

# Value Capturing for Financing Eco-City Development:

## Experience from the Netherlands and elsewhere

### 生态城市发展价值获取: 荷兰及其他国家经验

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# The Netherlands: climate adaptation and urban development

## 荷兰：气候适应性和城市发展

Eco-friendly urban development and climate adaptation

生态友好城市发展和气候适应性

Netherlands: long history with flooding and water safety issues

荷兰：很长时间都饱受洪水和水安全问题影响

Around 40% of the country ‘under water’

大约40%的国土面积位于海平面以下

Dutch national Delta Plan 荷兰国家三角洲计划：

- Investment to protect against rise of sea water level 为防止海水水位上升进行投资
- Investments to protect against increased risks of flooding in river delta 投资：防止三角洲的洪水风险增加
- Additional eco-friendly investments in urban development 城市发展：进行附加的生态友好投资







## programma in Kaart

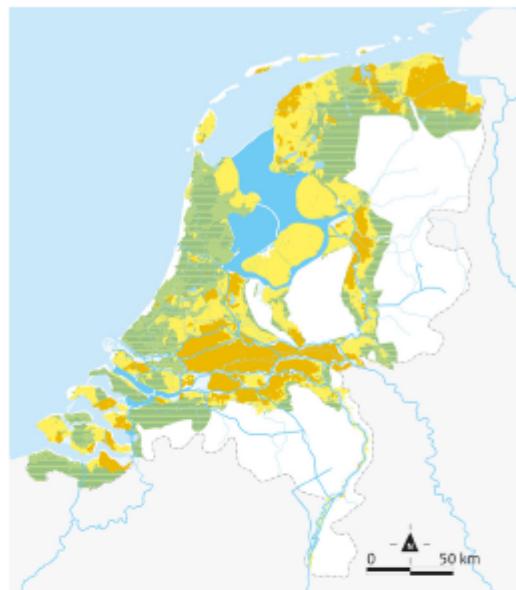
2015

programma's		Rivieren projecten vervaardigd na geplande maatregelen van het Delta programma		Tabel 2 Uit 12 in hoofdstuk 4. Eventuele kleinste symbolen geven planfase aan.	
anno	anno	Delta Hoogwaterbeschermingsprogramma (HAWP-2)	Neders. Uitvoering Riviergebied (NUIG)	Internt asselink gebied Oostvaarder d'Uitvaarder	Stand van zaken per project planfase per 2015
2015-2020	2015-2020	500 projectnummer	700 projectnummer	900 projectnummer	0 dag niet in planfase
		△ versterking ase dijk, duur of dam	▲ projectlocatie	1000 steenverdiging	□ onderzoek
		□ versterking ase kustverb	◆ bestorringlocatie	● bestorringlocatie	■ verkenning
		— dijkverdiging	○ projectlocatie	— strandverdiging	■ planverdiging
		— project Zeeuwse Schans Langs de Kust	— Overige projecten	— strandoppervlak gereed	■ tussen uitvoering en realisatie
		— Rijkswaterstaat	— am. riviermanagement	— strandoppervlak gereed	■ realisatie
		— waterhuishouding	— am. riviermanagement	— waterhuishouding	■ afgesloten



## Kaart 4a en 4b Opbrengst nieuwe aanpak waterveiligheid: individueel risico

Kaart 4a Situatie 2020 na uitvoering lopende programma's (referentie)



Kaart 4b Situatie 2050 na implementatie nieuwe aanpak



## Jaarlijkse kans op overlijden van een individu door een overstroming

kleiner dan $10^{-6}$	groter dan $10^{-5}$	zoetwater
■ tussen $10^{-6}$ en $10^{-5}$	■ potentiële overstrombaar gebied	■ zout water / brak water

## Kaart 5a en 5b Opbrengst nieuwe aanpak waterveiligheid: economisch schaderisico

Kaart 5a Situatie 2020 na uitvoering lopende programma's (referentie)



Kaart 5b Situatie 2050 na implementatie nieuwe aanpak



## Schaderisico per hectare per jaar (euro)

# Research topic

## 研究主题

### National government: 国家政府

- Investments to increase protection against rise of sea water level 对防止海平面上升的进行保护投资
- Investments in 'Room for Rivers' program 投资 “河流的空间”计划

### Dutch cities: 荷兰城市

- Climate proofing of eco-friendly new urban developments 生态友好新城市发展环境证据
- Requires additional investments 需要其他投资
- No additional (national) funding available 无需额外的国家基金

Smart land management and value-capturing strategies for funding climate-proofing, eco-friendly new urban developments?

