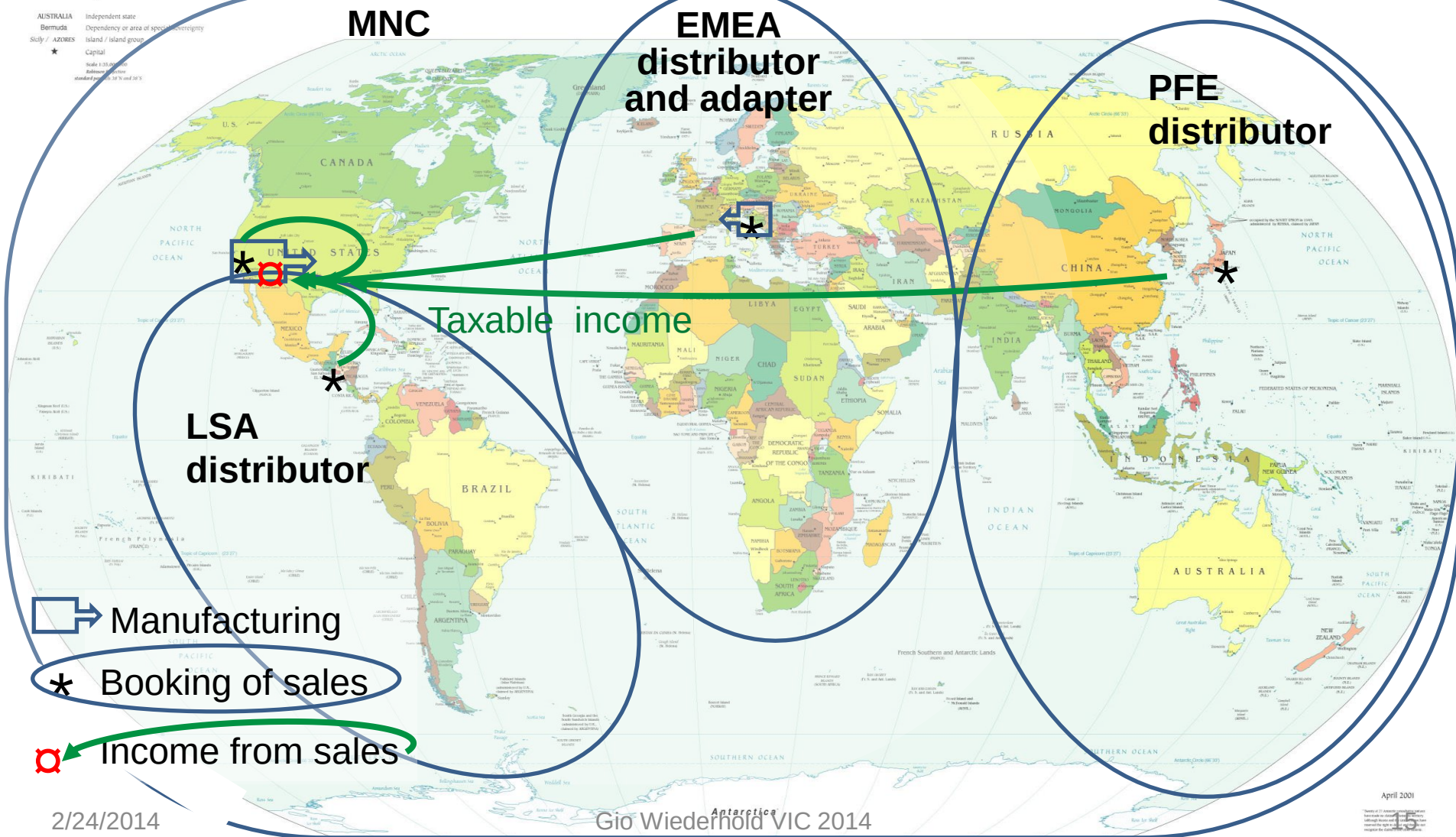


- If the rights owner is off-shore, collected income can avoid taxes.
- The rights owner can be a subsidiary of the original owner – the combination saves taxes, invisibly
- Rights to IP generate most high-tech income.

Offshore operations before rights transfer



Political Map of the World, April 2001

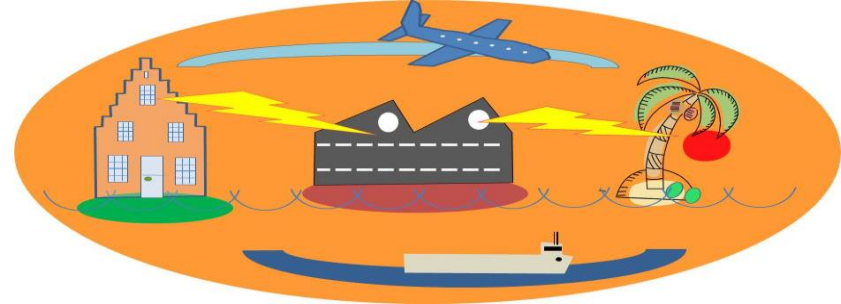


2/24/2014

Gio Wiederhold VIC 2014

April 2001

15



Offshoring of work

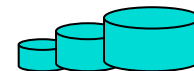
Task transfer to Enterprises in Foreign countries

Two obvious aspects and one less obvious:

1. **Work migration: jobs are moved to lower-cost countries**



2. **Support IP, as software etc. is moved to enable similar productivity in those countries**



3. **Rights to the IP are moved to taxhavens**

iP. software
design docs

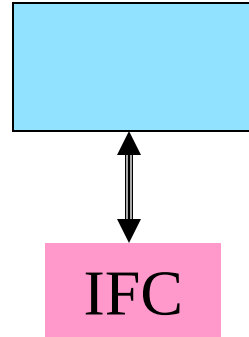


**Income is generated by people and
(intellectual) capital**

Types of Foreign Destination Entities

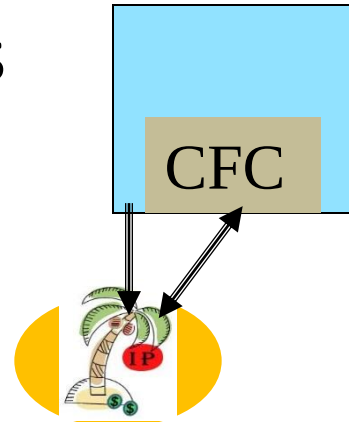
- **Independent Foreign Contractors**

- IFG may serve multiple customers
 - May share trade secrets with competitors
- Owners need contracts to protect the IP
 - Hard to monitor and enforce



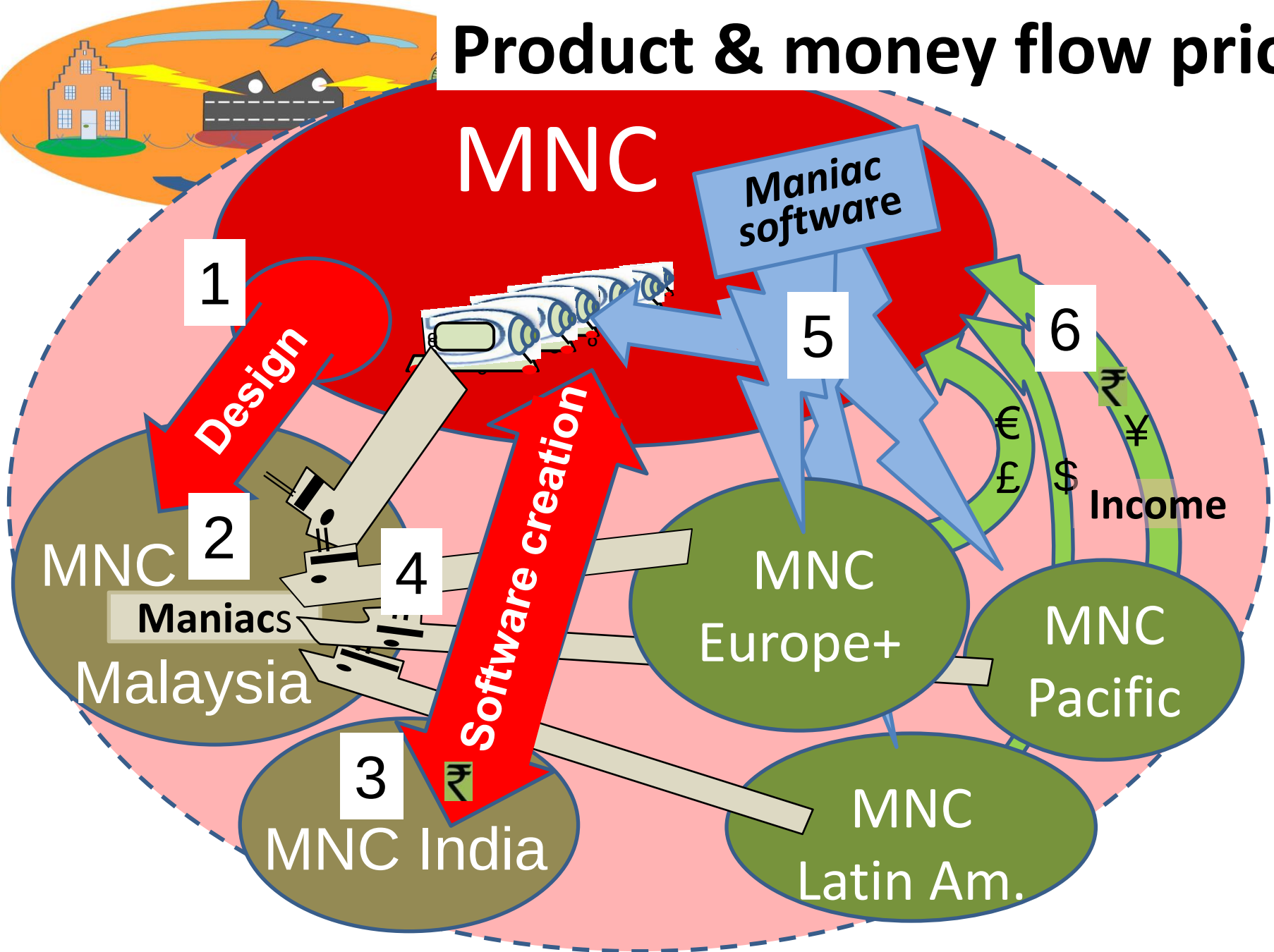
- **Owned, Controlled Foreign Corporations**

