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RESILIENT HOUSING

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# Housing and AI

## RISKS AND OPPORTUNITIES

MAY 2023

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EL PAÍS

Tecnología

## ¿Y si la inteligencia artificial no es el apocalipsis? "Es como decir que viene el coco"

La mezcla de miedo y moda ha convertido a esta tecnología en protagonista de un posible cambio radical y profundo que quizá no llegue tan lejos

The Economist

Menu | Weekly edition | The world in brief | Search

## The world needs an international agency for artificial intelligence, say two AI experts

Gary Marcus and Anka Reuel argue that global governance must be prioritised to address the risks of bias, misinformation or worse

The Economist

Menu | Weekly edition | The world in brief | Search

## Yuval Noah Harari argues that AI has hacked the operating system of human civilisation

Storytelling computers will change the course of human history, says the historian and philosopher

FINANCIAL TIMES

Opinion Artificial intelligence

## Writers vs AI bots is more than a Hollywood drama

Screenwriters' strike reflects wider job insecurity and fear of being usurped by technology

JOHN GAPPER + Add to myFT

The New York Times

OPINION

## A.I. Could Actually Be a Boon to Education

May 3, 2023

Cultura

Suscríbete por $95 | Ingresar

## El Nobel de Literatura chino Mo Yan admite haber recurrido a ChatGPT para un discurso

Reconocido con el máximo galardón en 2012, el autor confesó usar la inteligencia artificial para redactar un homenaje

El ganador del Premio Nobel de Literatura 2012 Mo Yan.

Artificial intelligence ✓ Added

## AI pioneer Geoffrey Hinton warns about growing risks as he quits Google

British scientist cited fears about the rapid development of the new technology

Artificial intelligence ✓ Added

## AI pioneer Yoshua Bengio: Governments must move fast to 'protect the public'

Computer science professor becomes latest expert to voice concerns over rapid rollout of large language models

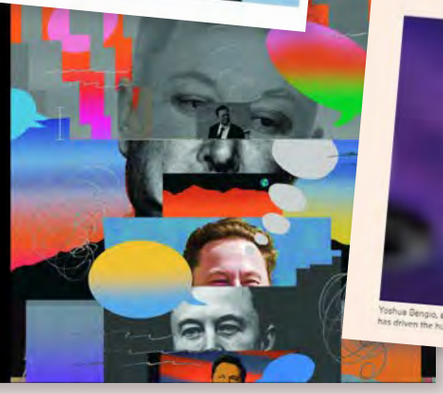
Yoshua Bengio, a professor at the University of Montreal, is best known for his work on deep learning, a field of AI research that has driven the huge recent advances in the sector © Cole Burston/Bloomberg

## ...AI solve my midlife crisis?

The answers from a chatbot career coach are mind-numbingly obvious but may entice people to be more open

## *Elon Musk Ramps Up A.I. Efforts, Even as He Warns of Dangers*

The billionaire plans to compete with OpenAI, the ChatGPT developer he helped found, while calling out the potential harms of artificial intelligence.



AI

The Economist
Meet the Mona Lisa world economy
Why civil wars are lasting longer
Ukraine's game plan
A special report on the car industry
AI
APR 22ND 2023
How to worry wisely about AI

# *White House Pushes Tech C.E.O.s to Limit Risks of A.I.*

In the White House's first gathering of A.I. companies, Vice President Kamala Harris told the leaders of major tech companies they had a "moral" obligation to keep products safe.