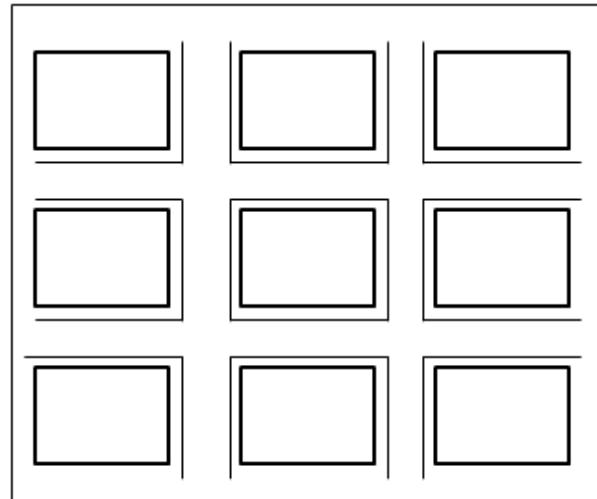
基于智能土地管理和价值获取策略的，环境友好型的新城市发展

Assumption: investments in climate-proof, eco-friendly urban development leads to real estate value increase

假设：气候证据、生态环境友好城市发展会带来土地价值的增加

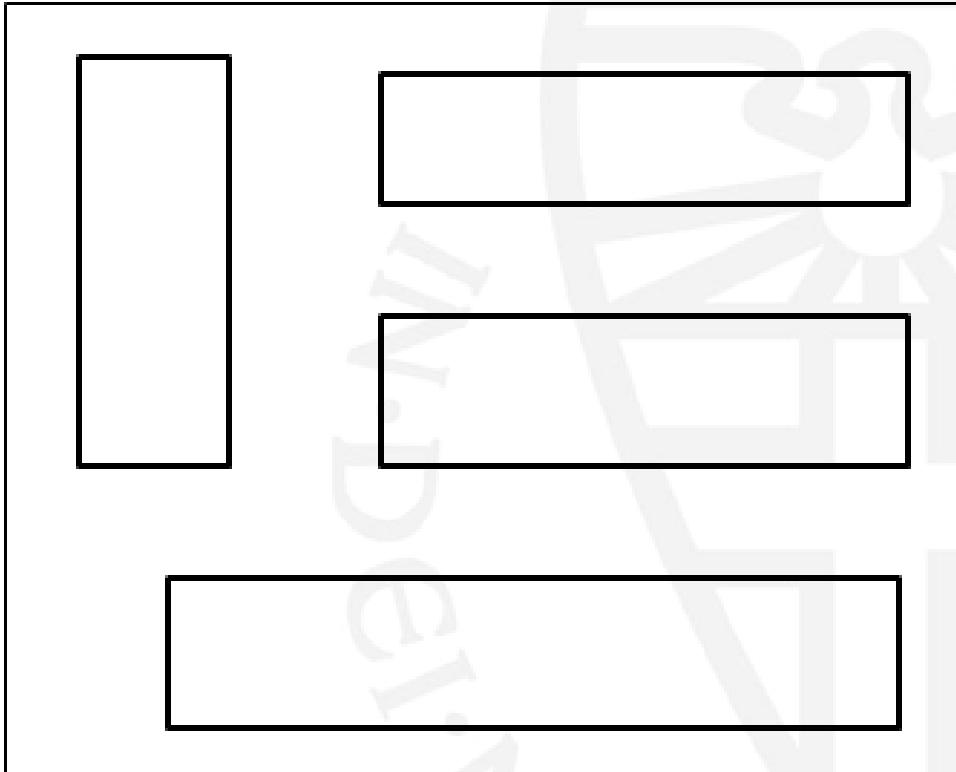
development <i>assembly models</i>	Main purpose	Land assembly	Value capturing public infrastruc
-led land pment	To implement local-authority-driven development program	Public body acquires all land that is needed	Income from sale building plots
land banking	To achieve (re)development program for specific area	Public body acquires all land that is needed	Developer contributions
e-led land pment	To achieve (re)development program for specific area	Private developer acquires all land that is needed	Developer contributions
<i>readjustment</i> s			
land stment	To achieve (re)development program for specific area	Temporary transfer of ownership rights to self-governing body; after readjustment	Self-governing b or owner contributions