- CFC provides much more control over IP
- IP rights often held in third-party countries
 - Avoids **taxation** of sales to other countries



Assessing the significance of risk also requires a valuation

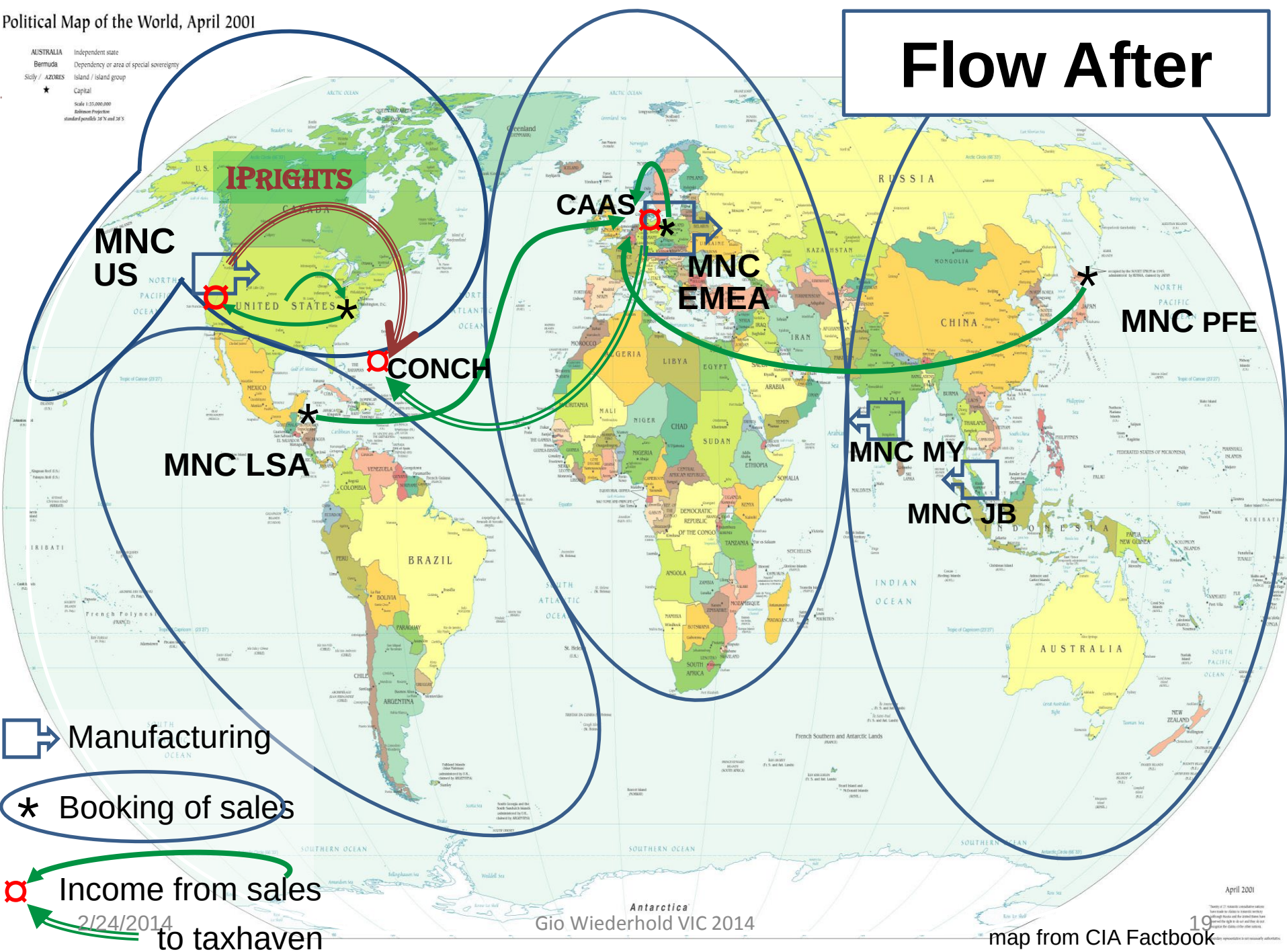
Product & money flow prior

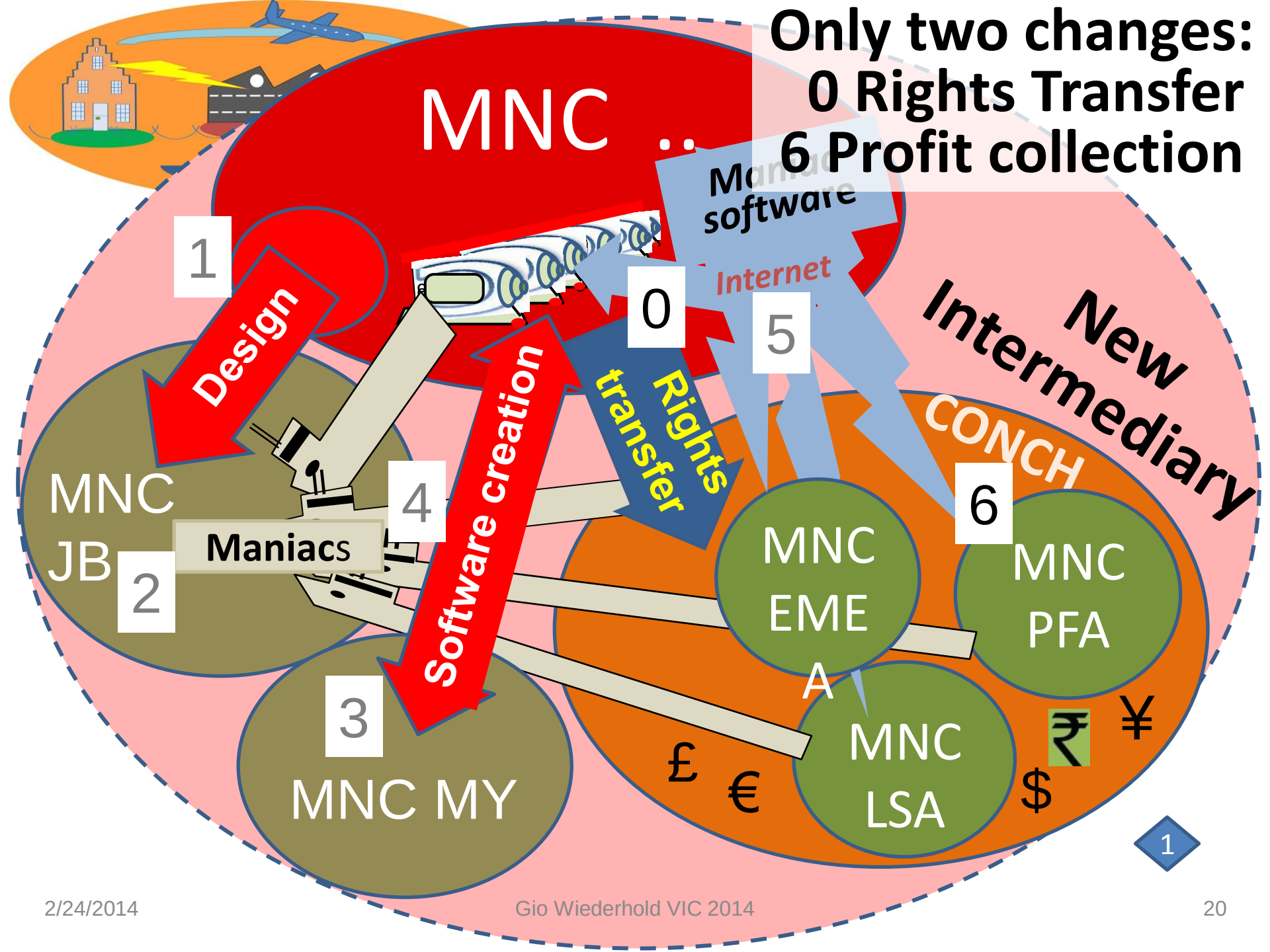


AUSTRALIA
Bermuda
Sicily / AZORES
★
Scale 1:35,000,000
Robinson Projection
Standard parallels 30°N and 30°S

Independent state
Dependency or area of special sovereignty
Island / island group
Capital

