

# The Management and Maintenance of High-rise Multi-family Housing Stock

Approaches and Strategies for Sustainability

10<sup>th</sup> Session of the World Urban Forum – 2020

Abu Dhabi

Claudio Acioly Jr

Senior Housing Expert

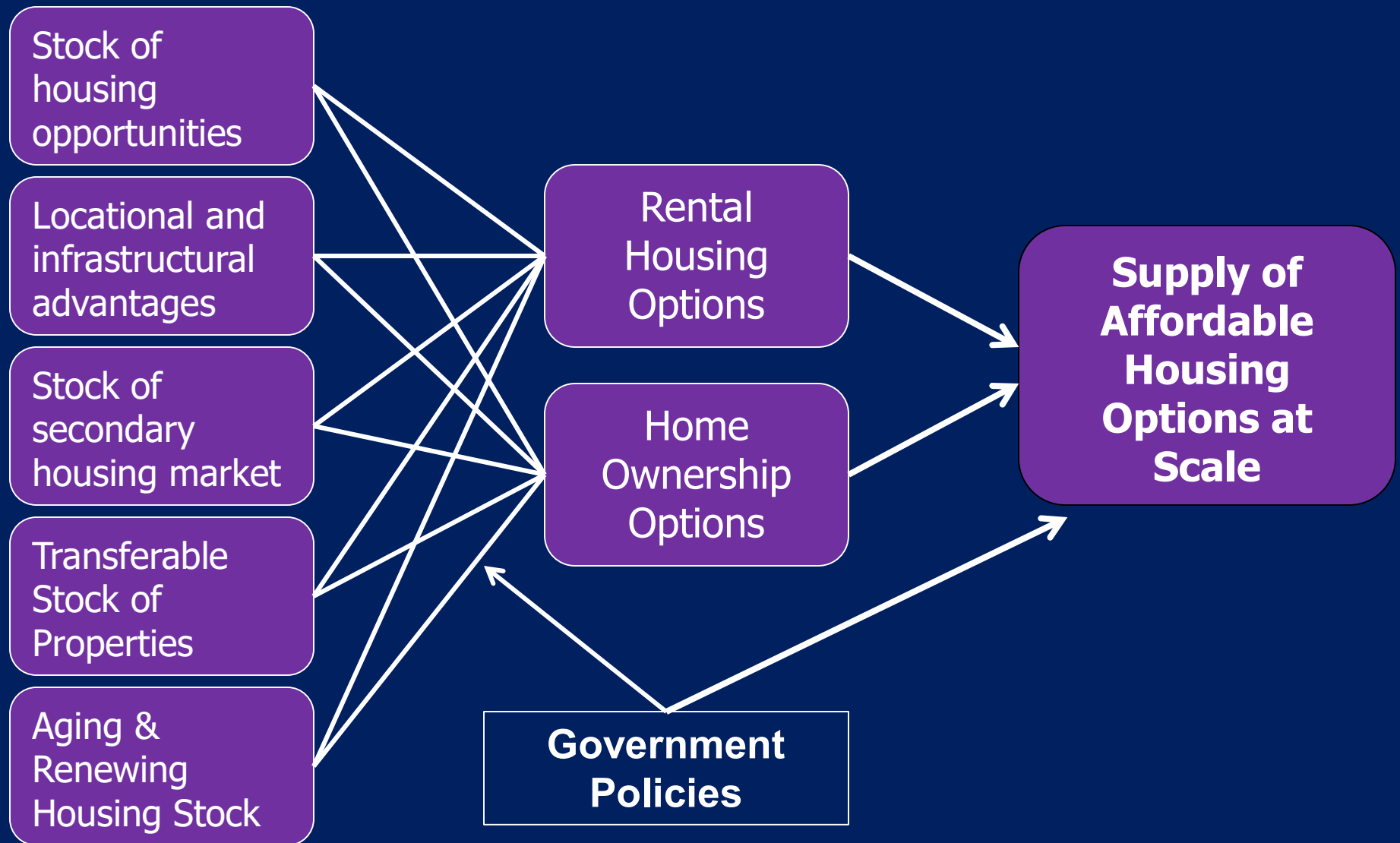
Director

International Urban Cooperation Programme of the European Union for Latin America and the Caribbean

GIZ Senior Manager

[claudio.Acioly@iuc-la.eu](mailto:claudio.Acioly@iuc-la.eu)

# What role plays the existing housing stock in achieving SDG11/NUA?



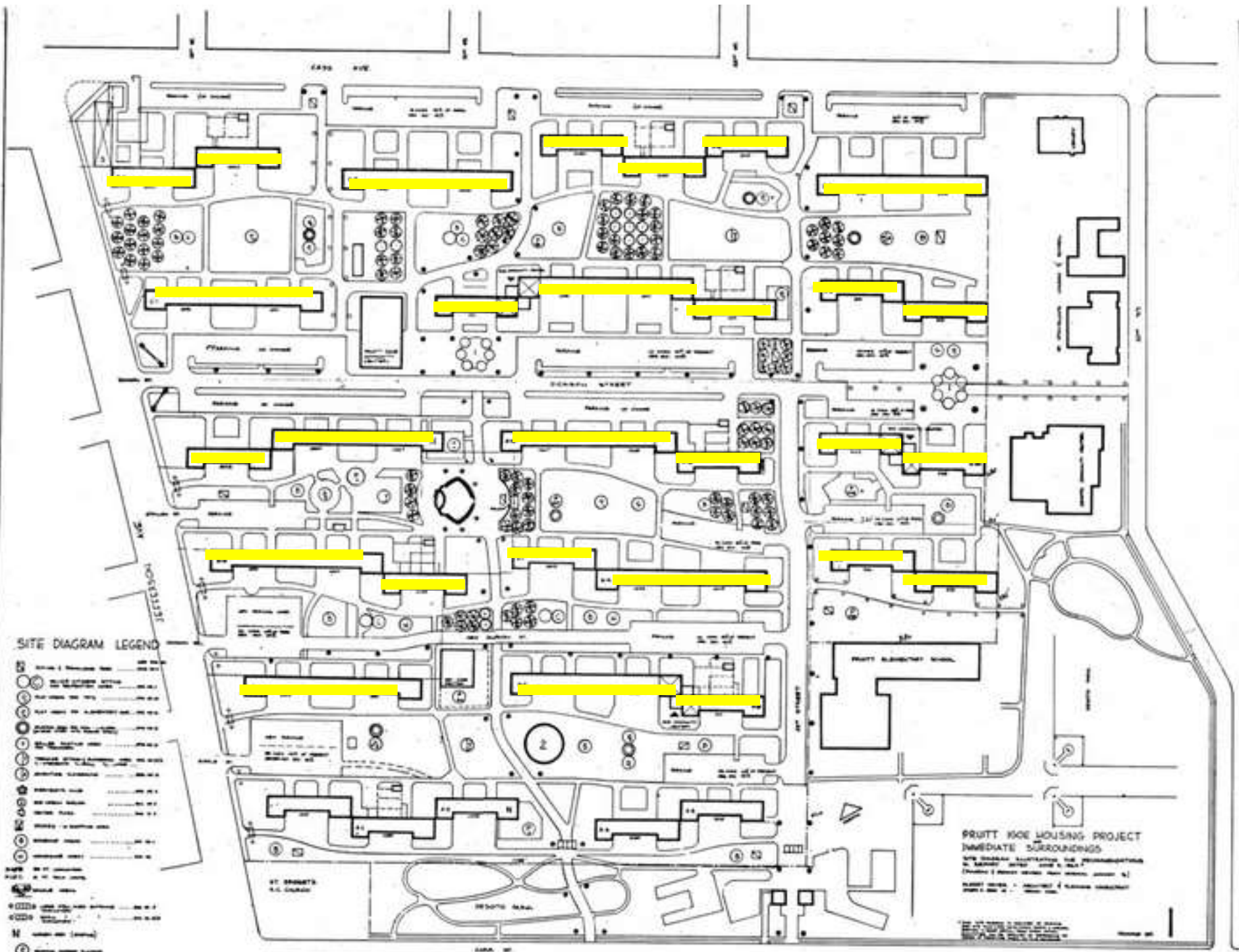
# Pruitt-Igoe Housing Project-Saint Louis

<https://www.youtube.com/watch?v=5gRuyhf2opY>

Few buildings in history can claim as infamous a legacy as that of the Pruitt-Igoe Housing Project of [St. Louis, Missouri](#). Built during the height of [Modernism](#) this nominally innovative collection of residential towers was meant to stand as a triumph of rational architectural design over the ills of poverty and urban blight; instead, two decades of turmoil preceded the final, unceremonious destruction of the entire complex in 1973. The fall of Pruitt-Igoe ultimately came to signify not only the failure of one [public housing](#) project, but arguably the death knell of the entire Modernist era of design.