# Value capturing for public infrastructure provision 公共基础设施供给的价值计算



Land value existing use  
土地价值现在的利用

Increment  
value of land  
增加土地价值



Land value future use  
土地价值未来利用

# Landownership constraints: assume the following situation 土地所有权限制：假设条件

Development location with different owners 不同所有者的发展定位

Majority of owners agree on plan for redevelopment (A, B; D willing to sell his property to A and B) 大部分业主同意再建计划 (A、B、D愿意出售自己的财产给A和B)

Re-parceling of land required 需要重新实施土地分配

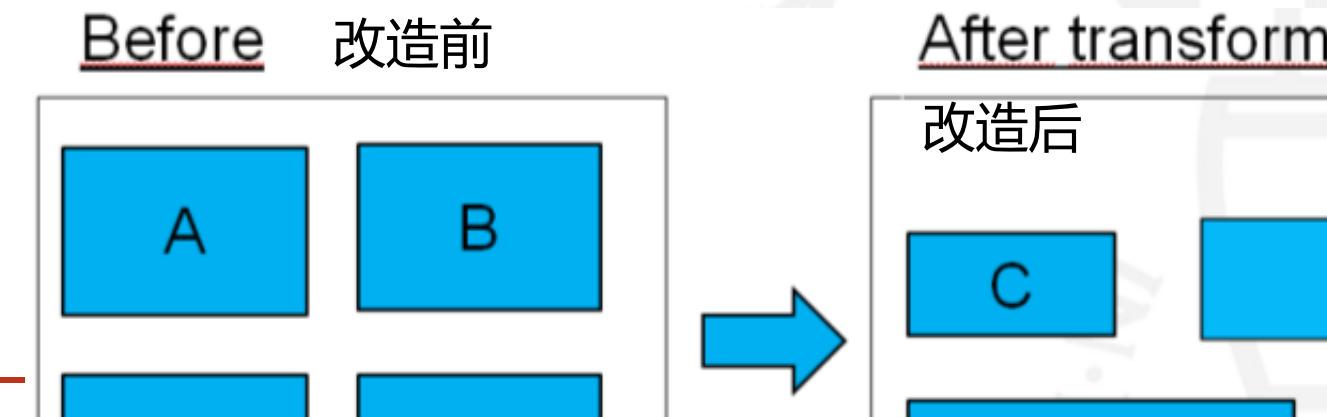
Proposed plan is in line with public policies for that area 提出的计划需符合该区域的公共政策

Minority of owners (C) does not want to participate 少量业主不同意参与

Alternative development is not possible: 无替代发展计划

- Inefficient 不高效
- Not in line with planning goals 与计划目标不一致

Outcome would be: development does not take place 结果可能是：发展不会发生



# Land assembly / consolidation

## 土地产权和拥有权

Why should the government intervene with the land market 为什么政府干预土地市场

Land assembly: make land available for (re)development (in an efficient way)

土地分配：使土地可以（重新）发展（以有效的方式）

Cost recovery of public works necessary for development

发展所必须的公共工作成本回收

Capturing the ‘unearned increment’ in land value

获取“自然增值”的土地价值

Political and spatial ambitions: 政治空间野心

- Affordable housing 经济适用房
- Sustainable development: climate proofing, eco-friendly 可持续发展：气候证据、生态友好

Right balance between public goals and individual property rights

公共目标和个人财产权利之间取得适当平衡

# Dutch experience: public-led land consolidation

## 荷兰经验：公众导向的土地拥有

Municipality buys all the land to be developed 本市购买所有待开发土地

No monopoly powers for municipalities 没有城市的垄断力量

Land will be serviced with infrastructure 土地提供基础设施服务

Re-parceling of land into forms suitable for desired development 重新分配的土地  
适合想要的发展形式