Flow After





Only two changes:
0 Rights Transfer
6 Profit collection

MNC

Design

Software creation

Rights transfer

Maniacs software

Internet

New Intermediary

CONCH

MNC JB

Maniacs

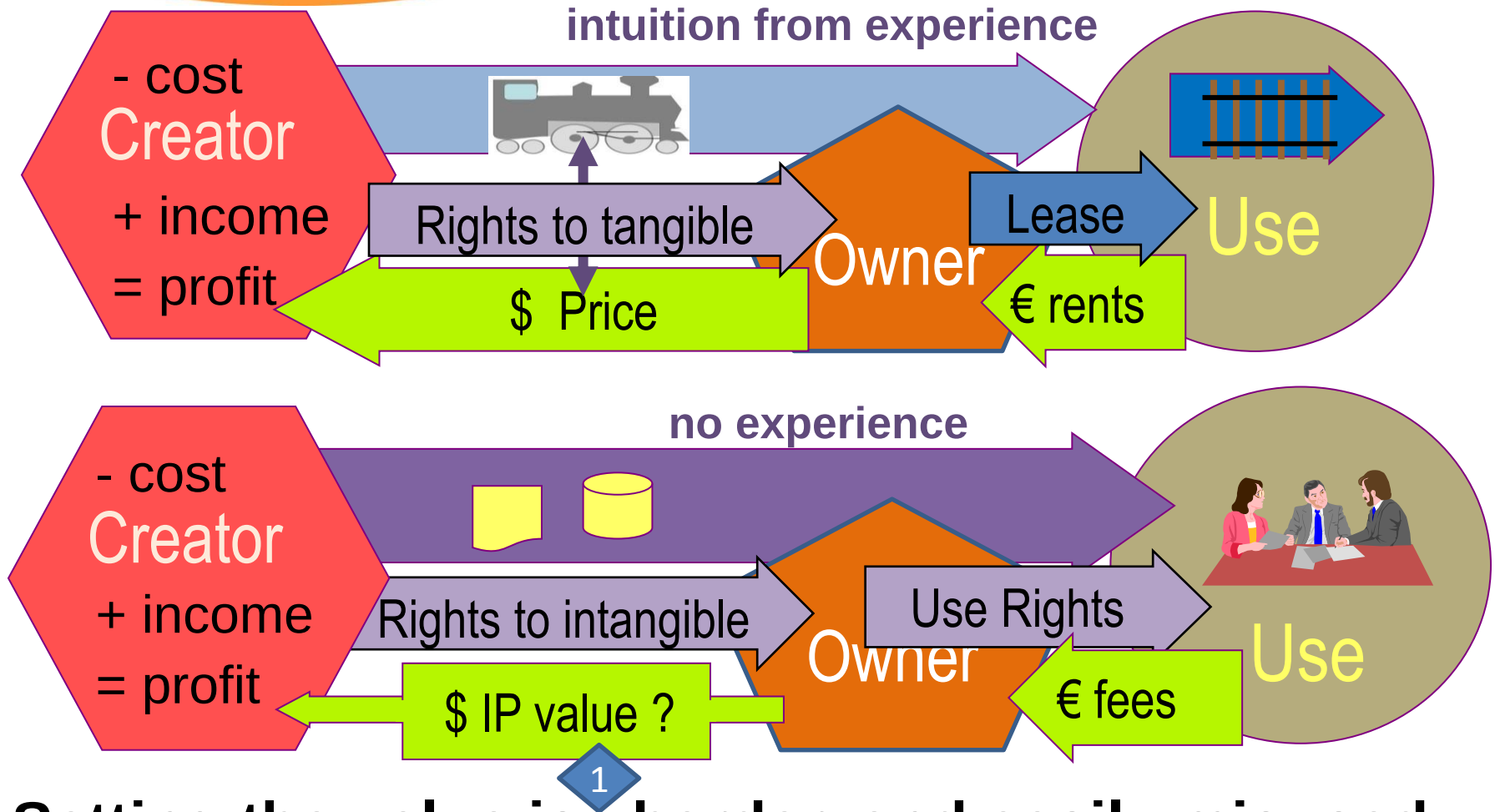
MNC EME

MNC PFA

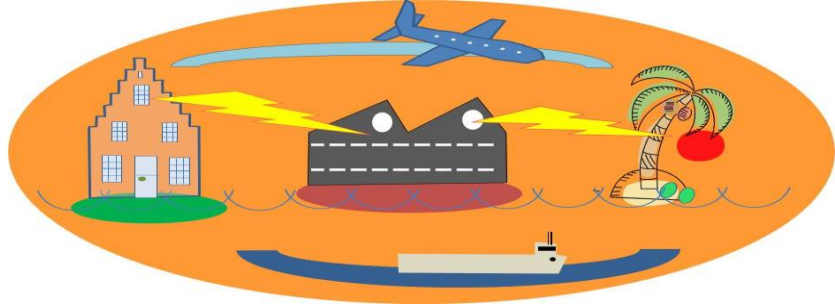
MNC LSA

MNC MY

Difference in tangible exports: the valuation



Setting the value is harder, and easily misused



Principle of valuation

The value of an asset is the sum of all future income discounted to today (NPV)

*In a public company implicitly estimated
by shareholders through the market cap*

Example: Market Cap value of a company (SAP, 2005)

Largely intangible – like many modern enterprises

Market cap = share price × no. of shares	€31.5B	100%
Bookvalue = sum of all tangible assets	€ 6.3B	20%
Equipment, buildings, cash		
Intangible value per stock market	€25.2B	80%

Intangible/tangible = 4 x

How much of the value is due to software at SAP ?

Example from BW:10

transaction steps 0 to 8

4

Nine transactions before US taxes are paid

United States

Forest Labs.
headquarters
New York, NY

IP RIGHTS

Forest Labs
Research
St. Louis,
MO

T0
FLP

\$99

T1

sales

drugstore
Phoenix, AZ

T2 \$76

pills

IRS
Washington
DC

T8 \$1.09

FRX
inc.

T3

\$64

pills

T7

\$7

FLH
IP RIGHTS
& \$\$\$
\$49

Forest Labs.
Holdings
Bermuda

Ireland

IT&C
Dublin
IE

5

\$0.75

Forest Labs.
Ireland
Dublin
IE

FLI

T5

\$12

European Union

NLbd
den Haag
NL

T4

Forest
Finance
Amsterdam
NL

T6

\$44

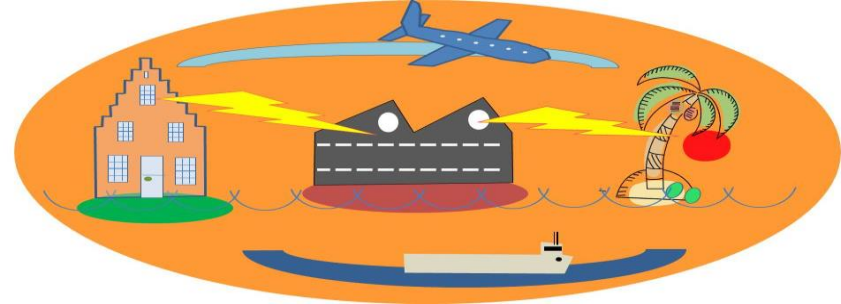
the
Netherlands

don't tax foreign
Flow-through

Ireland has territorial taxation

the \$ amounts are presented as integers

Based on Hermann Zschiegner in
"Globe-trotting Profits" [Drucker:10]
www.bloomberg.com/insight/lexapro.html



Ten ways to misvalue Transaction 0

1. Ignore human capital
2. Ignore ongoing research
3. Set lag from investment to profit low or to zero
4. Diminish value of IP rapidly, even if mature
5. Use a high discount rate for low risk development
6. Mischaracterize the IP license as being for anyone; non-exclusive
7. Allocate little income to offshore sales
8. Don't adjust for change
9. Base interest on 1.-8.
10. Use a low interest rate

Each factor reduces the result by 10% - 50%:

The combined effect is typically 10% - 2% of a *fair* result.

Approaches to assess IP

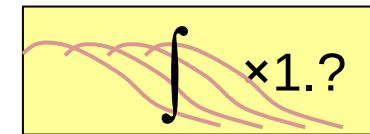
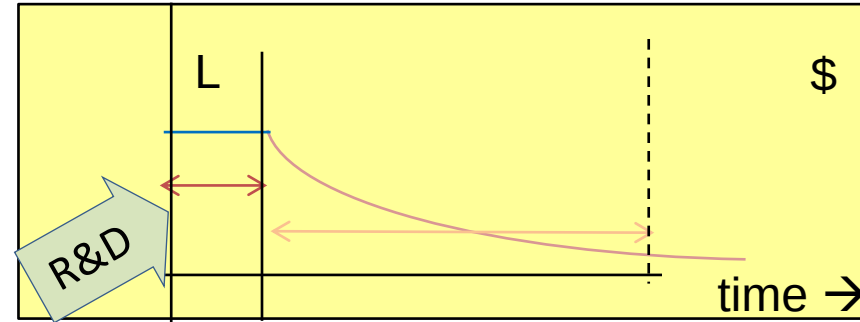
- Technical alternatives

1. Income Prediction

Based on expected sales; * Lag + diminishing IP Life_{L+i}

2. R&D roll-over

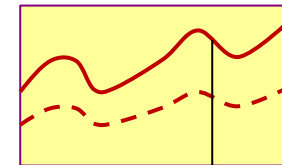
Based on experience of effectiveness of R&D from past investments $m = 1.2$ to 10