<https://www.youtube.com/watch?v=yruO2wqiOTU>





**SITE DIAGRAM LEGEND**

- ① 1st Floor
- ② 2nd Floor
- ③ 3rd Floor
- ④ 4th Floor
- ⑤ 5th Floor
- ⑥ 6th Floor
- ⑦ 7th Floor
- ⑧ 8th Floor
- ⑨ 9th Floor
- ⑩ 10th Floor
- ⑪ 11th Floor
- ⑫ 12th Floor
- ⑬ 13th Floor
- ⑭ 14th Floor
- ⑮ 15th Floor
- ⑯ 16th Floor
- ⑰ 17th Floor
- ⑱ 18th Floor
- ⑲ 19th Floor
- ⑳ 20th Floor
- ① 21st Floor
- ② 22nd Floor
- ③ 23rd Floor
- ④ 24th Floor
- ⑤ 25th Floor
- ⑥ 26th Floor
- ⑦ 27th Floor
- ⑧ 28th Floor
- ⑨ 29th Floor
- ⑩ 30th Floor
- ⑪ 31st Floor
- ⑫ 32nd Floor
- ⑬ 33rd Floor
- ⑭ 34th Floor
- ⑮ 35th Floor
- ⑯ 36th Floor
- ⑰ 37th Floor
- ⑱ 38th Floor
- ⑲ 39th Floor
- ⑳ 40th Floor
- ① 41st Floor
- ② 42nd Floor
- ③ 43rd Floor
- ④ 44th Floor
- ⑤ 45th Floor
- ⑥ 46th Floor
- ⑦ 47th Floor
- ⑧ 48th Floor
- ⑨ 49th Floor
- ⑩ 50th Floor
- ⑪ 51st Floor
- ⑫ 52nd Floor
- ⑬ 53rd Floor
- ⑭ 54th Floor
- ⑮ 55th Floor
- ⑯ 56th Floor
- ⑰ 57th Floor
- ⑱ 58th Floor
- ⑲ 59th Floor
- ⑳ 60th Floor
- ① 61st Floor
- ② 62nd Floor
- ③ 63rd Floor
- ④ 64th Floor
- ⑤ 65th Floor
- ⑥ 66th Floor
- ⑦ 67th Floor
- ⑧ 68th Floor
- ⑨ 69th Floor
- ⑩ 70th Floor
- ⑪ 71st Floor
- ⑫ 72nd Floor
- ⑬ 73rd Floor
- ⑭ 74th Floor
- ⑮ 75th Floor
- ⑯ 76th Floor
- ⑰ 77th Floor
- ⑱ 78th Floor
- ⑲ 79th Floor
- ⑳ 80th Floor
- ① 81st Floor
- ② 82nd Floor
- ③ 83rd Floor
- ④ 84th Floor
- ⑤ 85th Floor
- ⑥ 86th Floor
- ⑦ 87th Floor
- ⑧ 88th Floor
- ⑨ 89th Floor
- ⑩ 90th Floor
- ⑪ 91st Floor
- ⑫ 92nd Floor
- ⑬ 93rd Floor
- ⑭ 94th Floor
- ⑮ 95th Floor
- ⑯ 96th Floor
- ⑰ 97th Floor
- ⑱ 98th Floor
- ⑲ 99th Floor
- ⑳ 100th Floor

**PRUITT IGOE HOUSING PROJECT  
IMMEDIATE SURROUNDINGS**

THE HOUSING AUTHORITY FOR MISSOURI  
 1400 MARKET STREET, ST. LOUIS, MISSOURI 63103  
 (Drawing & Plans Section, Room 401)  
 PLANNED BY: MISSOURI HOUSING AUTHORITY  
 DATE: 1954

# **Pruitt-Igoe Housing Project-Saint Louis**

## **The Myths of Pruitt-Igoe**

In 1954, the first tenant moved into the federally funded Pruitt-Igoe housing project on the north side of St. Louis, Missouri. By the mid-1960s, however, the complex's crime rate surged, the vacancy rate rose, and living conditions dramatically declined. On July 15, 1972, the city of St. Louis admitted defeat and demolished 3 of the project's 33 towers. By 1976, the razing of Pruitt-Igoe was complete. Today, half of the property is occupied by two St. Louis city schools; in the other half, an overgrown urban forest has sprung up amid the rubble.



# What does cause the failure of housing solutions?

<https://www.youtube.com/watch?v=t29fgA5M7VA>

OST Koyaanisqatsi (Godfrey Reggio, 1982), by Philip Glass Photo :  
Pruitt Igoe destruction

Ko-yaa-nis-qatsi (Hopi language): 1. crazy life ; 2. life in turmoil ; 3. life out of balance ; 4. life disintegrating ; 5. a state of life that calls for another way of living.

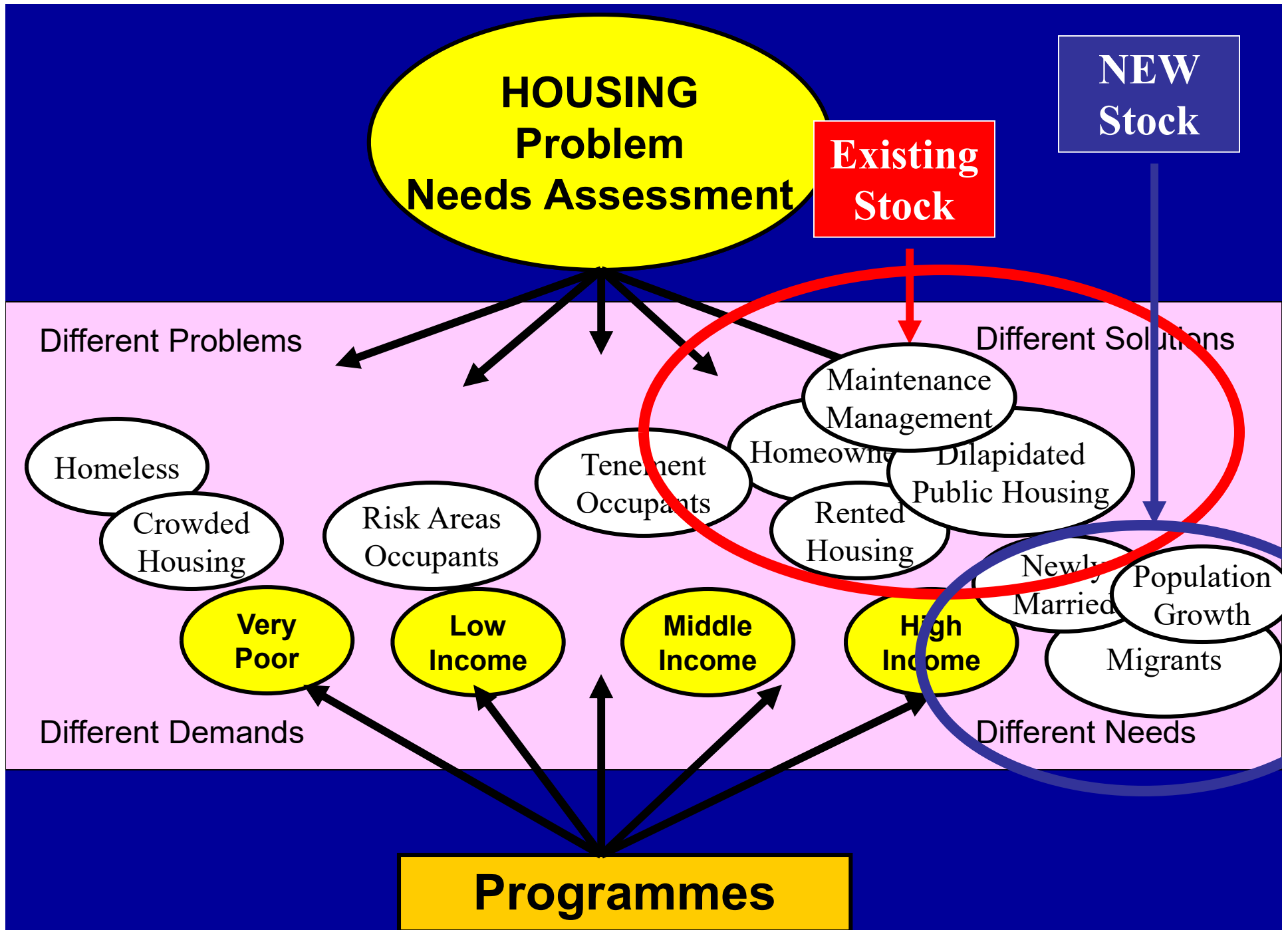
[https://www.youtube.com/watch?v=7eGTU\\_uXLKk](https://www.youtube.com/watch?v=7eGTU_uXLKk)