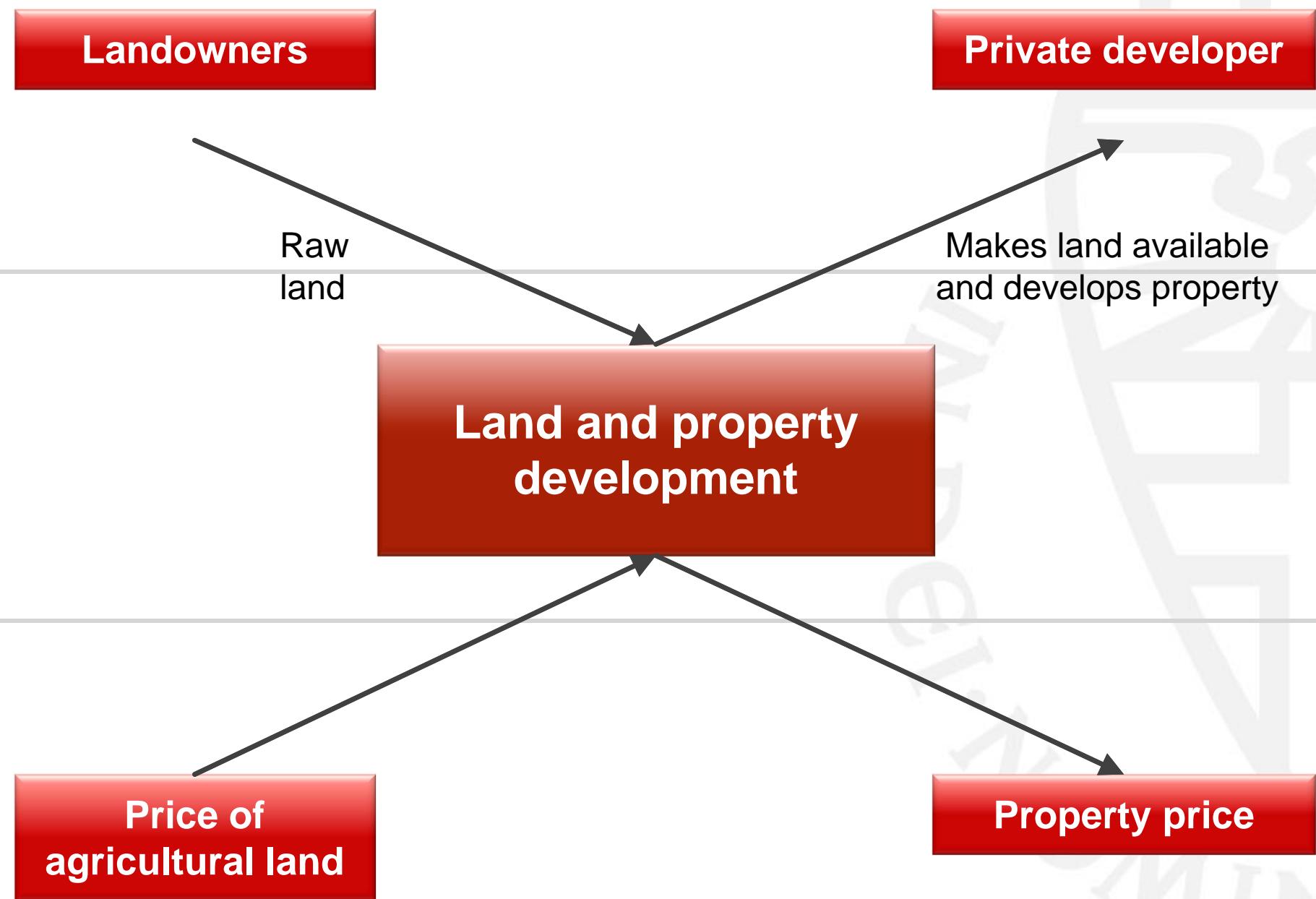
Municipality sells building plots to private developers and / or end users at full  
development value 本市对私人发展商或最终用户以全部价值出售的建筑地块