- Broader alternative approaches

3. Market capitalization (Market Cap)

Covers everything the shareholders value



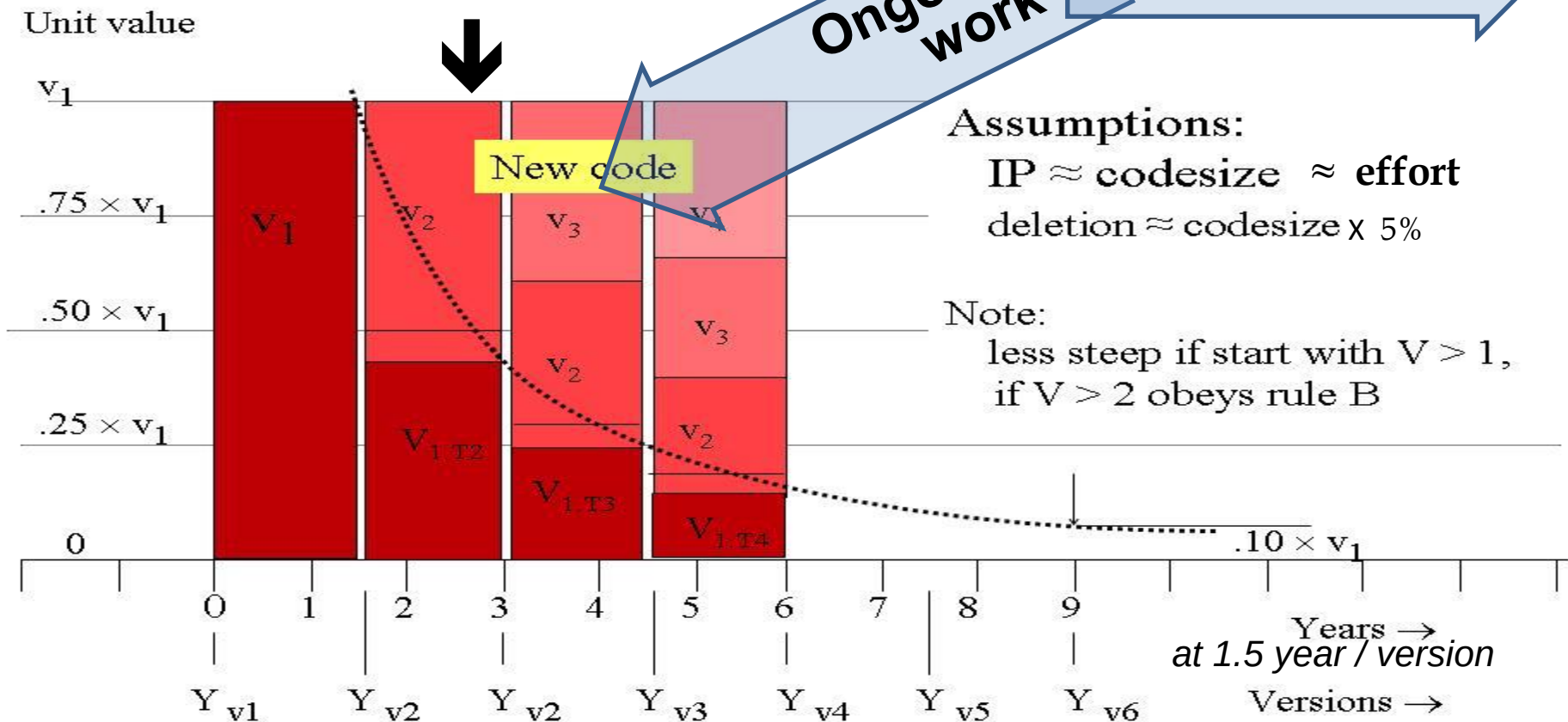
4. Comparisons with another existing businesses

Find other companies based on industry, operational similarity and then check their performance based on ratios as:

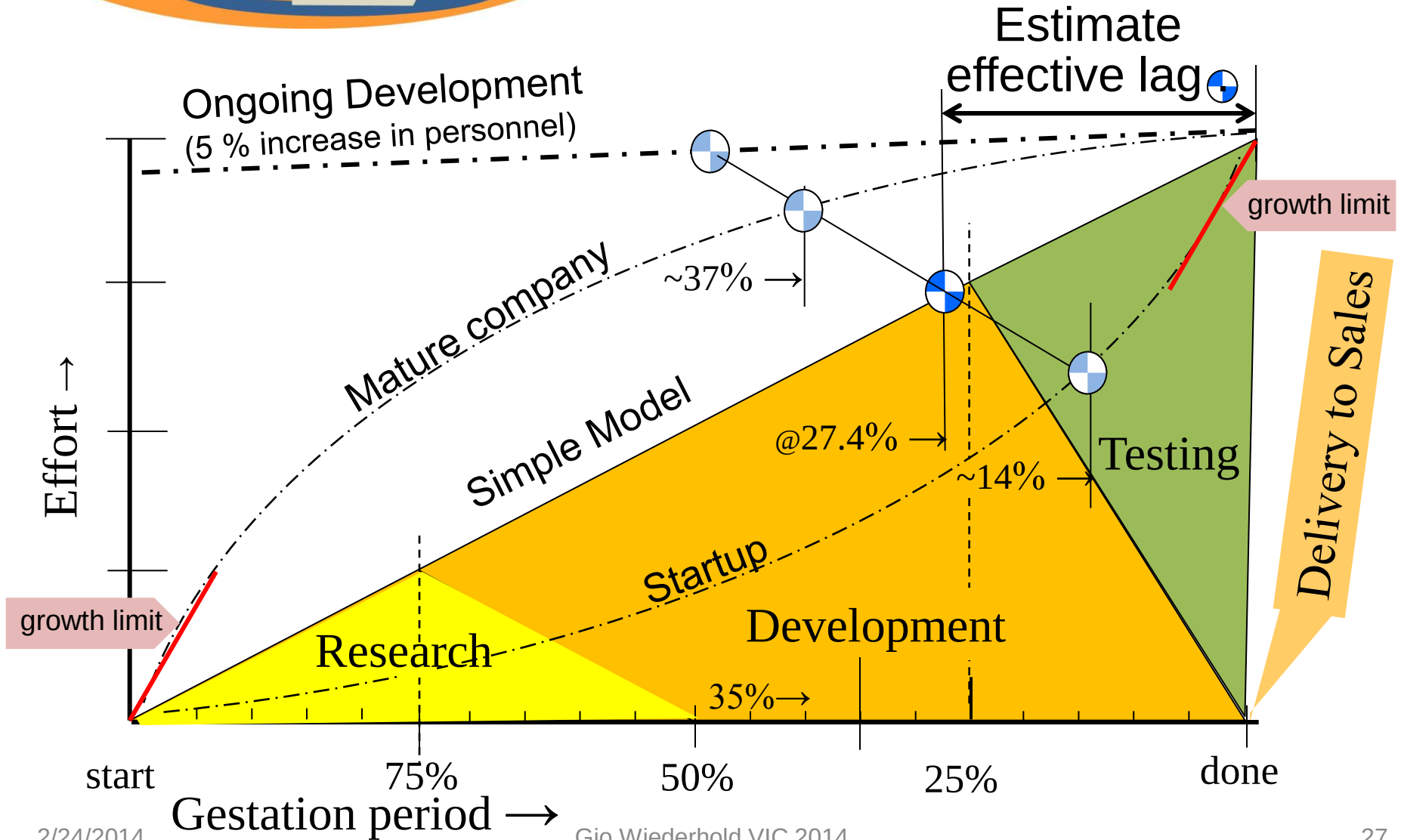
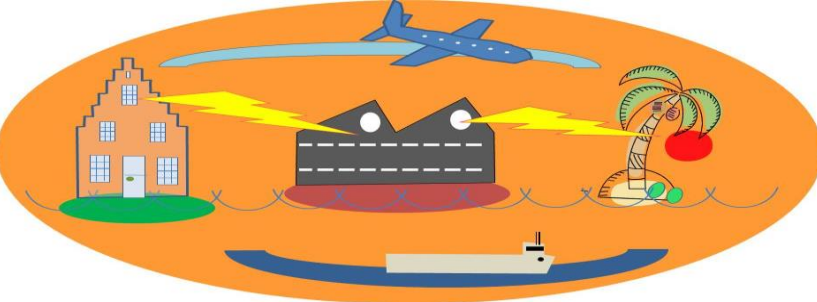
margins, royalties gathered, costs/earnings, . . .