Chicago High-rise Housing Demolitions

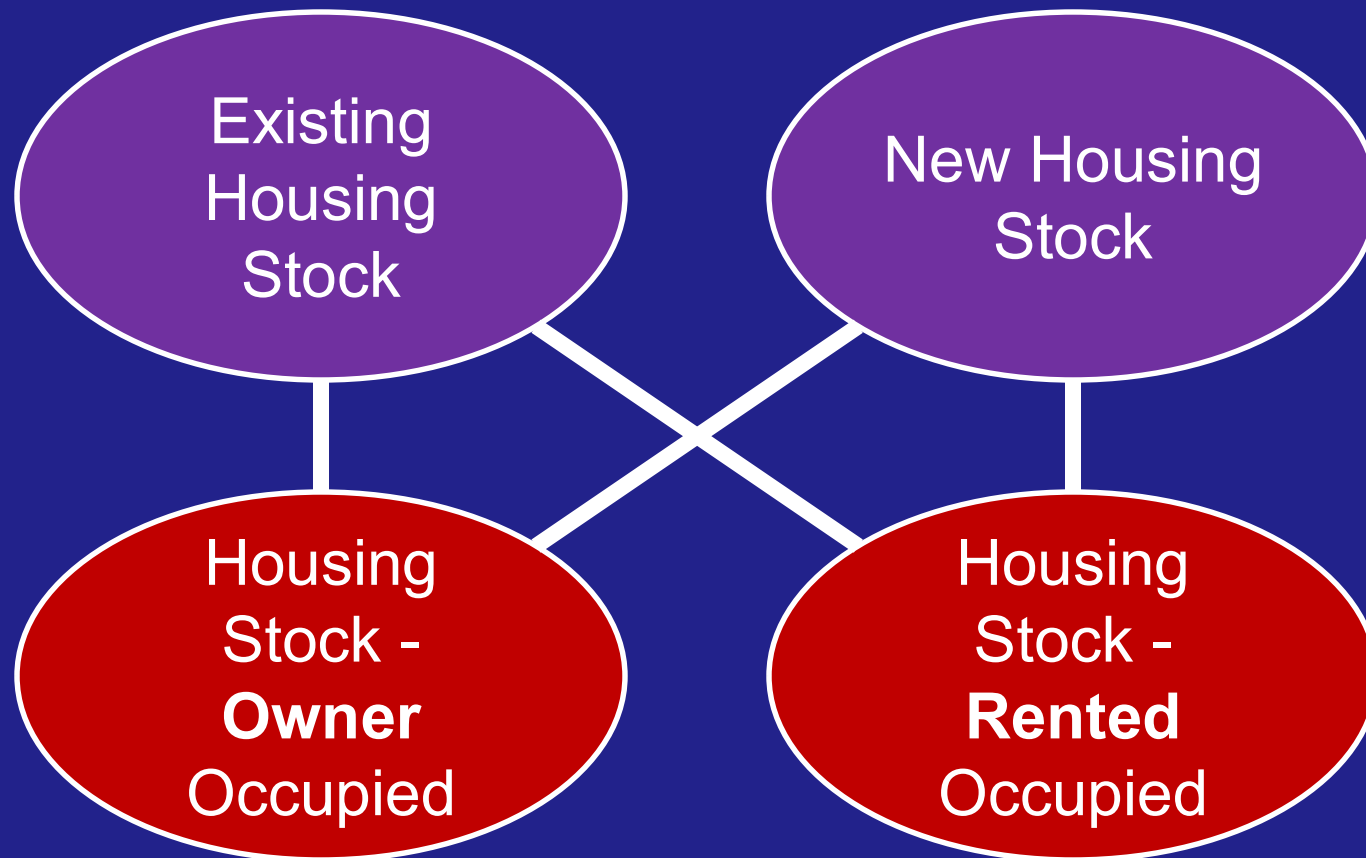


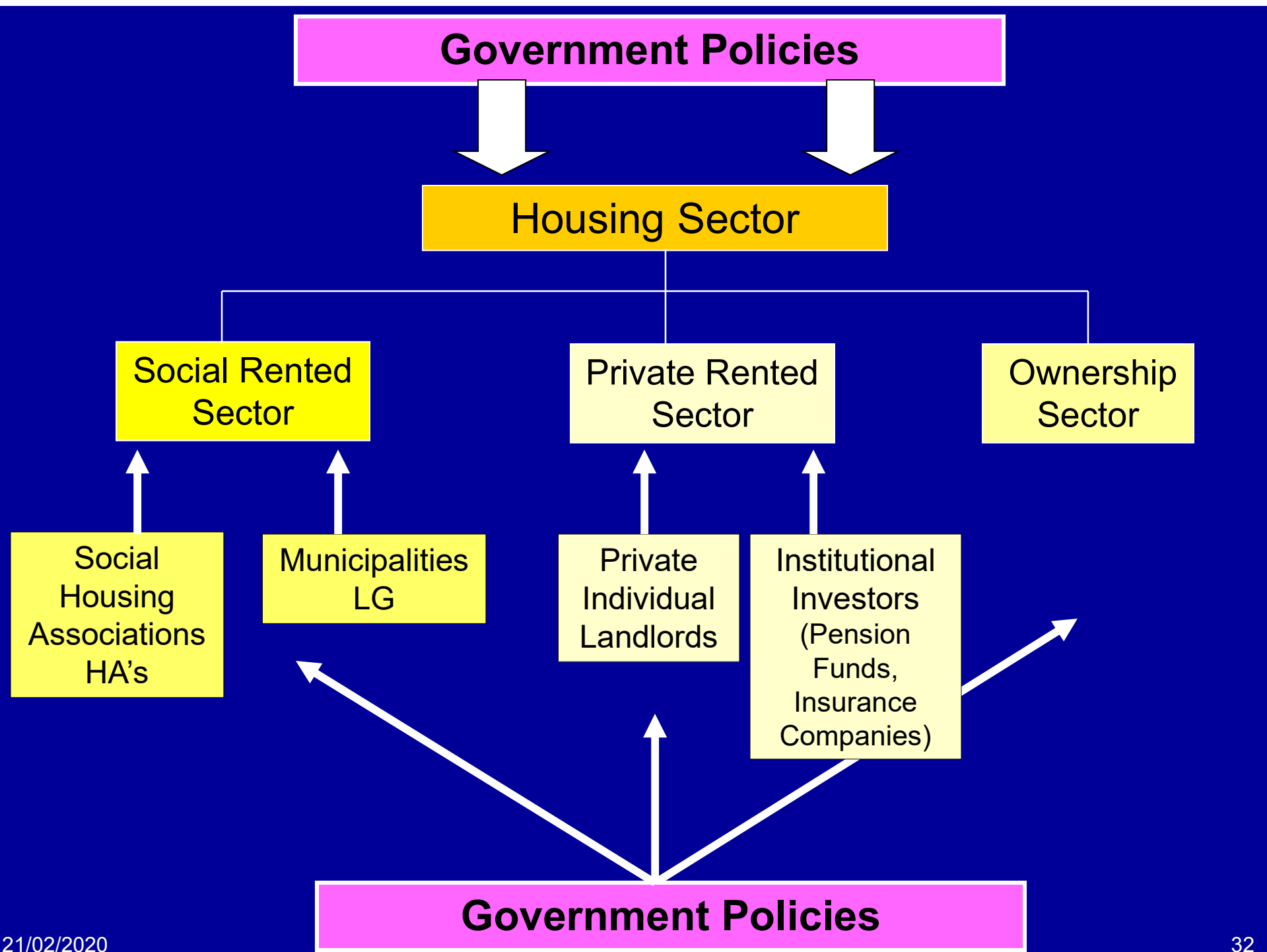
# 5.

## **Housing Policy & Government Intervention: new stock x Existing Stock**

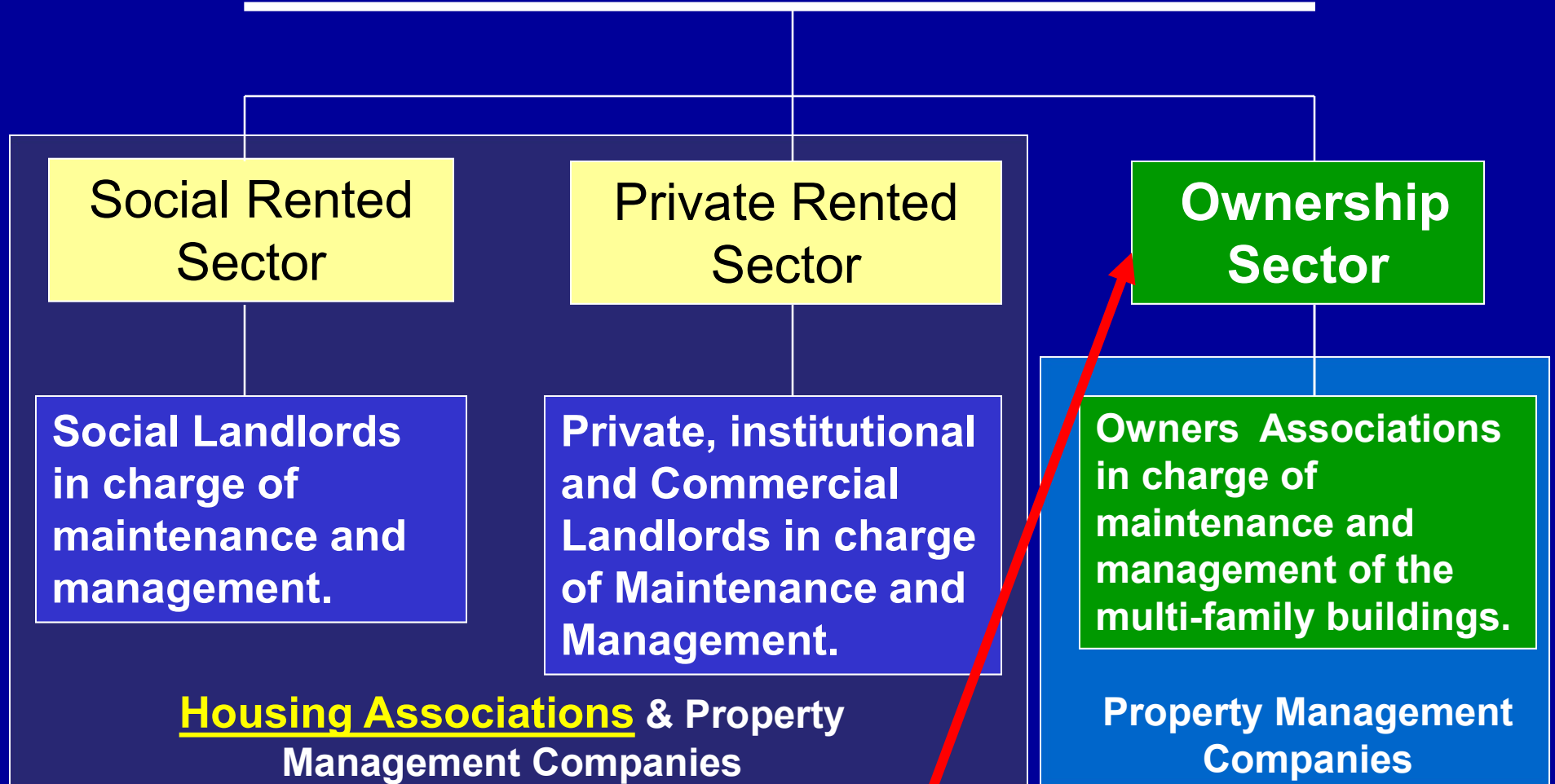


# Government Policies in The Netherlands





# HOUSING MAINTENANCE



Obligations & Responsibilities of homeowners.











**1 out of 3 Czech Republic Family lives in a panel building**

# BUT

Communal spaces and communal property suffering from neglect in maintenance.