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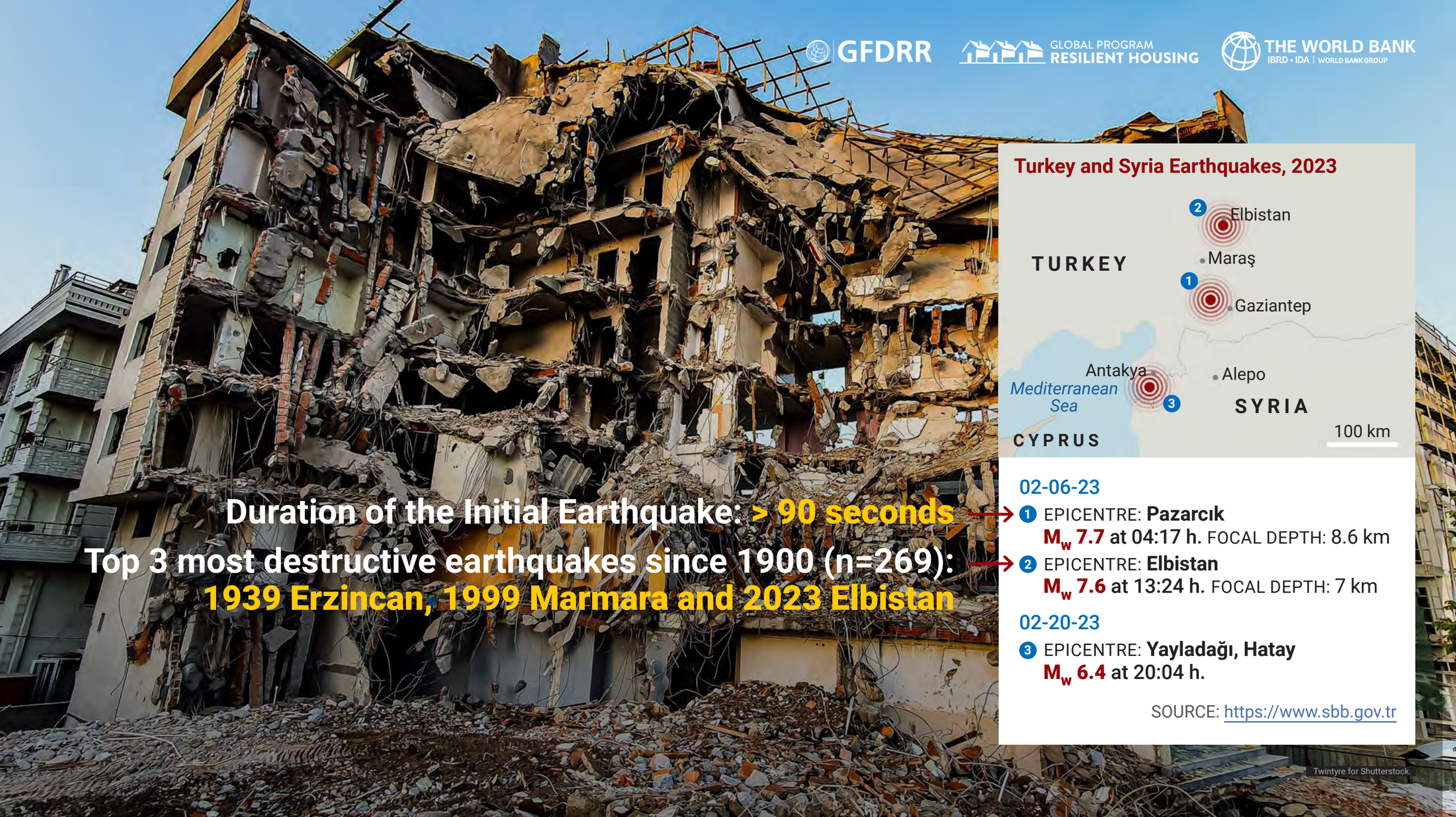

## Turkey and Syria Earthquakes, 2023




**Duration of the Initial Earthquake: > 90 seconds**

**Top 3 most destructive earthquakes since 1900 (n=269):**
**1939 Erzincan, 1999 Marmara and 2023 Elbistan**

02-06-23

1 EPICENTRE: **Pazarcık**
**$M_w$ 7.7 at 04:17 h.** FOCAL DEPTH: 8.6 km

2 EPICENTRE: **Elbistan**
**$M_w$ 7.6 at 13:24 h.** FOCAL DEPTH: 7 km

02-20-23

3 EPICENTRE: **Yayladağı, Hatay**
**$M_w$ 6.4 at 20:04 h.**

SOURCE: https://www.sbb.gov.tr

Twintyre for Shutterstock.