4. Growth diminishes prior IP

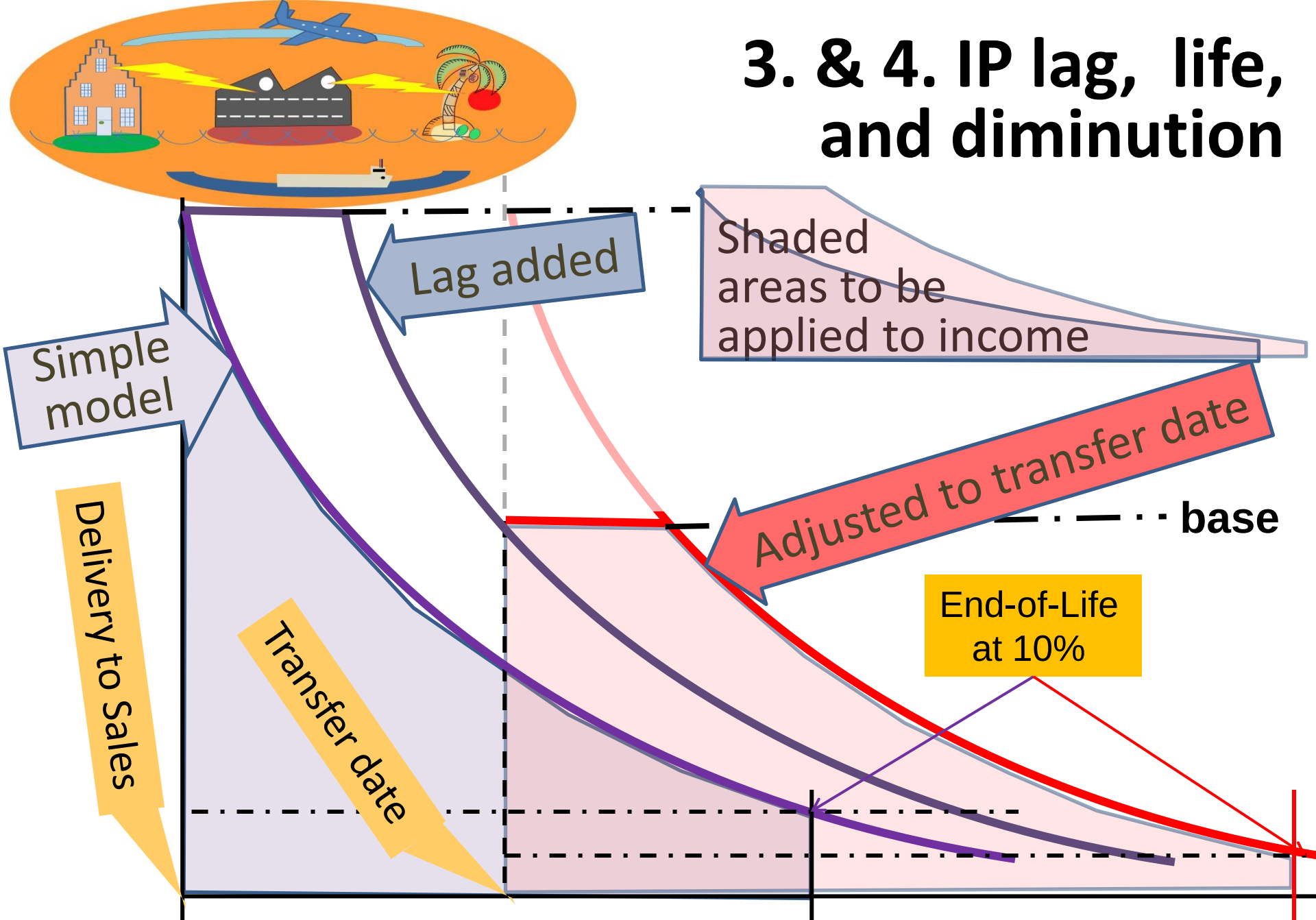
For constant unit price



3. Lag measures delay of profit from R&D efforts



3. & 4. IP lag, life, and diminution



7. Misallocation *simplified*

Buy a used in the US car at \$5000 for the \$600 door you need in Canada.

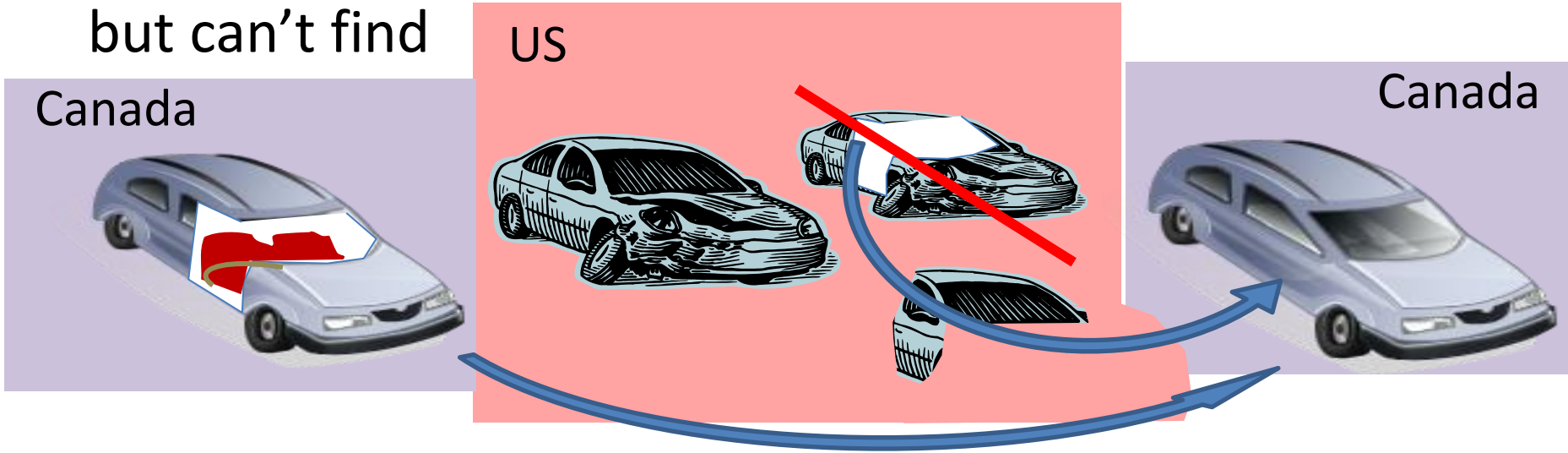
Consider that the rest has no value.