## Why?







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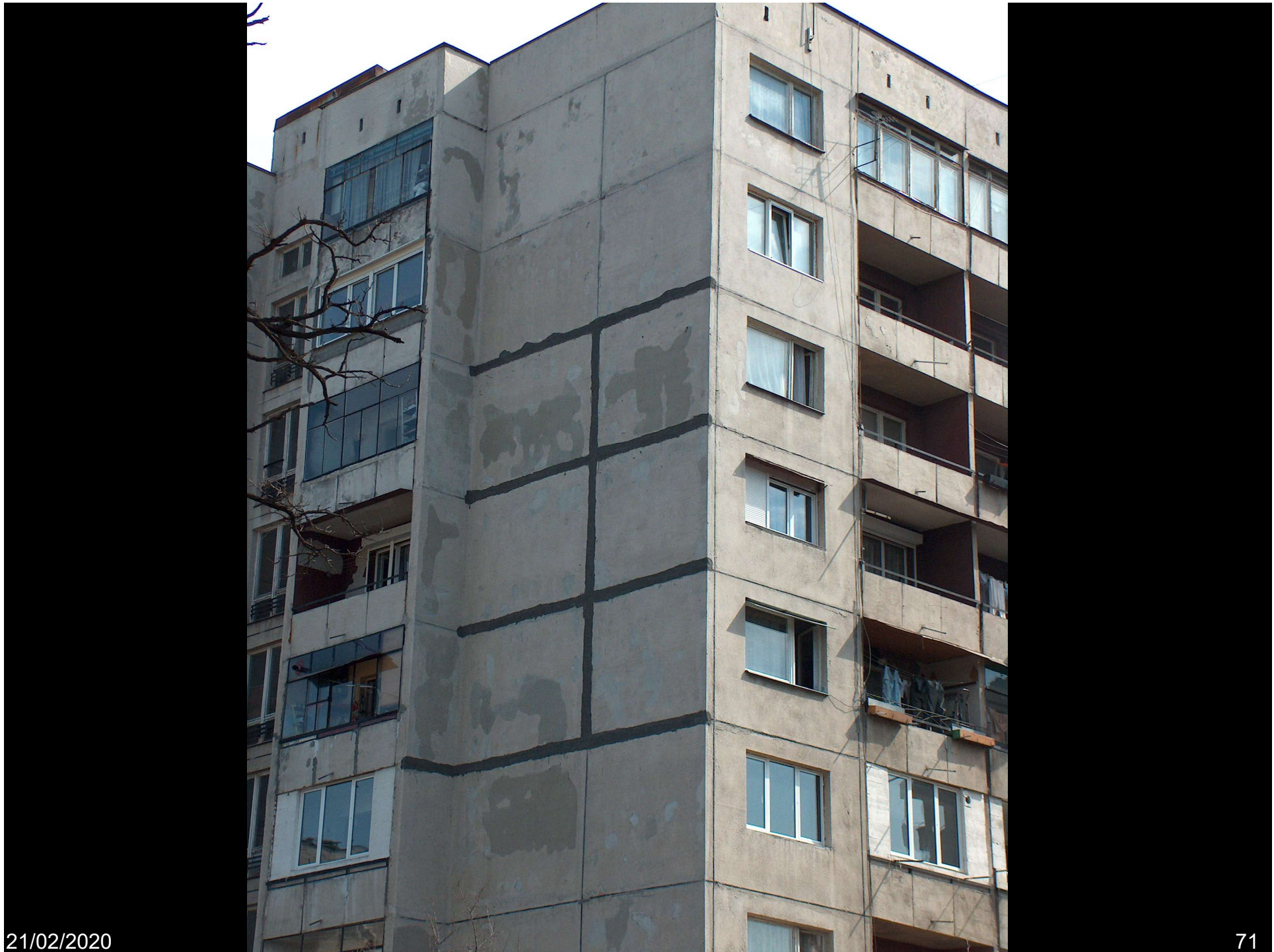
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# Maintenance and Management of the Existing Multi-family High-Rise Housing Stock

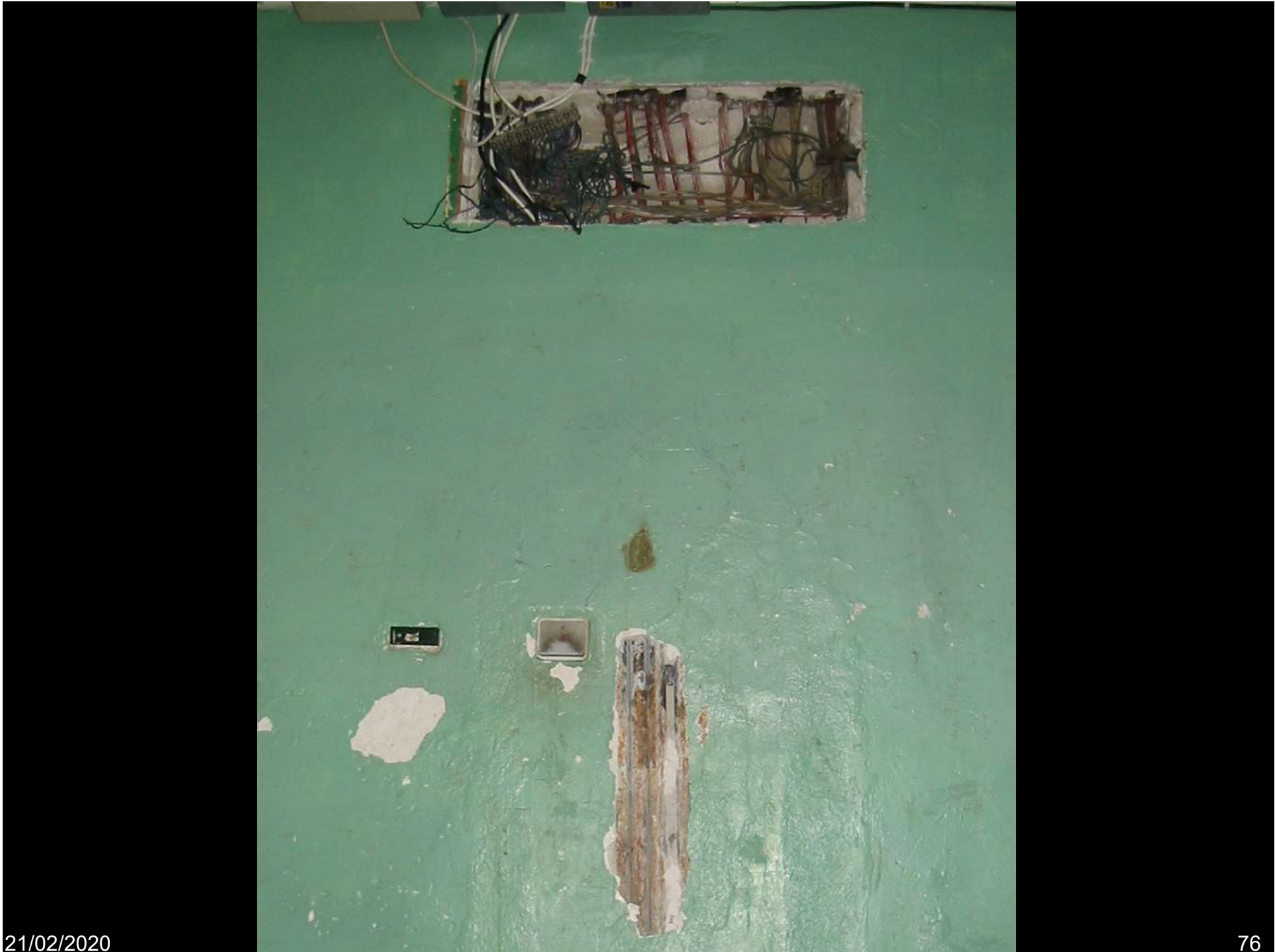
**What property owners/households are able to do on their own?**

**X**

**What property owners/households are not able to do on their own?**

TV СЕРВИС  
А.А. ШИШОВ  
СЕРВИС  
Адрес: [illegible]  
Телефон: [illegible]  
[illegible]







# Maintenance and Management of the Existing Multi-family High-Rise Housing Stock

**Individual  
Responsibility**

**X**

**Collective  
Responsibility**











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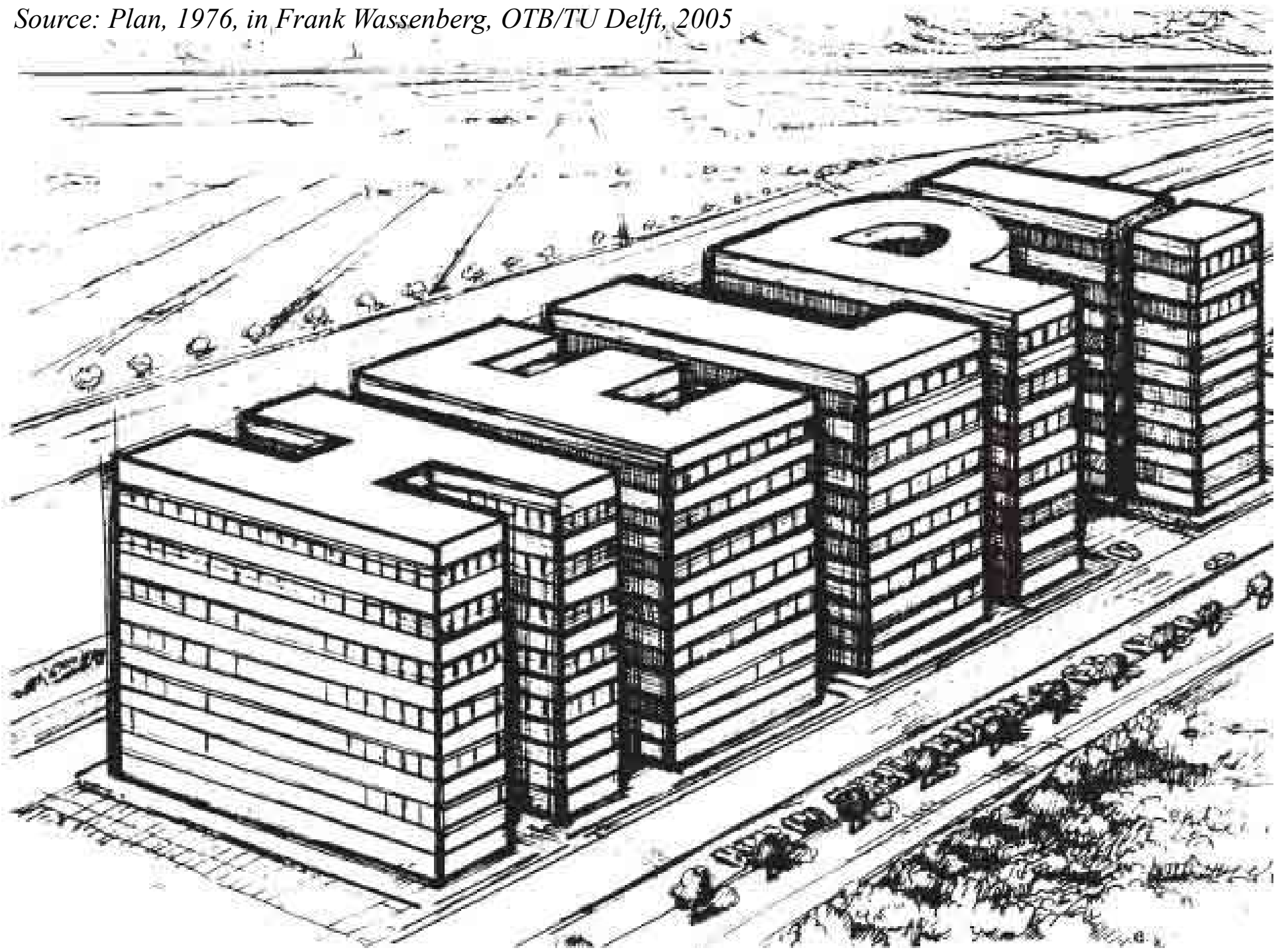
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# Result (2006)

- Underinvestment in maintenance
- Estimated backlog: € 400 Billion
- Programme of Refurbishment at current tempo will last over 40-100 years.