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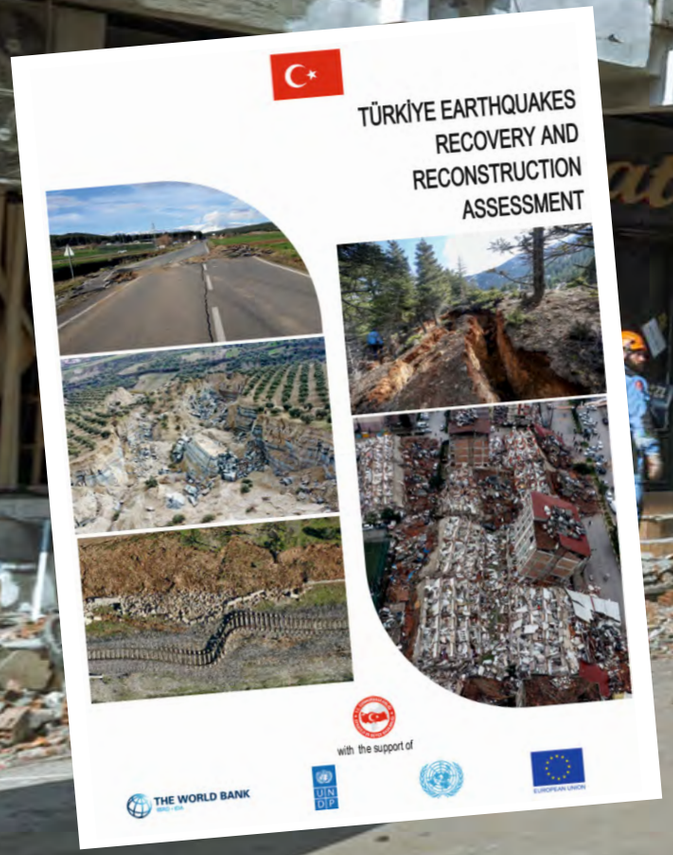


**Turkey Earthquakes, 2023.**

**Recovery and Reconstruction Assessment**

## 48,448 deaths.

**3.3. million**
people displaced.

**2 million**
people sheltered in tent camps and container settlements.

**USD 103.6 billion**
Estimated total damage.

**USD 66.1 billion**
Damages and losses in the housing sector.

Estimated total debris:
**10x**
1999 Marmara earthquake.

SOURCE: https://www.sbb.gov.tr

Mustafa Yanar for Shutterstock.

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# Resilience:
# A Moving Target

# Resilience: A Moving Target

Some Actions taken by Turkey after the 1999 Marmara Earthquake

- A Natural Catastrophe Insurance Pool was introduced (2000).
- A single institution, the Disaster and Emergency Management Agency, was created (2009 under PM's office, moved under MOI in 2018).
- A Disaster Risk Reduction Platform was established (2011).
- Laws on Building Inspections (piloted in 2001, implemented in 2011, modified in 2018) and Transformation of Spaces under Disaster Risk (2012) were enacted.
- The Regulation on Spatial Planning (2014) was published and the one on Earthquake Resilience was updated twice (2007, 2018).
- The Country's Hazard Map was renewed (2018).
- The National Earthquake Strategy and Action Plan was produced (2023).

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# Resilient Housing: From Tragedy to Triumph

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South Club
fitness & spa
Honey Bee
HATAY / ANTAKYA
HONEY BEE
ANAOKULU
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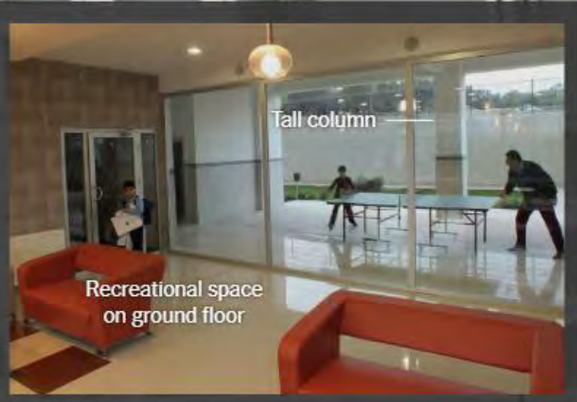
# *Earthquake-Proof, Not Corruption-Proof: Turkey's Needless Deaths*

Turkish families got wealthy off a construction system rife with patronage. A Times investigation reveals just how fatally shaky that system was.