but can't find

US

Canada

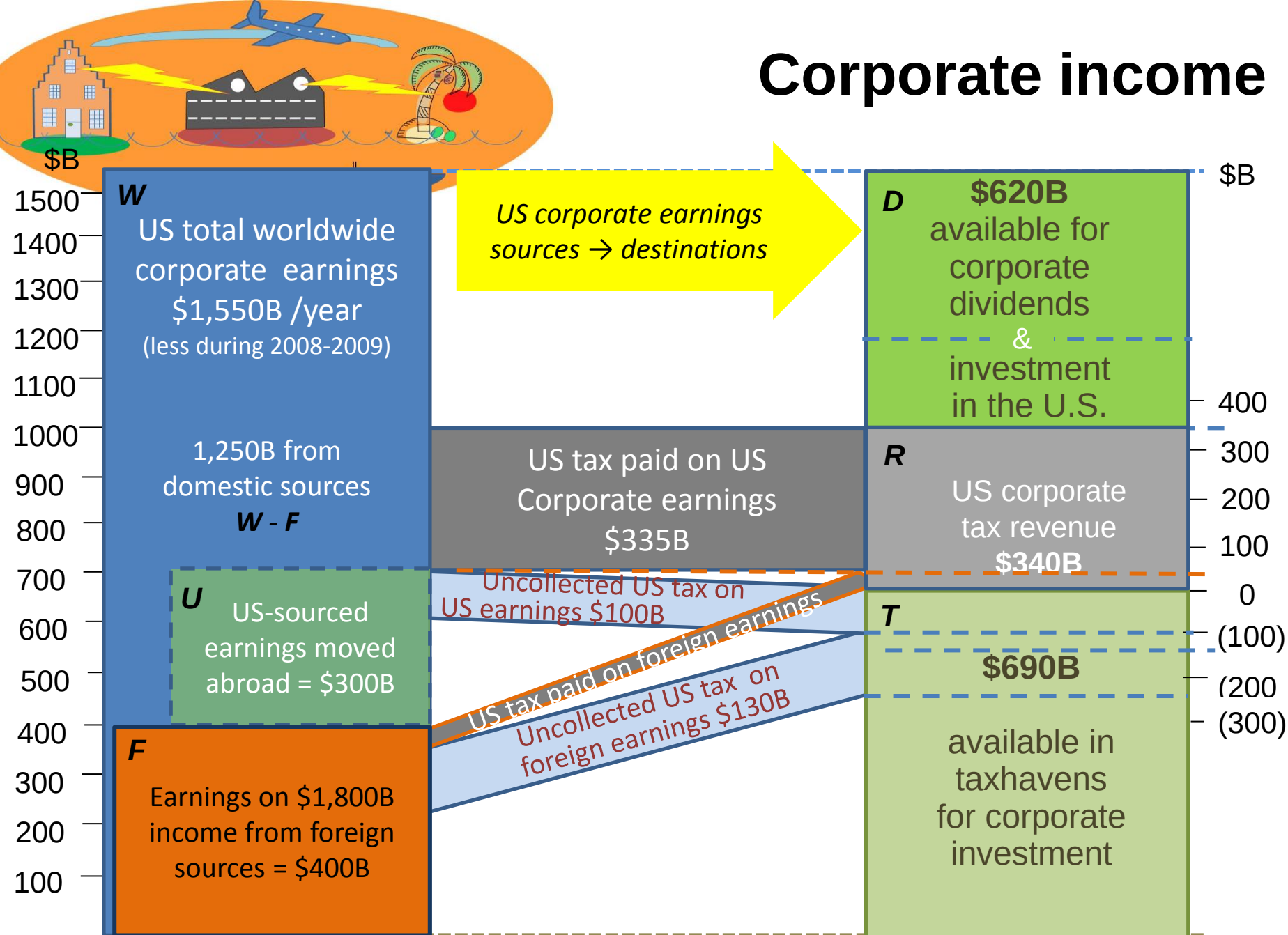
Canada



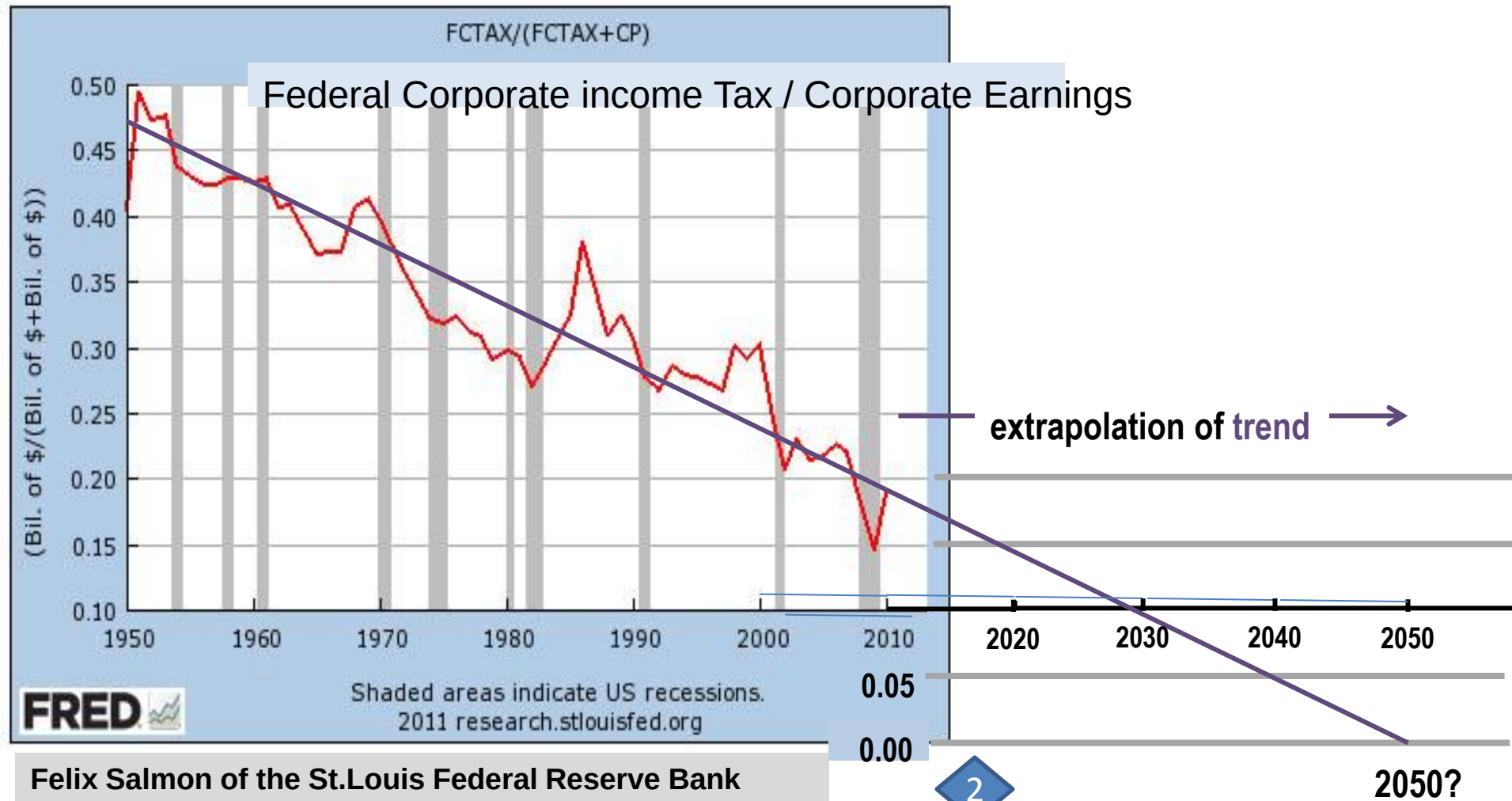
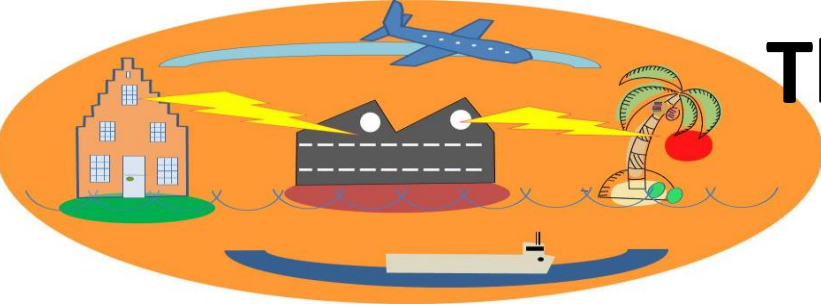
Charge the US division of your company a \$5000 cost and \$600 income from the parts transfer to Canada.

Nice \$4400 US tax deduction .

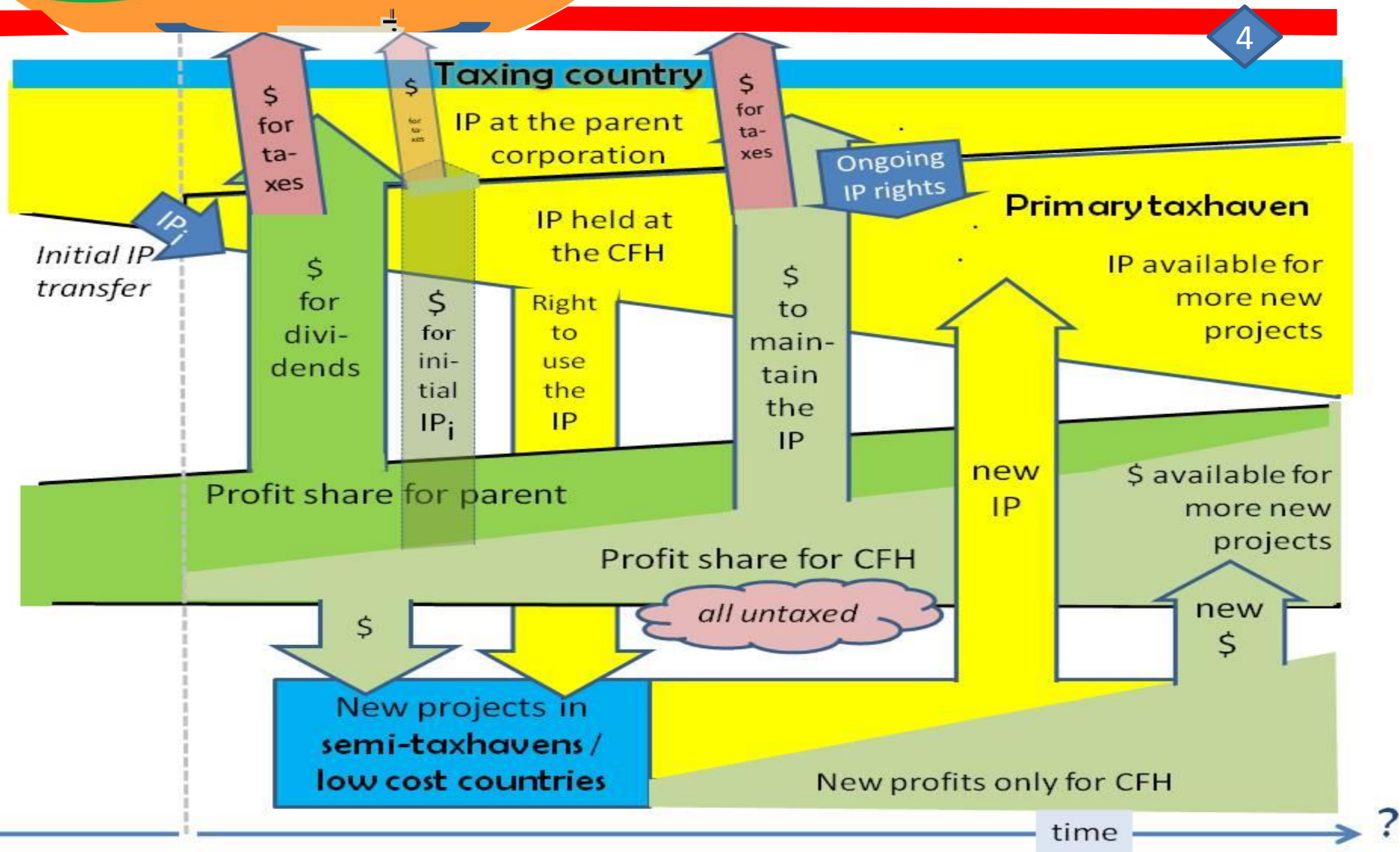
Corporate income



The contribution of taxes by corporations is decreasing



Effects over time ?



Who pays taxes

Government

salaries

Employees

salaries

Businesses

dividends

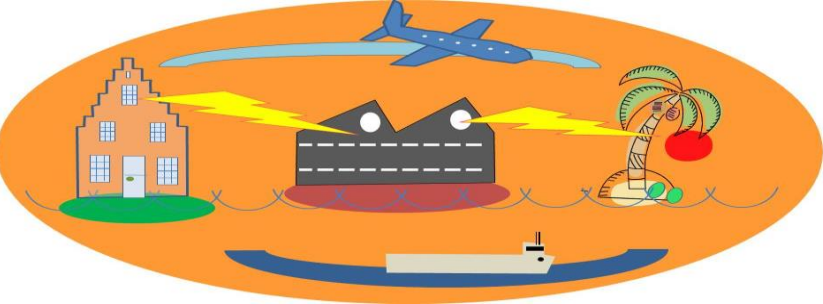
Shareholders

Independent workers

SEP

Misc.:
Customs
Fees

*Double
taxation?*



No simple solutions, so have a radical proposal

No corporate taxation and no reductions on dividend and capital gains taxes

- ~ 0.5% loss in total U.S. Tax revenues
- ✓ equalizes multinationals vs. domestic corp's
- ✓ no motivation for corp's to use taxhavens
- Removing a component of US tax revenues is worrisome
- But now no 'double taxation' Corporate + Shareholders
 - Revenues from corporate taxation are decreasing, 
 - Just advance what is happening already piecemeal

Answers to the Motivation query

Comments:

"It's all perfectly legal"



Only after an initial misvaluation

If brought back to the US then ~40% would be lost to taxes



It's less than 25% due to incentives

The IRS let's corporations off the hook



Yes, but its hook is small

Those loopholes should be plugged



It's a process, not a hole

Ireland should not have a 12.5% corporate tax rate



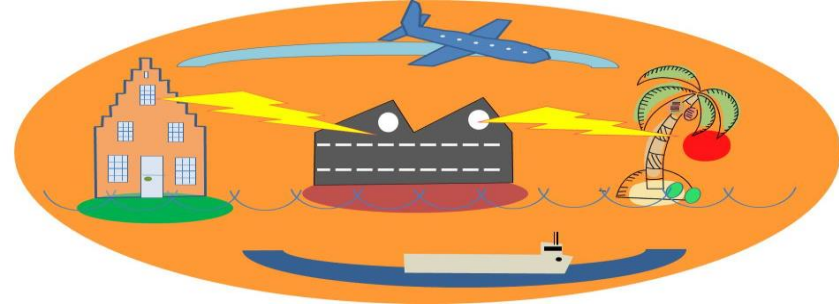
Ireland is 1. sovereign, and 2. has territorial taxation

Just allocate taxable revenue to country by sales!