*Source: VROM, 2005; PRC Bouwcentrum, 2006*

*Source: Plan, 1976, in Frank Wassenberg, OTB/TU Delft, 2005*



# Summary Video-Lectures

<https://www.youtube.com/watch?v=Mo1354GWFLk&t=88s>

Claudio Acioly, High-rise Multi-family Housing  
Maintenance and Management

Short version:

<https://www.youtube.com/watch?v=EtD1QBZThYk>



# ETHIOPIA:

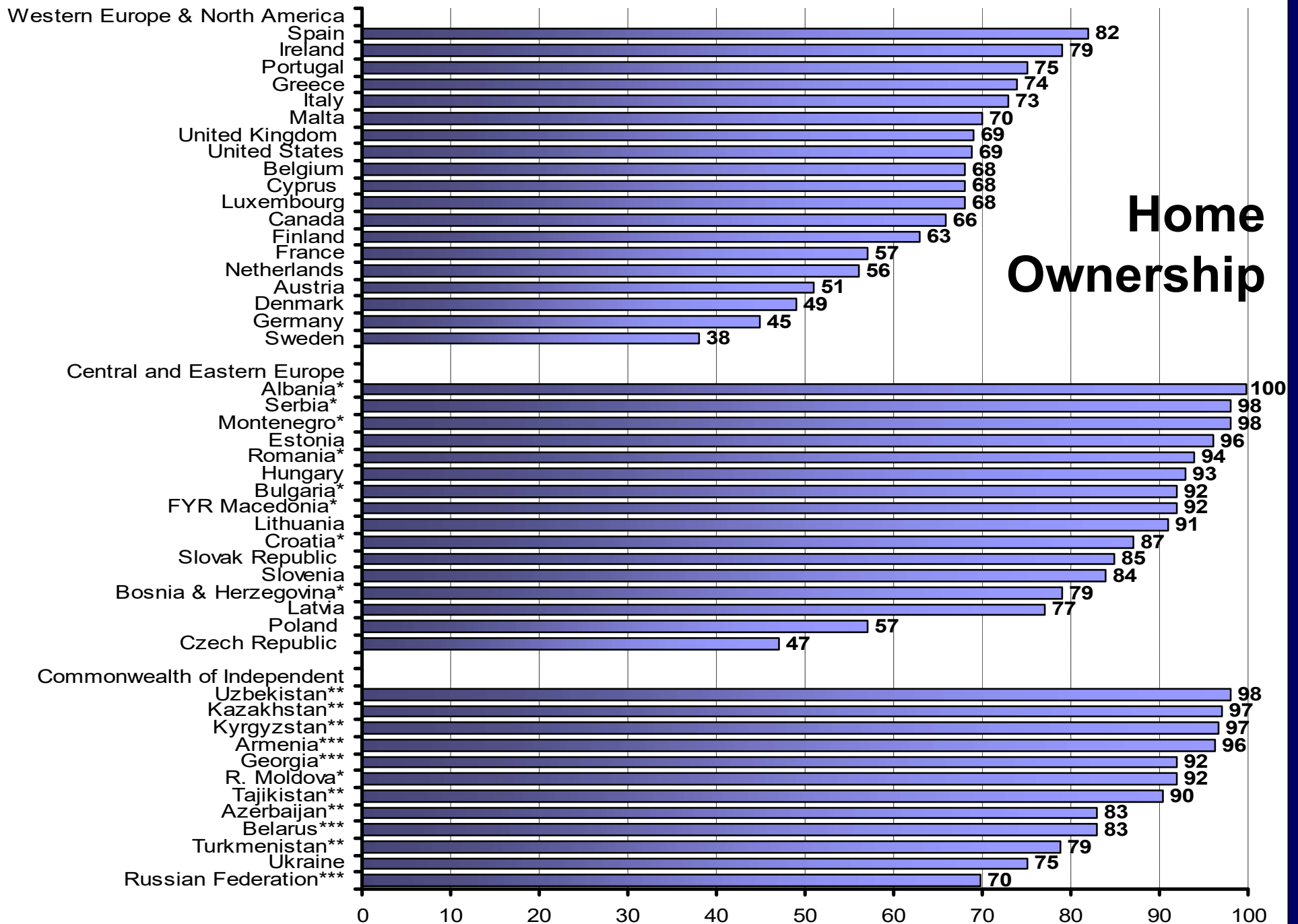


# 4.

## The Housing Stock:

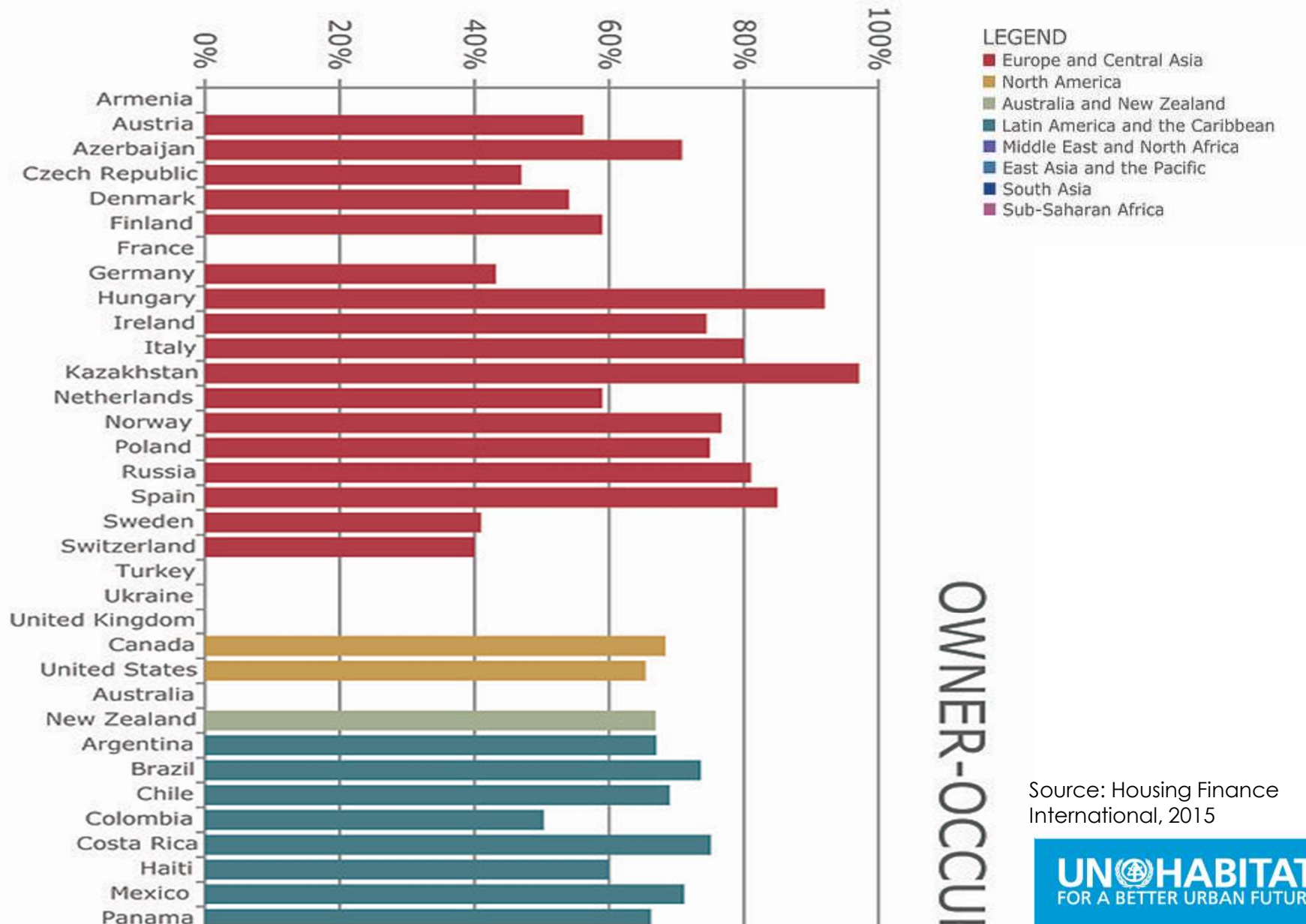
Owner X Rented Occupation.

# Home Ownership



Source: UN-HABITAT, 2008; estimates based on data from: MollIRC for EU-25, \*Tsenkova (2005) for SEE, \*\*UNECE database and Duncan 2005 for CIS % of total stock

# % home ownership



OWNER-OCCU

Source: Housing Finance International, 2015



# KEY QUESTION

**How to organize “repair & maintenance” in the high-rise multi-family housing stock?**

**How to establish practical, legal and financial arrangements that help apartment owners to fulfill their individual responsibilities for repair & maintenance in multi-story & multi-family apartment blocks in a sustainable manner??**