Images of the wreckage made clear that all three towers broke off around the ground floor.

Aerial image by Ali Kemik taken on Feb. 11.




Antis Yapi via Facebook

The most vulnerable part of Renaissance was the **ground floor**, which had an open layout. To make room for recreational spaces, this level had fewer masonry blocks than elsewhere, as well as taller columns that were more susceptible to lateral motions in quakes.

That most likely created a vulnerability called a soft story.

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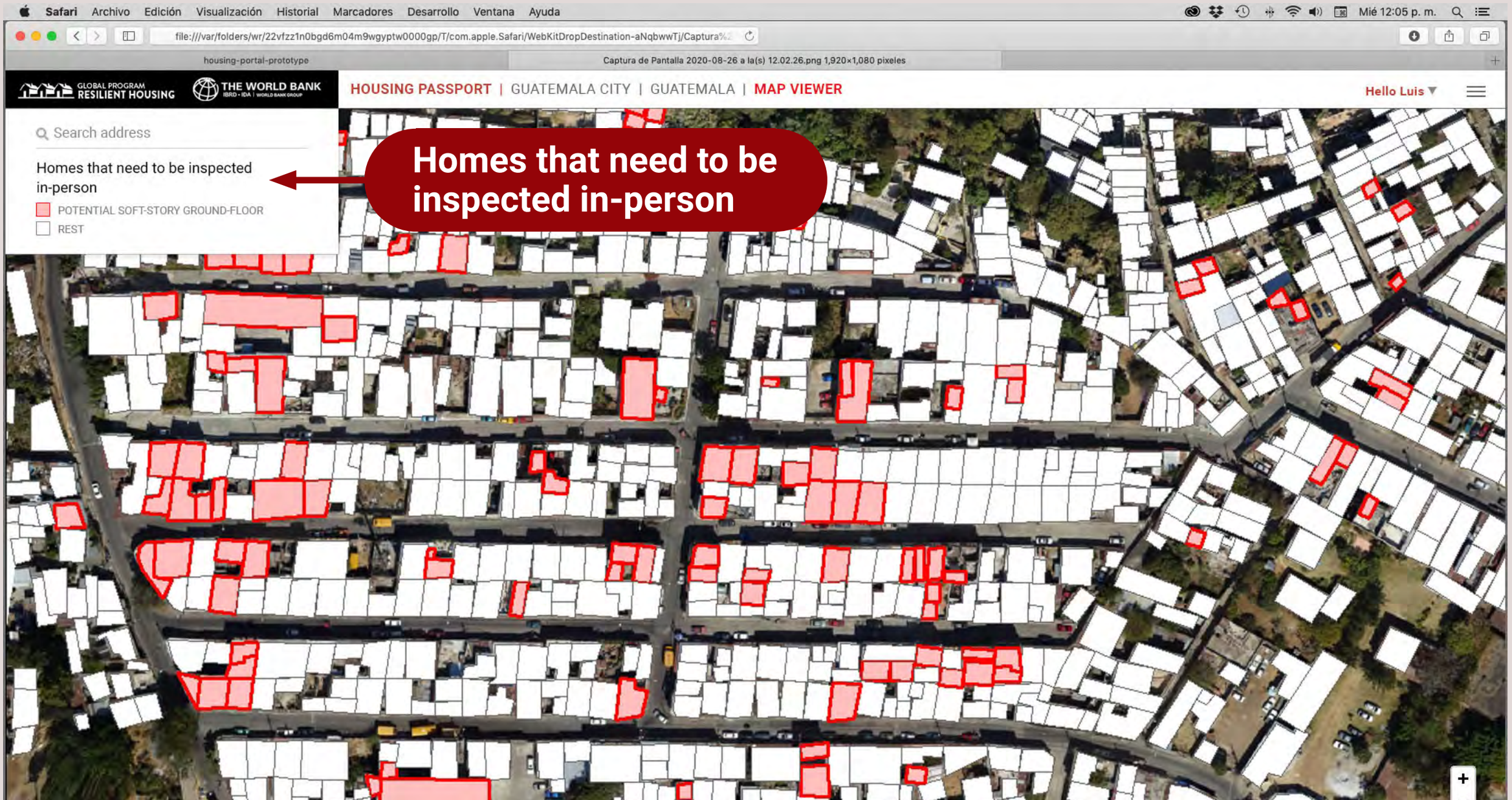
Byakkaya for iStock.