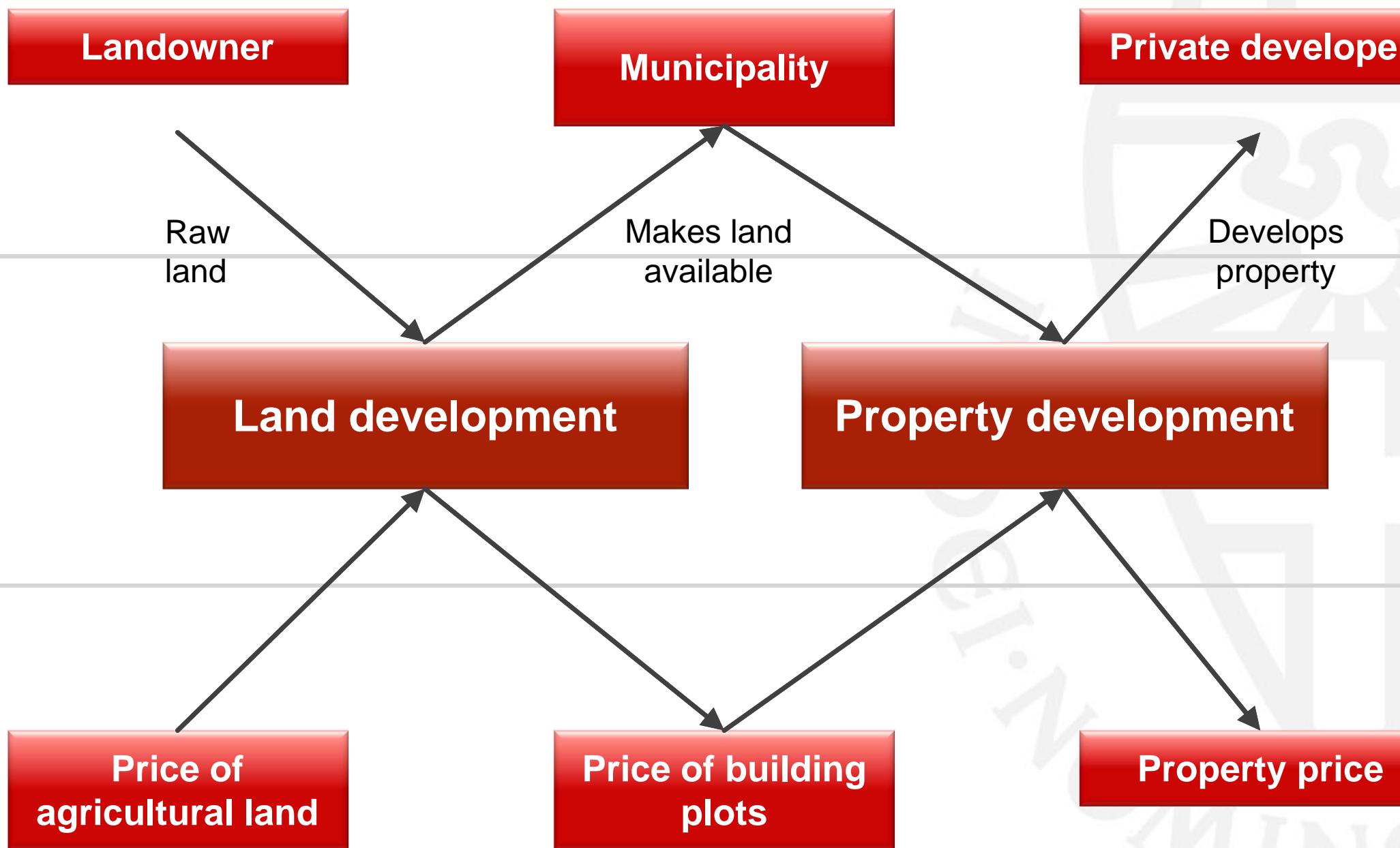
Net income from buying and selling can be used for cost recovery of public works  
including climate proofing and eco-friendly investments) 通过购买和出售的净收  
入能被用于公共工作的成本回收（包括气候证据和生态友好投资）