# 6.

**Understanding the  
Housing Problem is the  
first step:**

**Is it a financial problem? Is it a  
policy problem? Is it a management  
problem? A legal gap?**

# Key Technical Elements:

- Structured walls
- Roof
- Foundations
- Facades
- basements

## Common Property

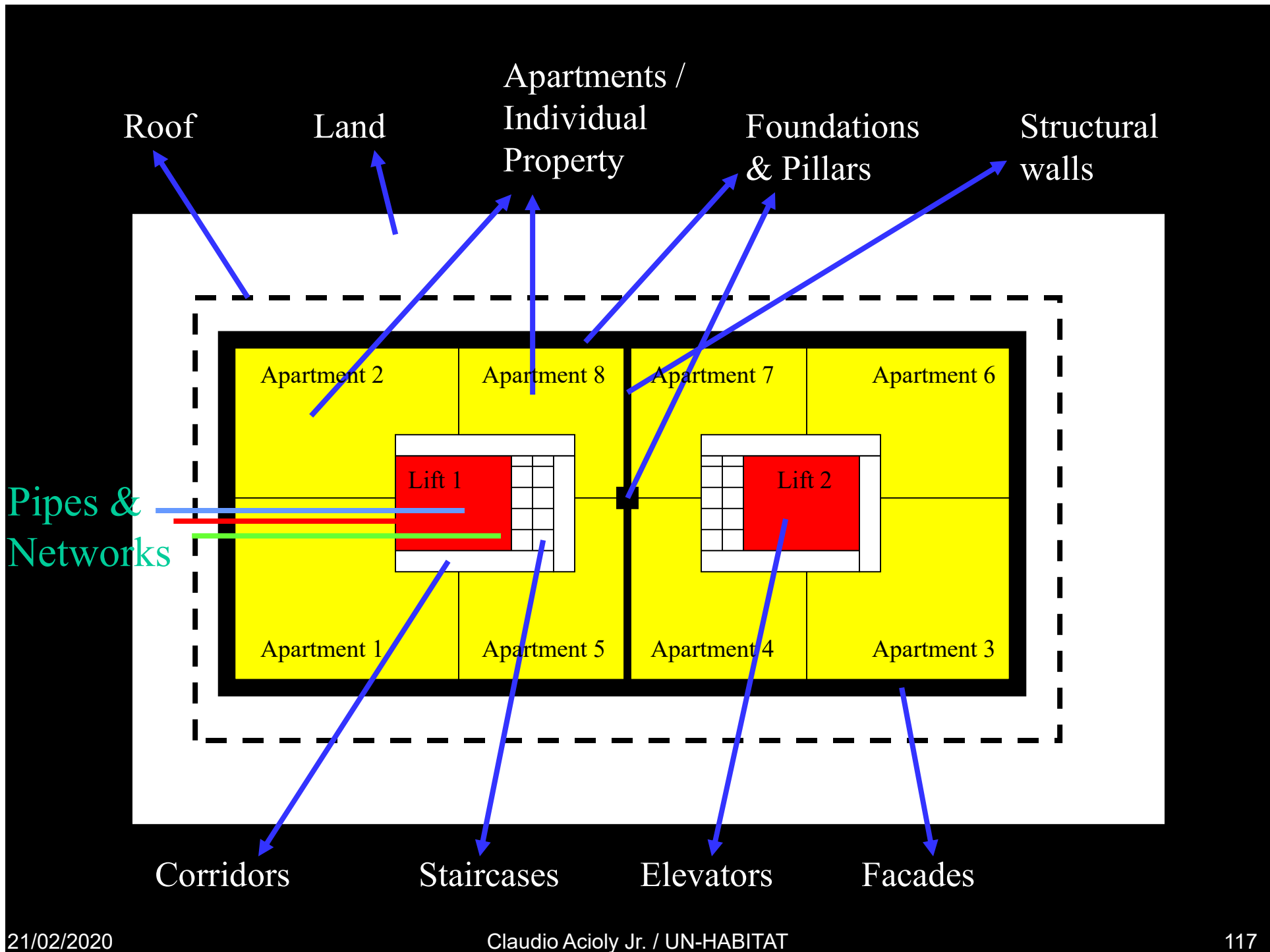
- Staircase
- Entrance
- Corridors
- Accesses
- Laundry room
- Surrounding land
- Elevators / lifts
- Common space for heating & boilers

Pipes & Networks

Co-owners

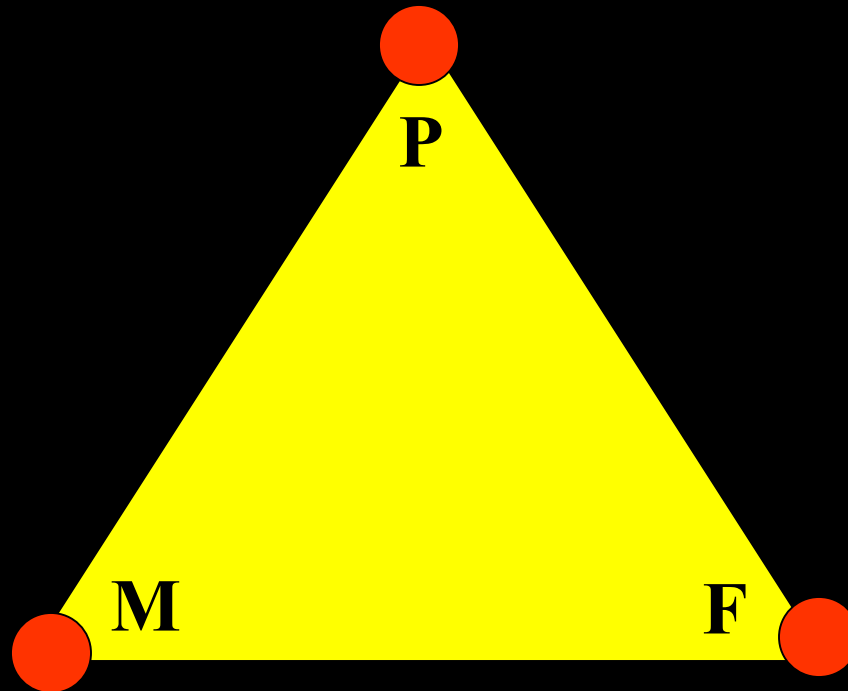
Every owner has the right to have say  
in decisions over management





# The PROBLEM?

**POLICY**



**MANAGEMENT**

**FINANCIAL**

**Government  
support roles &  
responsibilities**



**P**

**Owner  
Occupants**

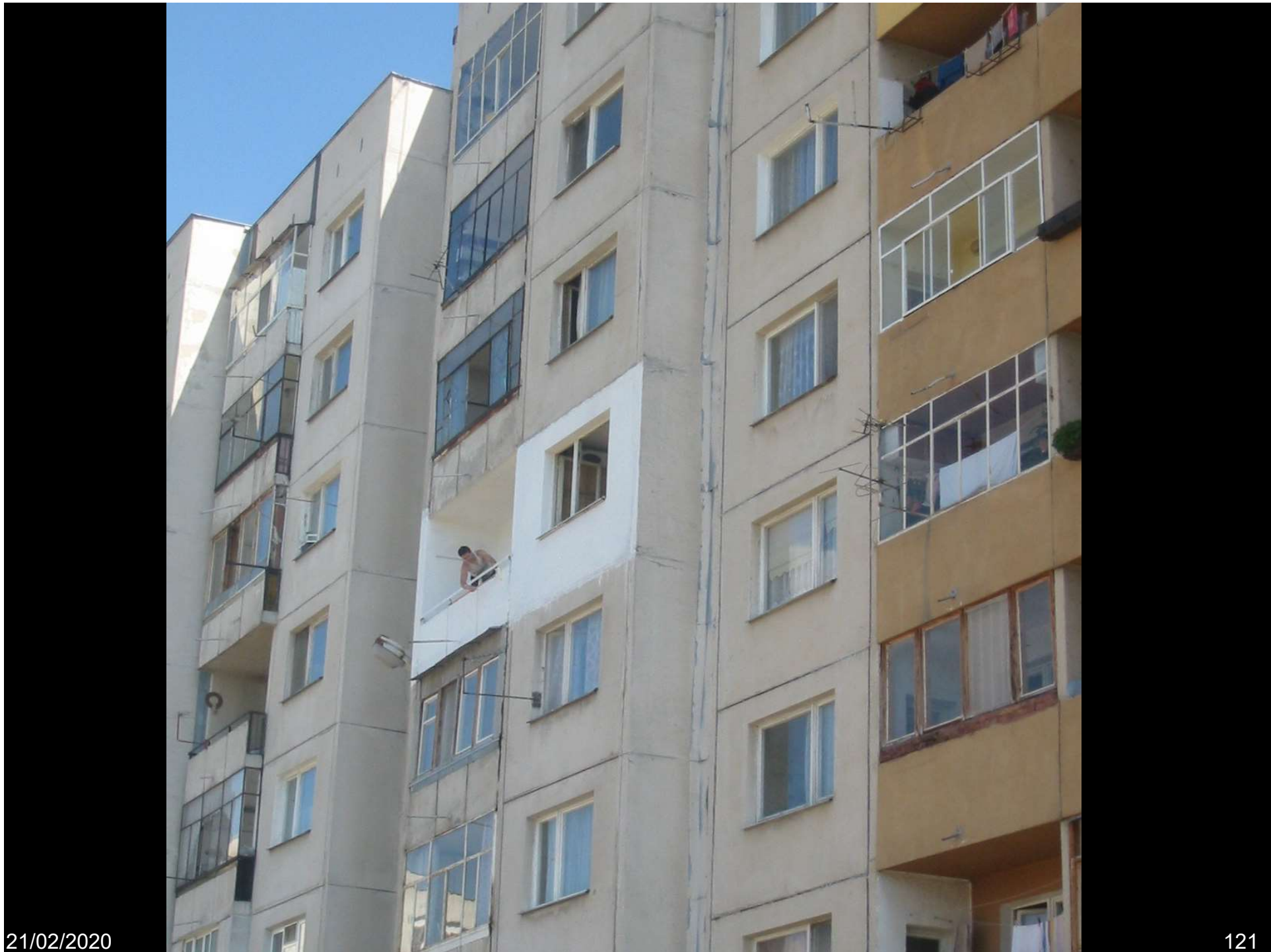
**M**

**F**

**Regulatory and  
organisational  
frameworks. Support  
to owners. Collective  
arrangements, common  
property management**