# GLOBAL PROGRAM RESILIENT HOUSING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housing-portal-prototype
Captura de Pantalla 2020-08-26 a la(s) 12.02.26.png 1,920×1,080 pixels
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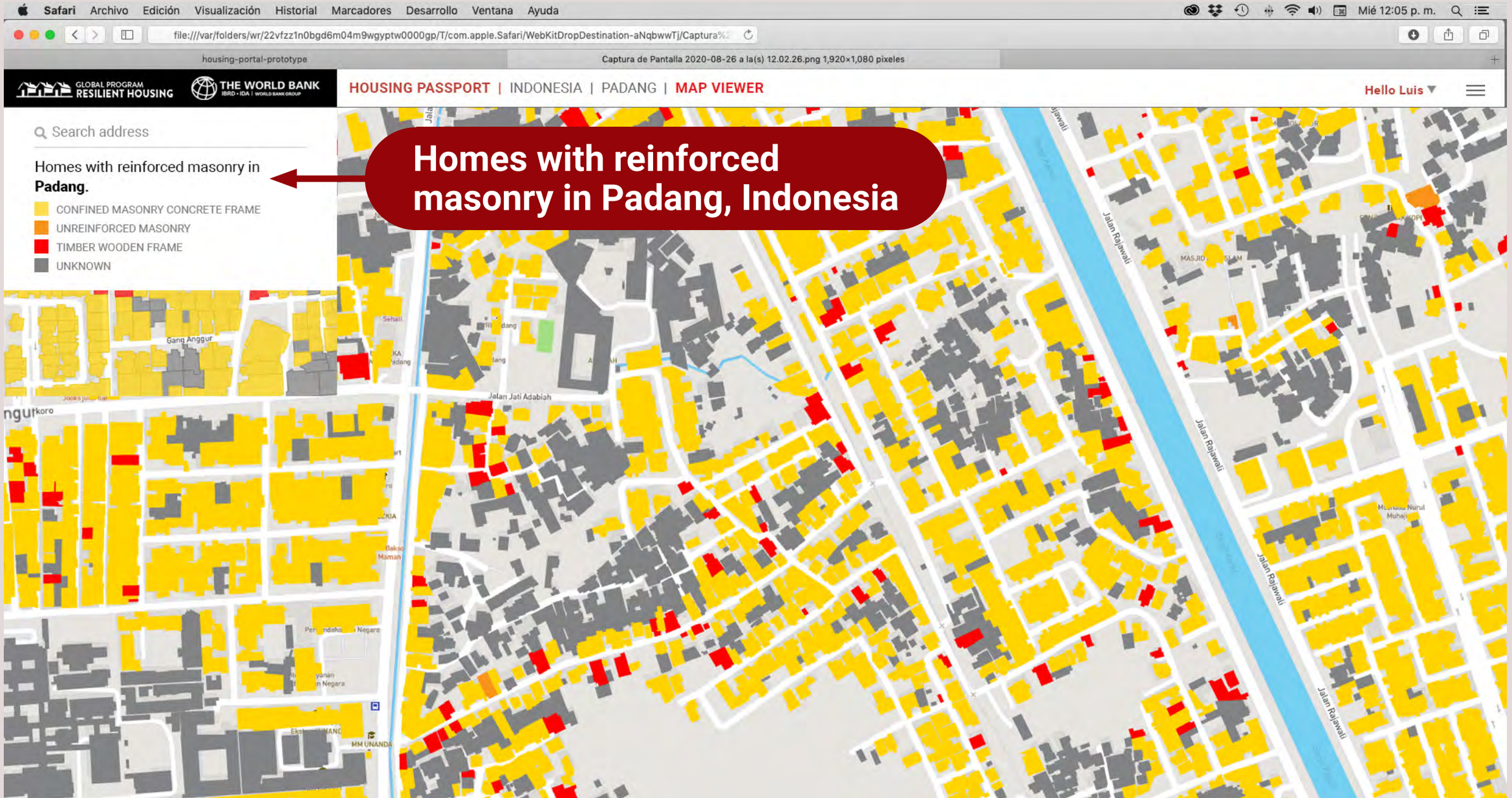
HOUSING PASSPORT | GUATEMALA CITY | GUATEMALA | MAP VIEWER
Hello Luis
Search address
Homes that need to be inspected in-person
POTENTIAL SOFT-STORY GROUND-FLOOR
REST
Homes that need to be inspected in-person