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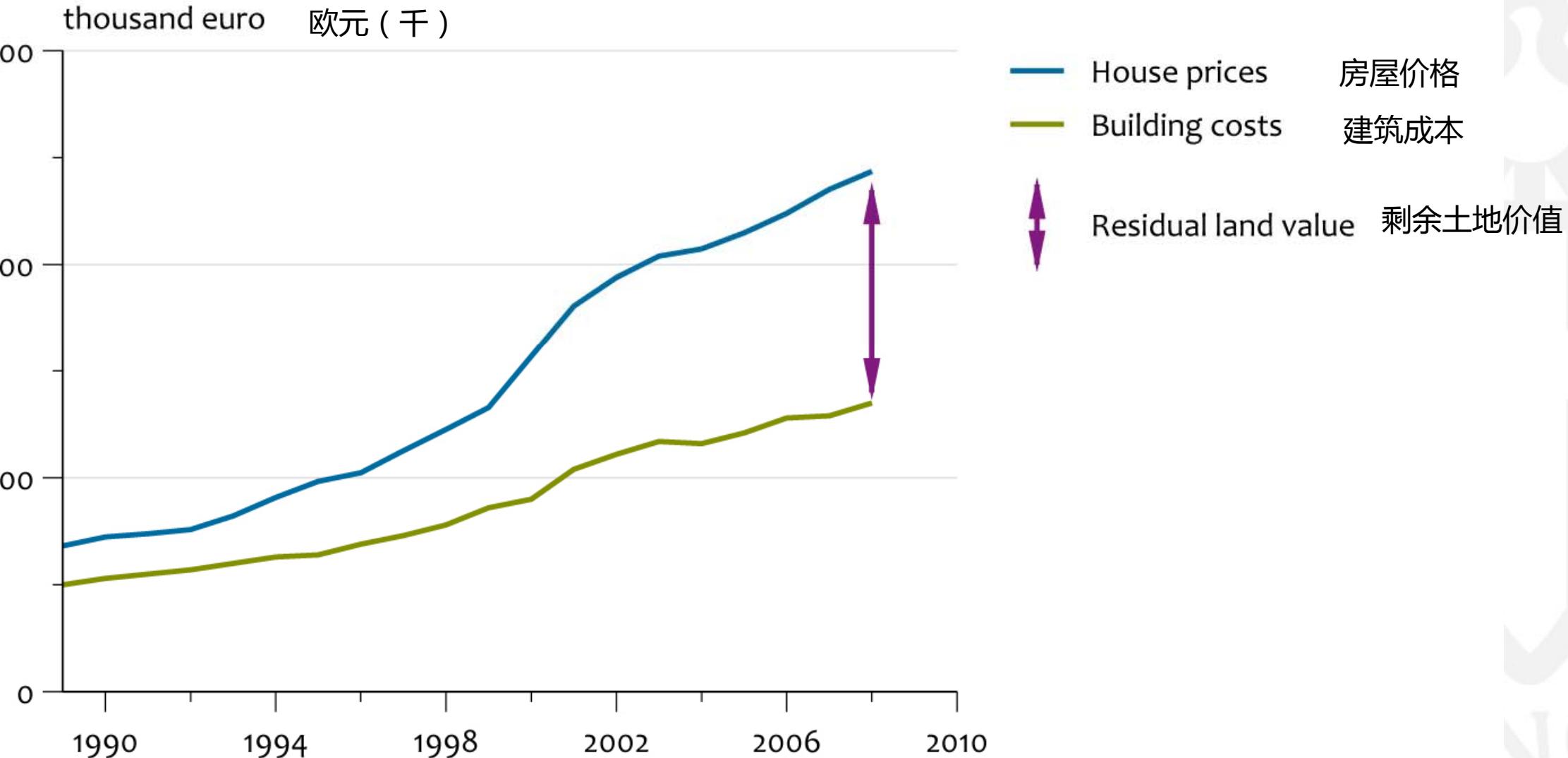
# Public land development: why?

## 公众土地发展：为什么？

- Pro-active planning: quest for control (additional to land use planning) 主动规划：任务控制（额外土地利用总体规划）
- Financial benefits 经济收益
  - cost recovery of public works 公共工作的成本回收
  - value capturing (cash cow) 价值获取（摇钱树）
- Public goods argument (market failure) 公共产品参数（市场失灵）
- Public land development allows large, integrated developments 公共土地开发允许大型，综合性的发展
- Private sector appreciates public development model 私营部门的赞同公众发展模式
  - high-quality development locations
  - they earn their money with housebuilding (and not land development)