Assumes no transfers

The comments were based on a lack of understanding

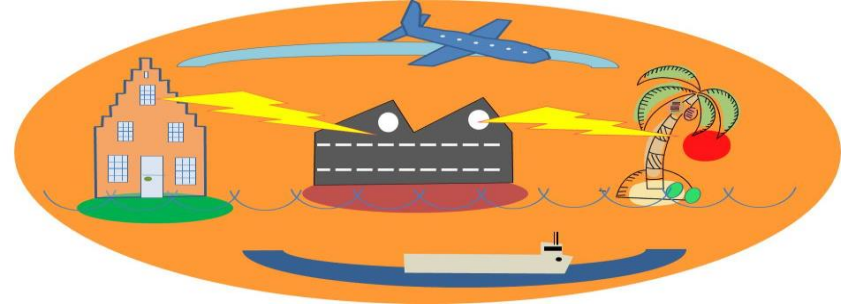


*Let's ignore the
intangibles, we
cannot measure
them reliably.*

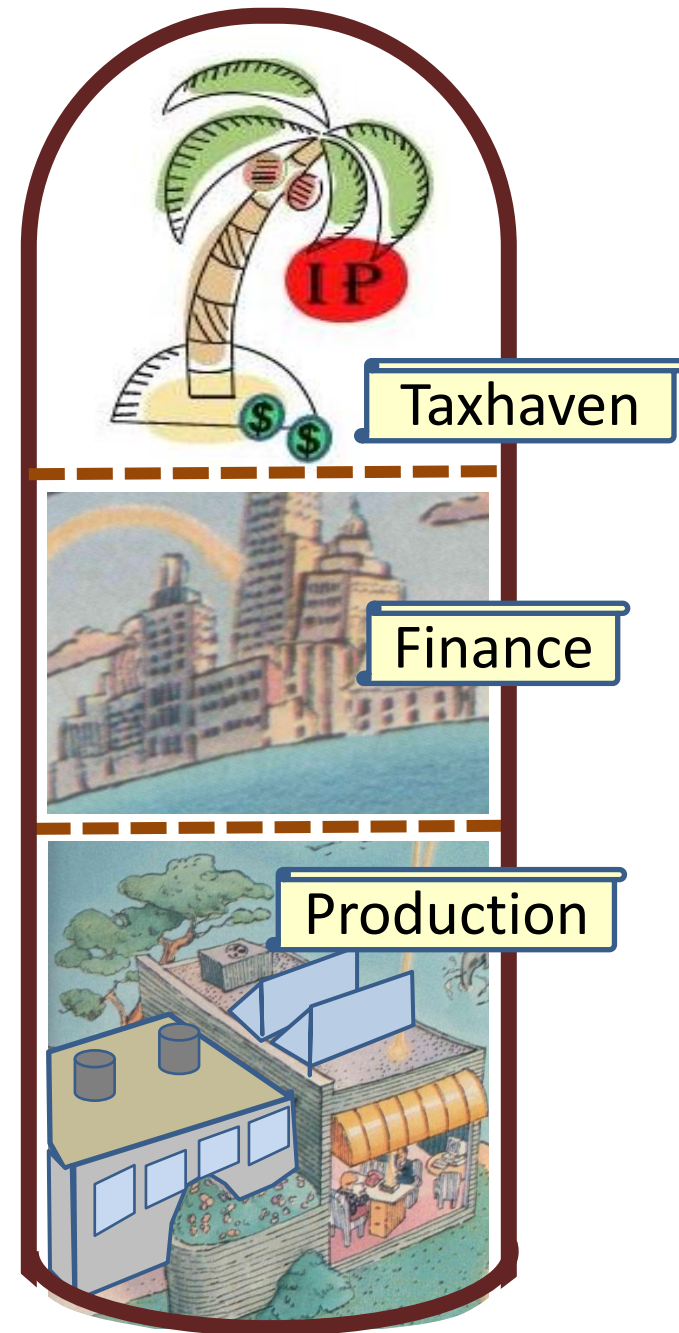
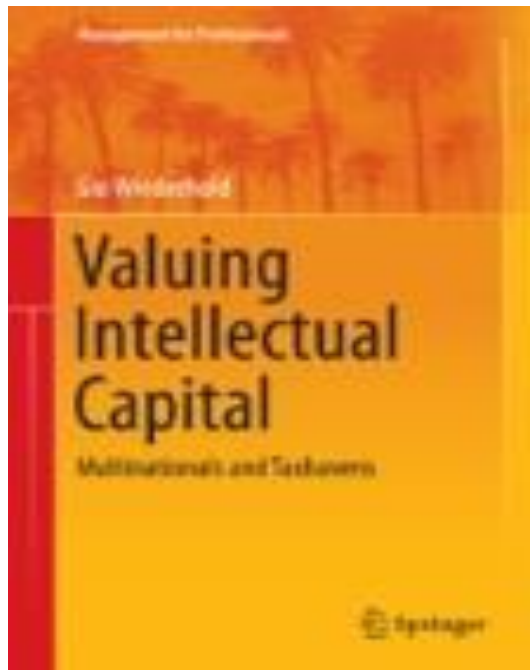
**Book
value**