+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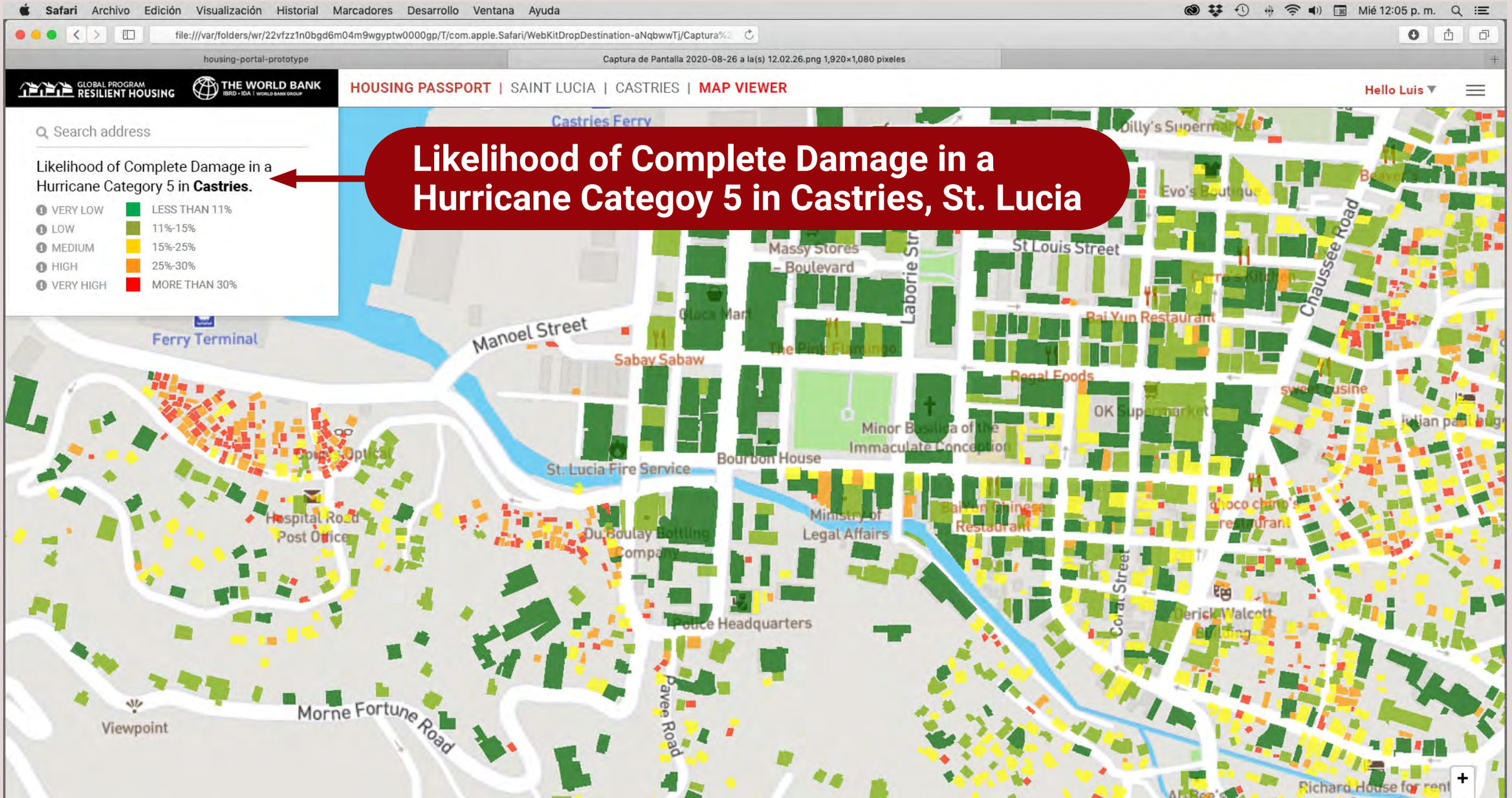
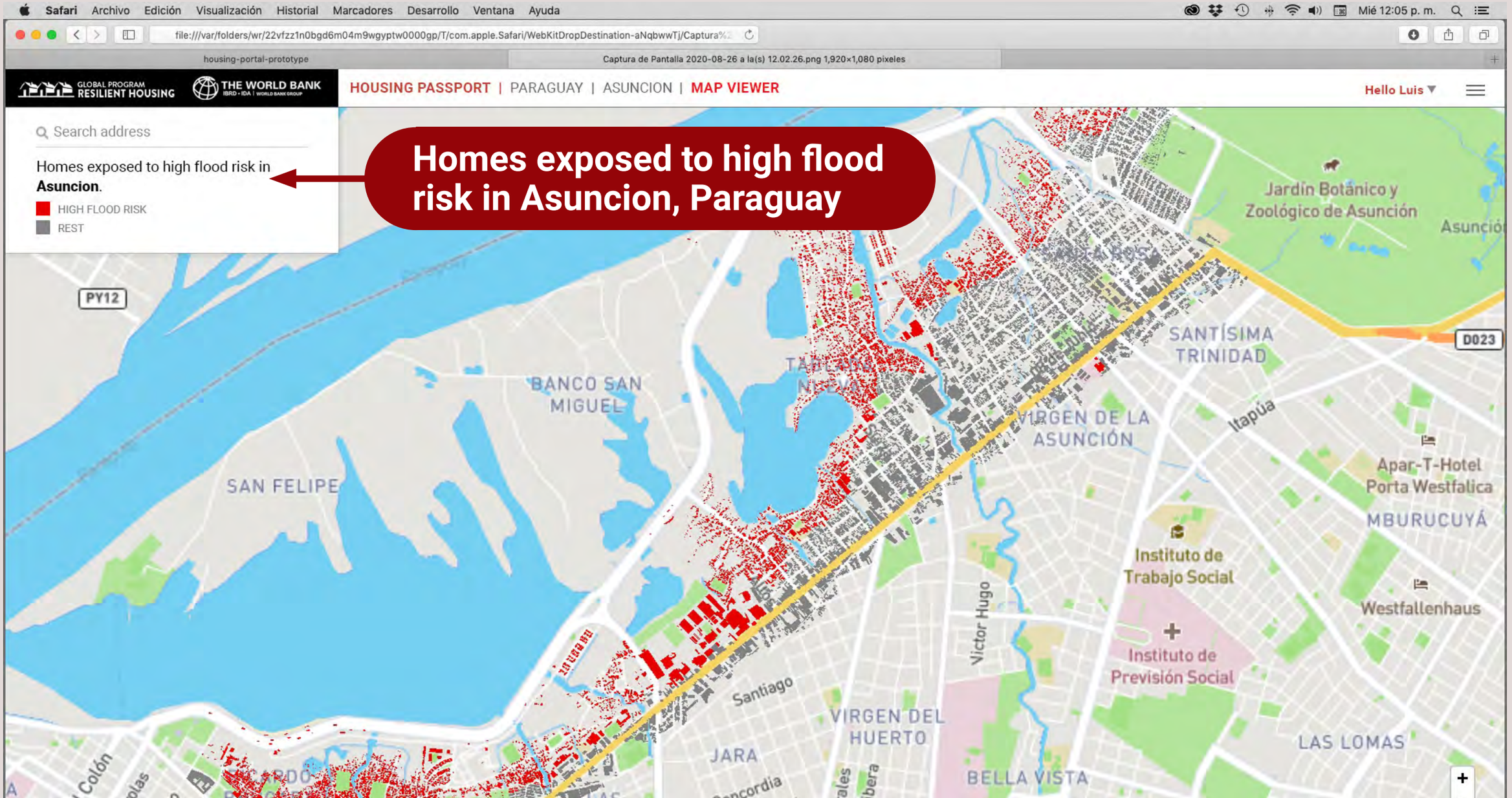
GLOBAL PROGRAM RESILIENT HOUSING
THE WORLD BANK IBRD • IDA | WORLD BANK GROUP
HOUSING PASSPORT | INDONESIA | PADANG | MAP VIEWER
Hello Luis
Search address
Homes with reinforced masonry in Padang.
CONFINED MASONRY CONCRETE FRAME
UNREINFORCED MASONRY
TIMBER WOODEN FRAME
UNKNOWN
Homes with reinforced masonry in Padang, Indonesia
Jalan Rajawali
Jalan Jati Adabiah
Gang Anggur