# 发展能够获得什么？

Residual land value for market-rate housing



# 姆斯特丹



# 得勒支 Leidsche Rijn



# Public-led land development: why not 公众导向土地发展：为什么不？

- Value of existing properties brought into the redevelopment  
现有物业的价值带入重建
- Duration of the project: long time to acquire all properties  
项目的持续时间：很长一段时间来获取所有属性
- Legal powers for expropriation, but many complications  
征用的法律权力，多伴有并发症
- Lack of transparency: two hats problems for municipalities  
缺乏透明度：城市的两顶帽子的问题
- Huge financial risks for municipality  
城市巨大的金融风险
  - risk of high interest costs 高利息成本风险
  - risk of unsellable building plots 建筑地块出售风险

eadjustment

## 产权土地所有的土地管理：城市土地调整

All landowners pool land: temporary transfer of owner rights to ‘special purpose vehicle’ 所有业主的土地：将所有者权利暂时移交给“特殊用途车辆”

No transactions 无交易

Re-parceling of land into building plots that suit proposed development  
重新实行分配的土地变成建筑用地所提出的发展计划

Original owners receive plot of land that equals original share in value  
原业主收到的地块等于原有的价值股

If owner receives smaller plot of land, other owners will compensate him  
如果车主收到土地小地块，其他业主将补偿他



## 国际城市土地调整案例

To facilitate private-private cooperation in case of ‘clumsy’, inefficient land ownership structure 低效的土地所有制结构的私营部门的合作

International experience: including Germany, France, Spain, Turkey, Italy, Japan, Korea, Taiwan, Thailand, India .... 国家经验：包括德国、西班牙、土耳其、意大利、日本、韩国、台湾、泰国、印度

Japan: *Kukaku Seiri* 日本

Type 1: main focus on adjusting ownership structure 类型1：主要的精力放在调整股权结构

➤ (e.g. Germany: Bauland Umlegung) 德国

Type 2: main focus on facilitating cooperation between owners 类型2：主要的精力放在促进业主之间的合作

➤ (e.g France: Association Fonciere Urbaine) 法国

# *Land value capturing – versus – Property value capturing* 土地价值计算VS产权价值计算

Dutch model (and many countries)

*Land value capturing 土地价值获取*

Property developer contributes to costs public infrastructure provision  
房地产开发商有利于成本的公共基础设施建设

Two models 两个模型

- Public land development: based on net income from building plots sale
- Planning Act regulates developer contribution, based on *real costs*

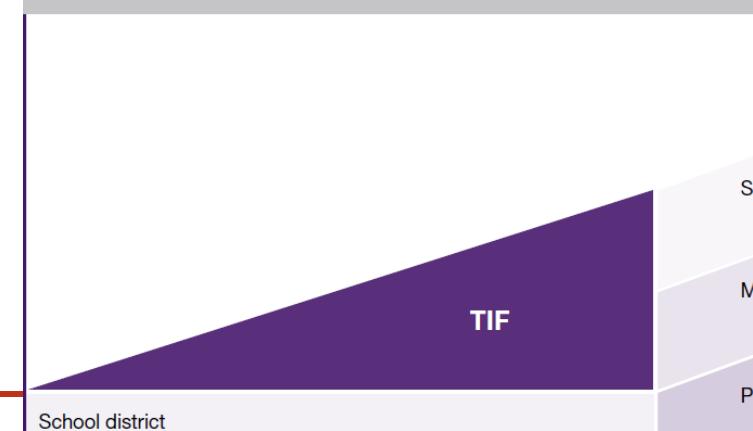
Problems with this model 模型的问题

- Uncertainty about infrastructure costs
- Future developers unknown
- Assumes profitable development