Intangibles

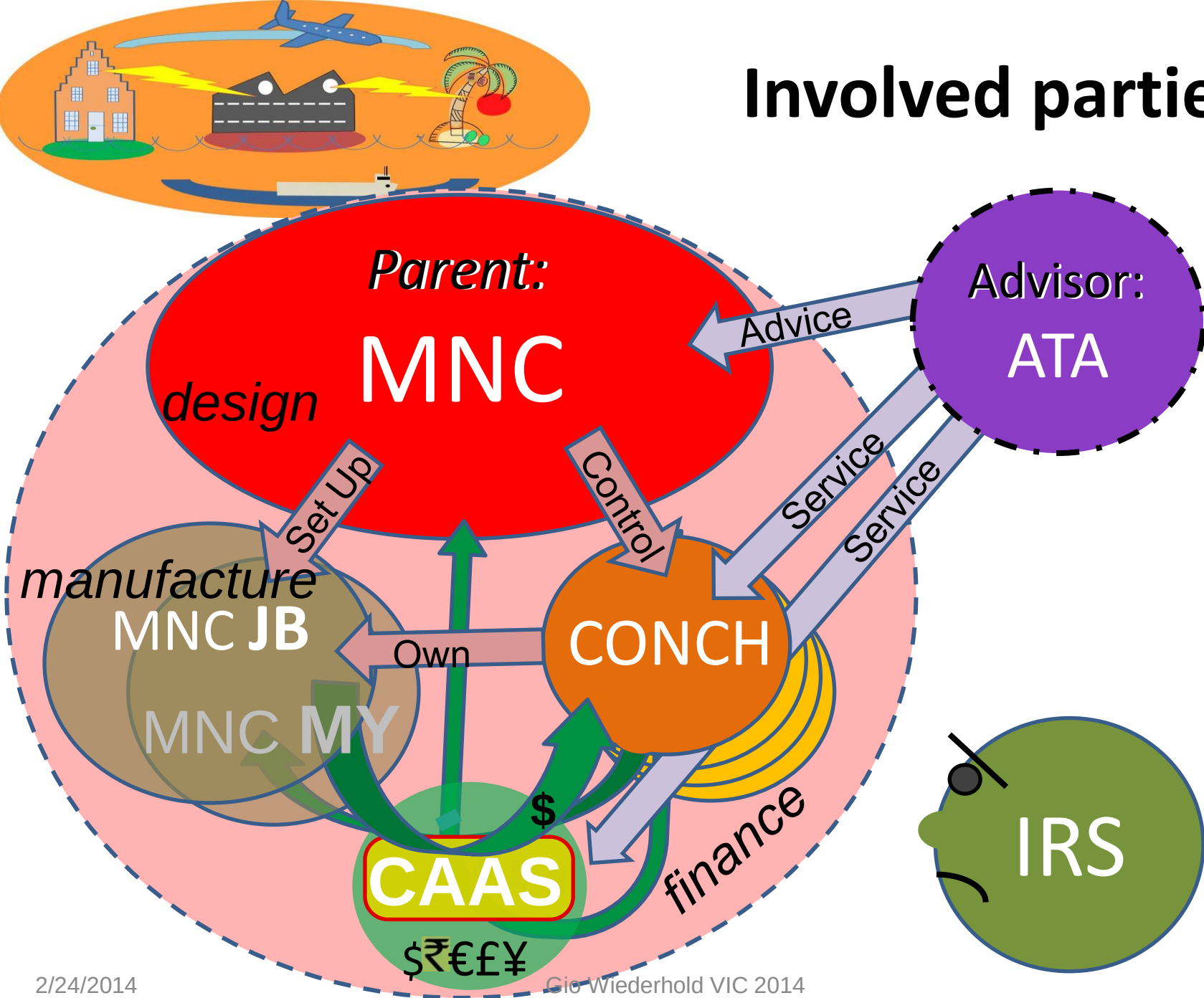


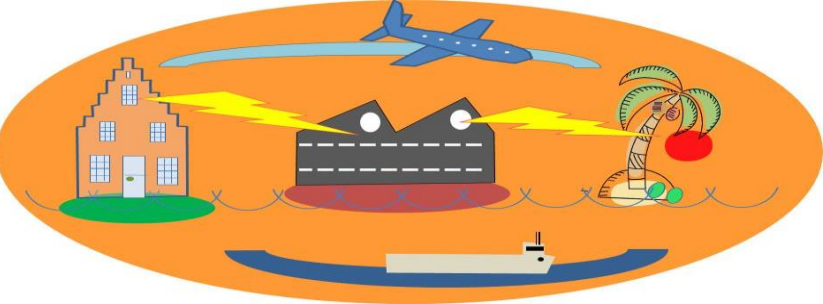


Questions?



Involved parties

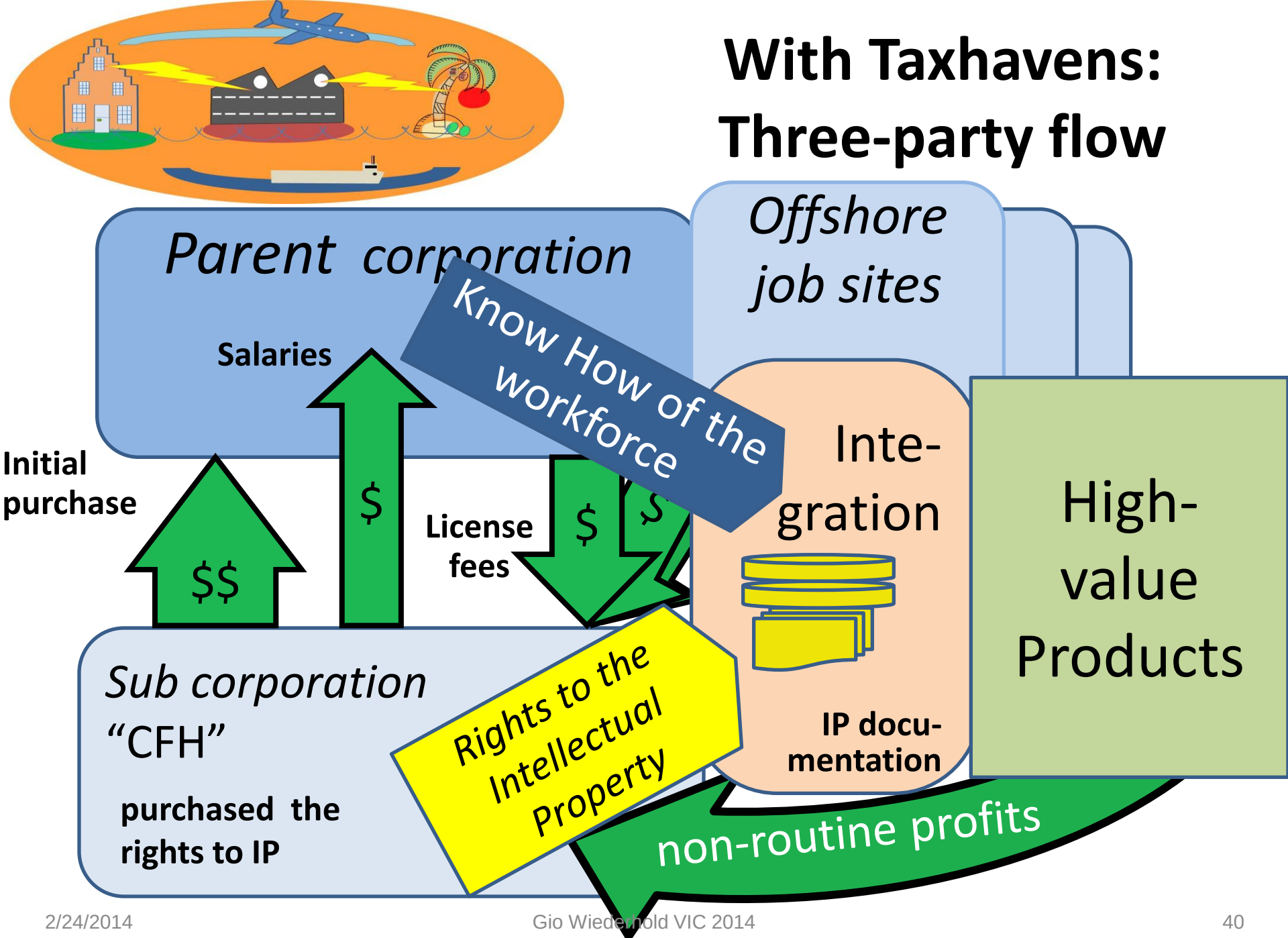




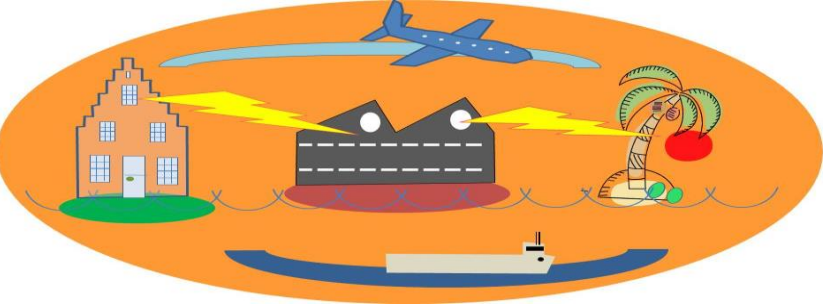
Estimate of effect on tax revenue

Taxed item	Action	Change		Motivation and result
Corporate income tax (CIT) for C-corporations -- not S-corps. LLCs	Abolish	(\$143.3B)		Cannot be administered fairly
Dividends to individuals	Tax as income	\$30.4B		Treat all sources of individual income identically
Capital gains by individuals		\$69.0B		
Effect of taxation of greater dividend payouts	Corporate	\$9.6B		Tax on compensation of shareholders for their increased taxes. Purchases (based on DoD spending)
Direct effect of investment		\$20.4B		
Research credit , similar corporate tax deductions (loopholes), corporate AMT		No \$ change. No tax, no tax credit		If incentives are still desired, they must be replaced by explicit grants
Indirect effect of increased investment and repatriation of offshore holdings		No effect of “Laffer curve”		
Total estimated effect		(\$13.8B)		(7.2%) of business tax revenues (0.5%) of US tax rev.

With Taxhavens: Three-party flow



Knowledge is the Link



To be effective a **worker** has to know what has to be done

- That knowledge consists of

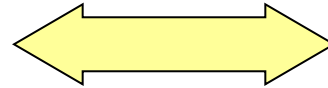
• call center employees	• technicians
• engineers	• managers

- ❖ The technology

- Documentation, prior versions, quality control

- ❖ The business methods

- How technology in the product is marketed
 - The flow from buyers to improved products and methods



Companies distinguish themselves by proprietary IP

1. Patents, sometimes Copyrights
2. Confidential Documents
3. Knowledge within its people - protected by NDAs

Trade secrets

Taxhavens

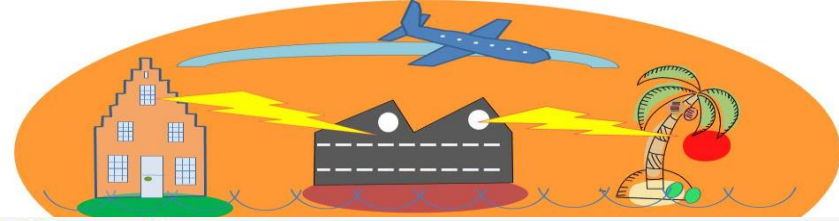
are places where

1. Taxes are low
2. Financial and IP supervision is minimal
3. Reporting requirements are minimal
- Three *cooperating* types are needed
 1. Primary tax havens (about a dozen countries)
 - Small populations,
 - Can live largely of license fees
 - Cayman Islands, pop. 50K, 90K companies @ 3000/year
 2. Semi-taxhavens (more, but diverse)
 - Large populations, need jobs
 - Enact, often temporary, tax benefits for foreign work
 3. Conduit taxhavens (few, small, financially active countries)
 - trusted, separate taxhaven activities by *ringfencing*
 - can shuffle funds invisible among locations



DUTCH SANDWICH





Not all taxhavens are offshore: Delaware

Google maps

1209 North Orange Street, Wilmington DE



Get directions My places

1209 N Orange St
Wilmington, DE 19801

Formal HQ of
Coca-Cola, Ford, General Motors,
Google, Hewlett Packard, Intel, Kentucky
Fried Chicken, Texas Instruments, and
200,000 more corporations

At this address:
CT Corporation -
MYSMP, LLC -

owner:
Corporation Trust,
a subsidiary of
Wolters-Kluwer, a
Dutch publishing house.