Likelihood of Complete Damage in a Hurricane Categoy 5 in Castries, St. Lucia
HOUSING PASSPORT | SAINT LUCIA | CASTRIES | MAP VIEWER
Hello Luis
Search address
Likelihood of Complete Damage in a Hurricane Category 5 in Castries.
VERY LOW
LESS THAN 11%
LOW
11%-15%
MEDIUM
15%-25%
HIGH
25%-30%
VERY HIGH
MORE THAN 30%
Castries Ferry
Ferry Terminal
Manoel Street
Massy Stores - Boulevard
Laborie Street
St Louis Street
Chaussee Road
Sabay Sabaw
Rai Yun Restaurant
Regal Foods
OK Supermarket
Minor Basilica of the Immaculate Conception
Bourbon House
St. Lucia Fire Service
Ministry of Legal Affairs
Du Boulay Bottling Company
Hospital Road
Post Office
Police Headquarters
Coral Street
Derick Walcott
Morne Fortune Road
Viewpoint
Payee Road
Richard House for rent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housing-portal-prototype
Captura de Pantalla 2020-08-26 a la(s) 12.02.26.png 1,920×1,080 pixels
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HOUSING PASSPORT | PARAGUAY | ASUNCION | MAP VIEWER
Hello Luis
Search address
Homes exposed to high flood risk in Asuncion.
HIGH FLOOD RISK
REST
Homes exposed to high flood risk in Asuncion, Paraguay
PY12
D023
BANCO SAN MIGUEL
SAN FELIPE
VIRGEN DE LA ASUNCIÓN
SANTÍSIMA TRINIDAD
Jardín Botánico y Zoológico de Asunción
Itapúa
Apar-T-Hotel Porta Westfalica
MBURUCUYÁ
Instituto de Trabajo Social
Instituto de Previsión Social
Westfallenhaus
Victor Hugo
Santiago
VIRGEN DEL HUERTO
JARA
BELLA VISTA
LAS LOMAS