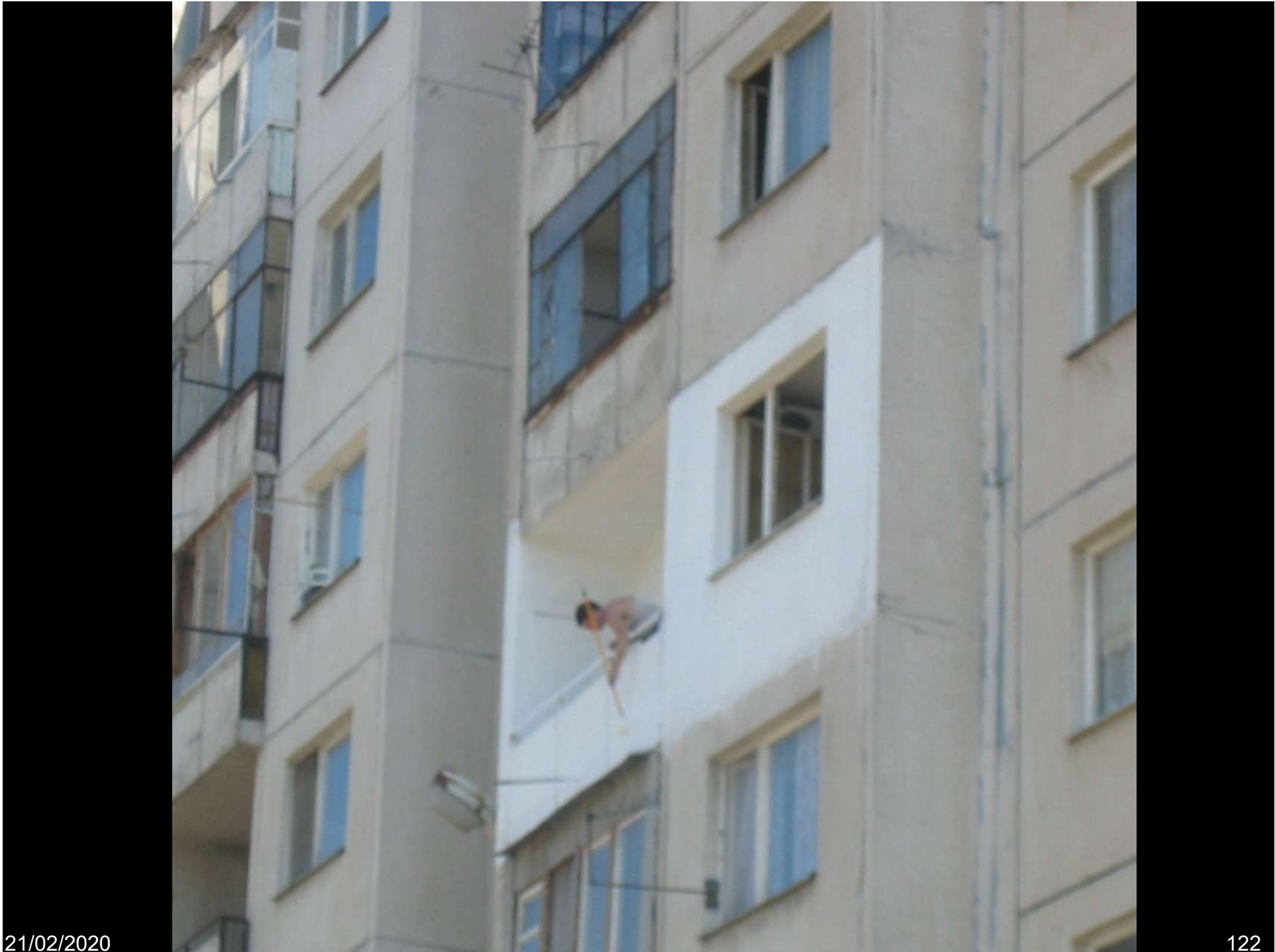
**Financial support, credit  
provision, programme  
support.**





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72

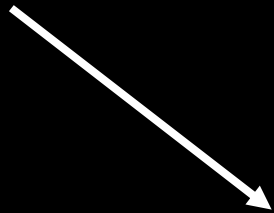




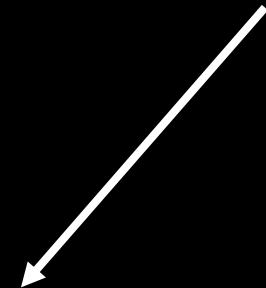
# Binding Decisions Building Consensus

**AFFECTS ALL WHO AGREE OR DISAGREE**

Resident  
Participation  
is a MUST!



Resident  
Participation  
is a MUST!





ДЕНОНОЩНА  
АПТЕКА И ОПТИКА  
Mucosolvan

ДЕНОНОЩНА АПТЕКА  
ОПТИКА

ДЕНОНОЩНА  
АПТЕКА





Coca-Cola

KRABAC!!! USA & NATO KILL BG! БОЙКО-МАНИ PABO BPAEN!

# 7.

## Defining the Strategy:

**Getting the best of homeowners, governments and private & non-governmental players is the way forward.**

# Key Technical Elements:

**Common  
Property**

Pipes & Networks

Co-owners

Every owner has the right to have a saying in decisions over management

Constraints and Choices as standards, materials, costs, etc.

Building Consensus

Binding Decisions

**AFFECTS ALL WHO AGREE OR DISAGREE**

Every owner has the right to have a saying in decisions over management

Constraints and Choices as standards

Building Consensus

Binding Decisions

**AFFECTS ALL WHO AGREE OR DISAGREE**

Participation is a MUST!



Participation is a MUST!

# CHILE:

**continuing policy and nearly universal access to housing subsidy enables progress in housing supply.**





# BRAZIL:



# PARAIÓPOLIS – SÃO PAULO



CONCRETE  
PART



# SINGAPORE:







# SOUTH KOREA:





# CHINA:



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Claudio Acioly Jr. / UN-HABITAT

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# 8.

**The maintenance of the  
owner occupied social  
housing stock:**

**it is a private matter but government  
can and should facilitate it.**

# *Housing Stock Management & Maintenance*

Cyclical Maintenance & Renovation

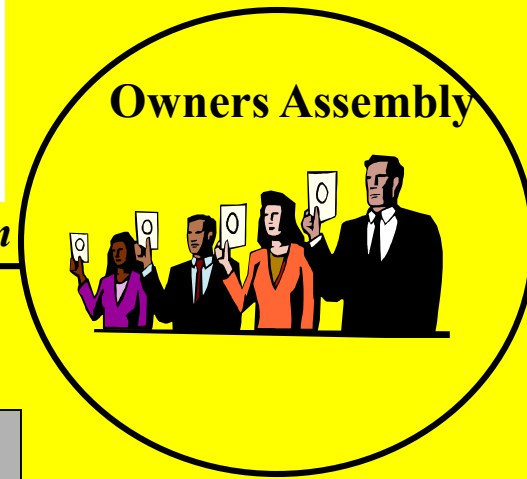
Regular Maintenance, repair, safety & cleaning