# Property value capturing: Tax Increment Financing

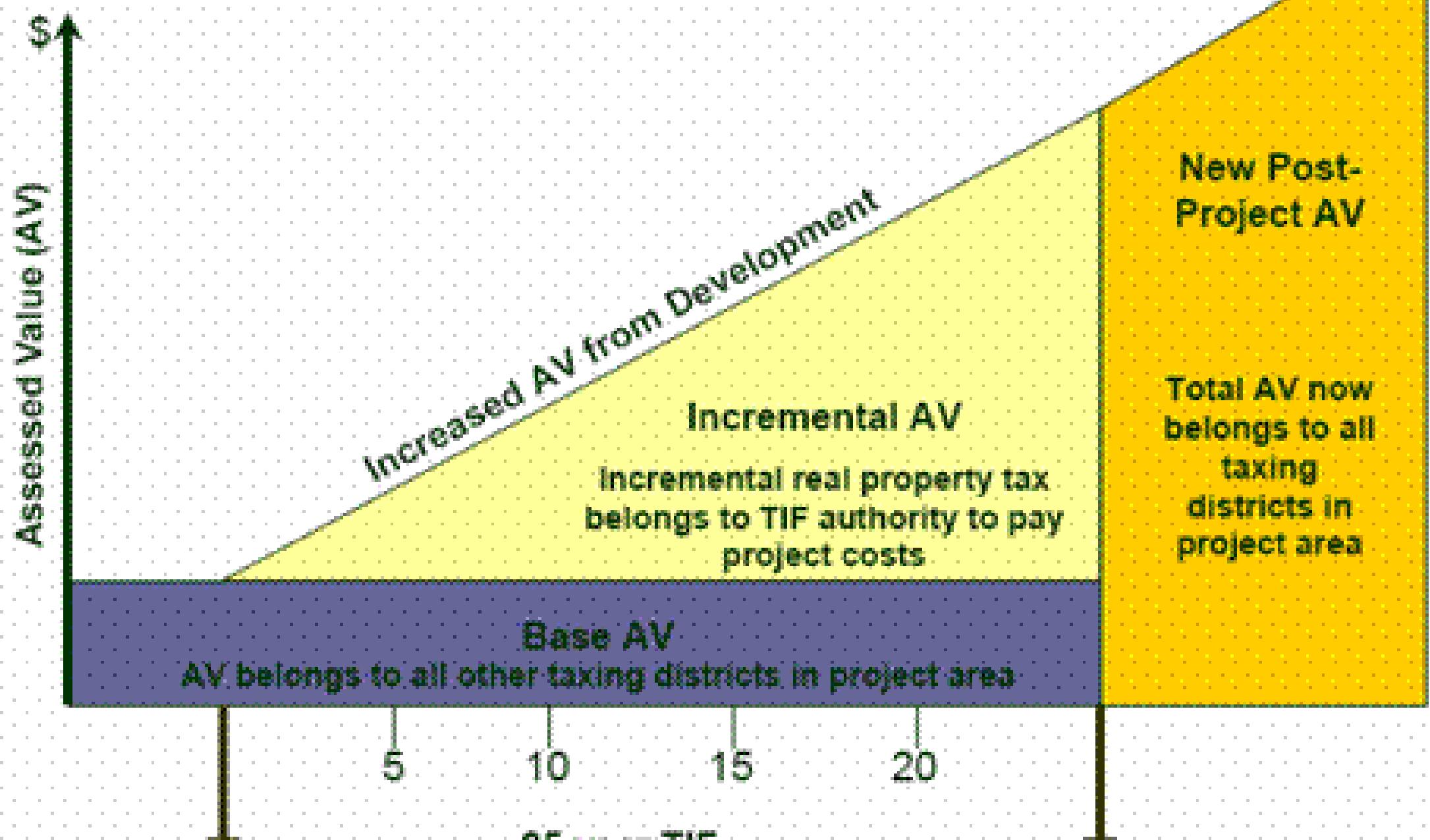
## 产权价值计算：税收累计财政手段

- Financing of public infrastructure provision 公共基础设施建设融资
- Use of future tax increment as ‘gap funding’ (property taxes, parking fees, income from long land leaseholds, ...) 利用未来的税收增量为“资金缺口”（从长期土地租赁权的房产税，停车费，收入，...）
- Only additional tax income for incremental property values, as a result of transformation project 唯一的额外税收收入增量的属性值，作为改造项目的结果
- ‘But for’ criterium 对于“绕圈”
- Agreement on risk allocation 同意风险分配



# 税收增量融资

## TIF ASSESSED VALUE (AV) OVER PROJECT LIFE



# Conclusions

## 结论

Governance and financing of climate-proof, eco-friendly urban development requires integrated, comprehensive approach 生态友好的城市发展需要集成、综合的政府和财政手段

- for efficient construction of public infrastructure
- for maximum value capturing
- Incorporates value increase and prevents unpriced positive externalities

Alternative development models:可替代的发展模型

- public-sector led
- private-sector led
- public-private cooperation
- owners cooperative

It's all about:主要包括

- pro-active and effective urban planning
- assessing value impact of public infrastructure investment
- sharing financial risks among landowners, local government, development industry and future property owners