Contracted Property Management Company



*Appointment & election*

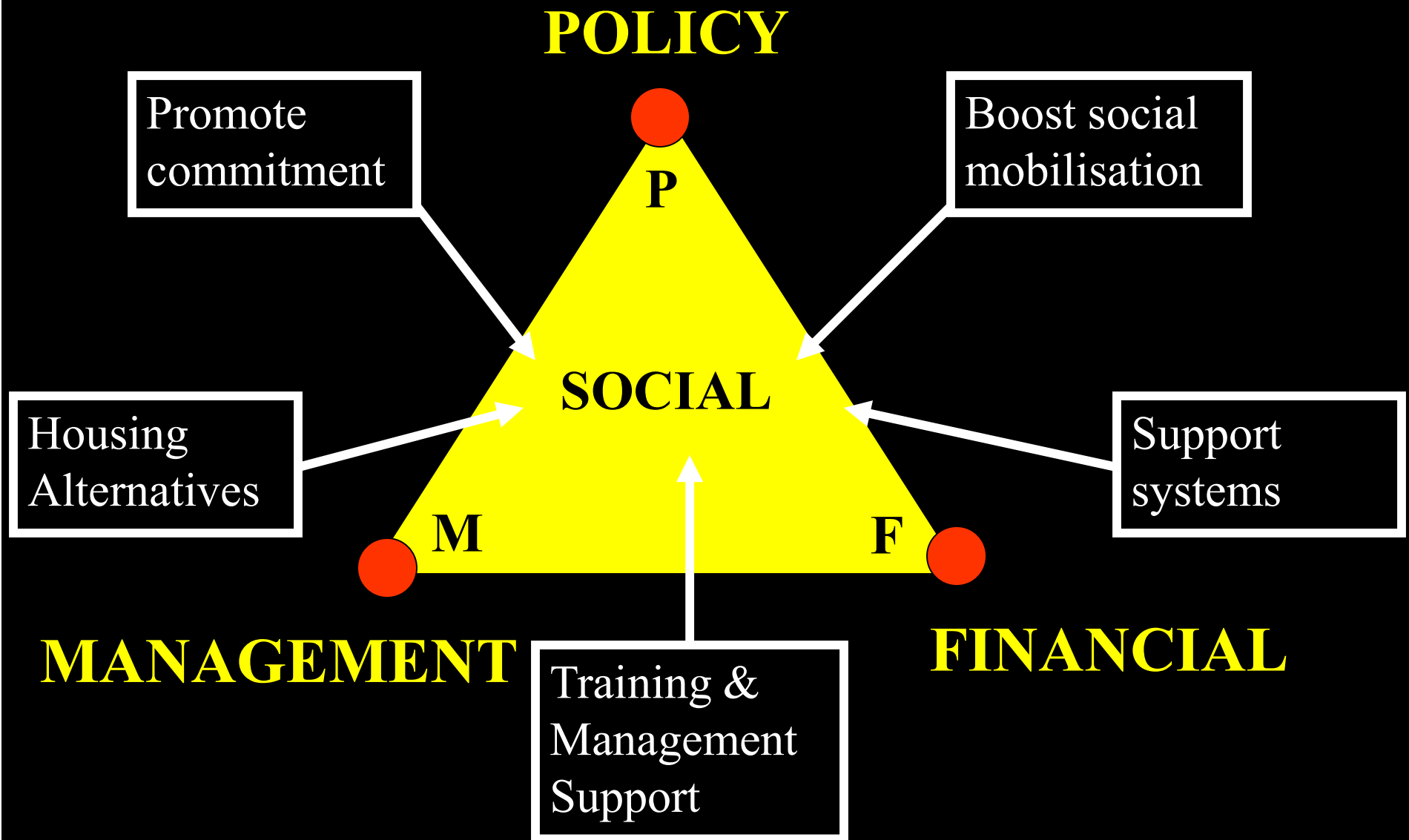
*Reporting*



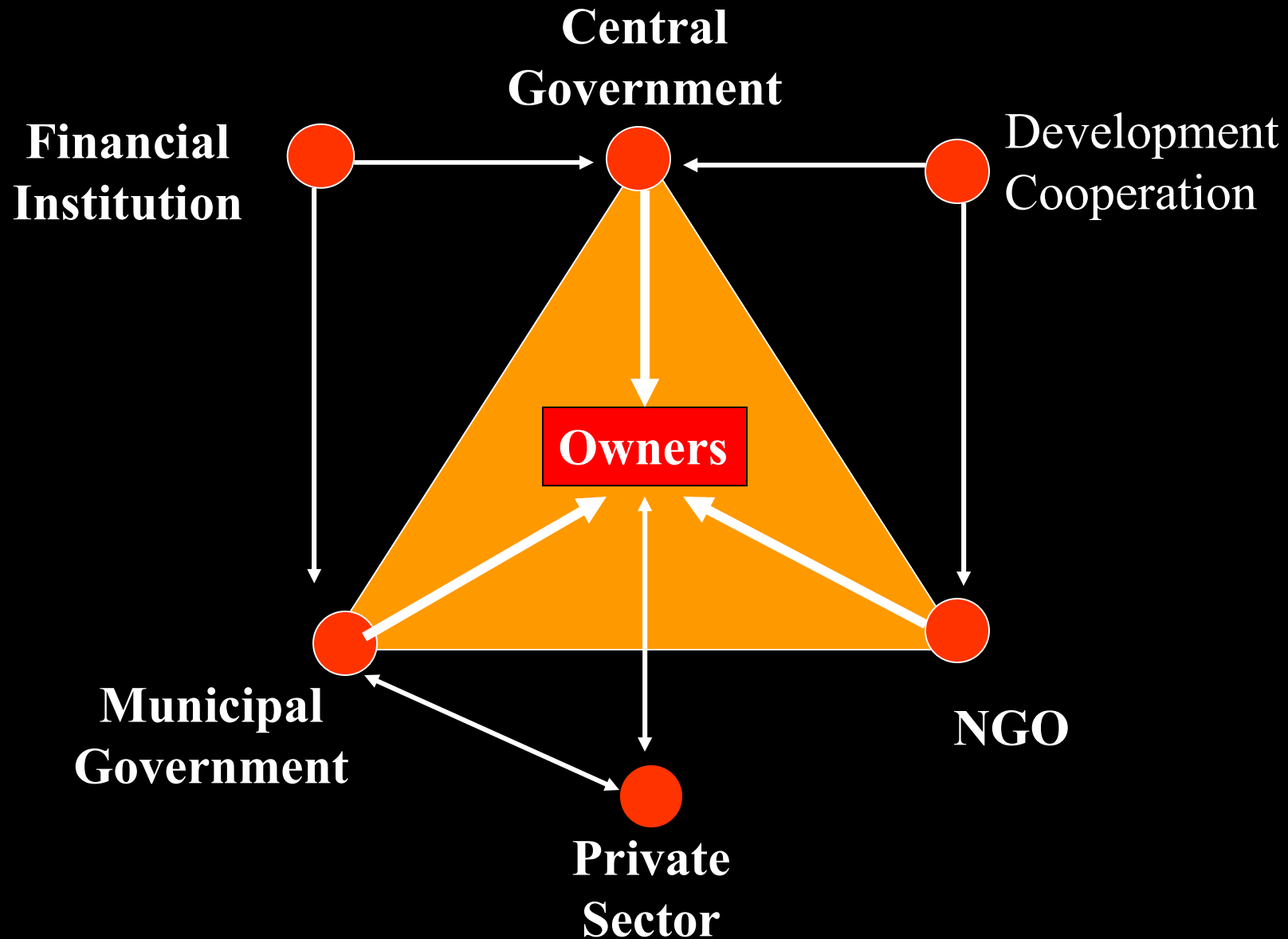
Homeowners Associations

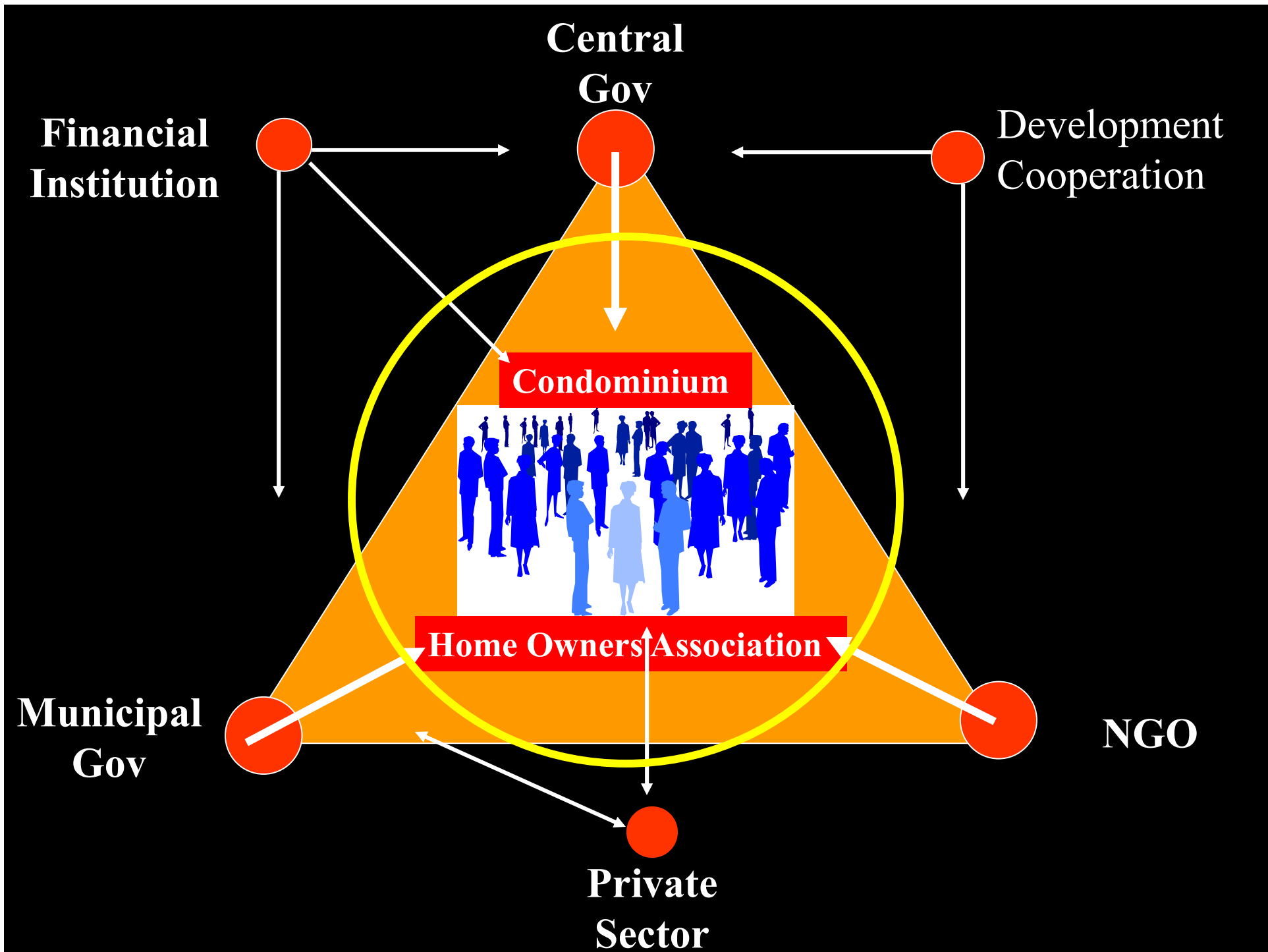


# The PROBLEM becomes SOCIAL !

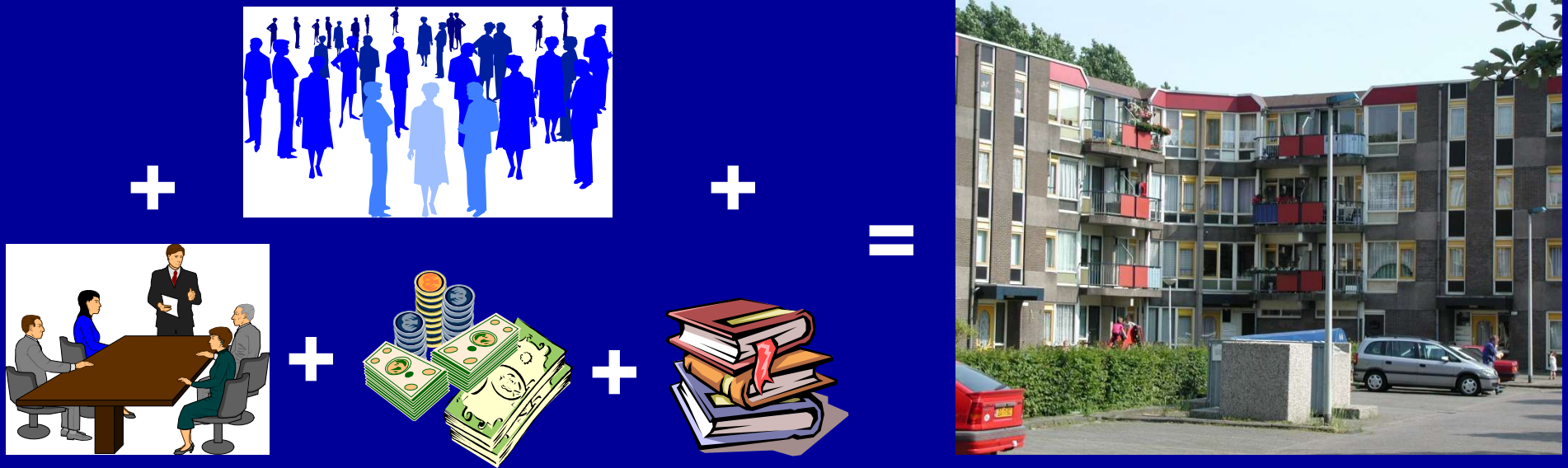


# Problem Resolution Involves Many Actors





# BRIEF CONCLUSION



Participation + Elected/Appointed Management + Financial Contribution + Legal Book keeping

- **Individual Rights & Obligations**
- **Transparency and Accountability**
- **Property Valuation is collective interest but benefit is individual**
- **Legal basis and legitimacy towards third parties**

# FIVE TRENDS:

1. More saying to apartment owners or leaseholders
2. Introduce more responsibilities
3. Push residents to be more actively involved in the management of their common property including surrounding land
4. Clearly defined boundaries between individual and common property
5. Legal provisions to enforce membership and commitment of individual owners to common property management.