# A Housing Portal to Find, Build and Strengthen Homes

BY

The Global Program for Resilient Housing

## What we do

We partner with governments and companies to save lives and strengthen communities and entire economies –one household, neighborhood and city at a time.

360° camera

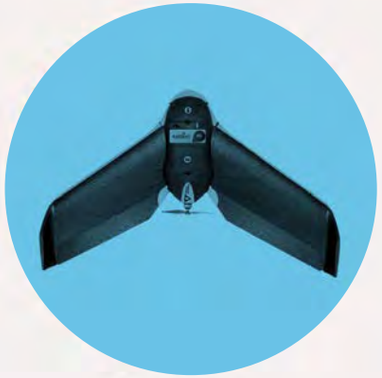
Drone

Machine Learning

How? We use machine learning algorithms to extract detailed geospatial data from high resolution images taken from the sky and the streets and combine it with existing health, social and economic datasets to produce house-by-house maps of entire cities. We shine a light on the opportunities to expand, strengthen and protect existing homes.

Our technology allows us to generate an unprecedented amount of data at a fraction of the cost in a fraction of the time. With more and better geospatial data, we can accelerate ideas into

360° camera



Drone

Machine Learning

- **The Housing Portal** can show more than 25 characteristics for complete cities, neighborhoods or housing units.
- It is interactive, and allows users to **define their own areas of analysis** and examine their neighborhood or block.

# What did we learn?

# HUMILITY

# FOCUS

ChameleonsEye for Shutterstock.

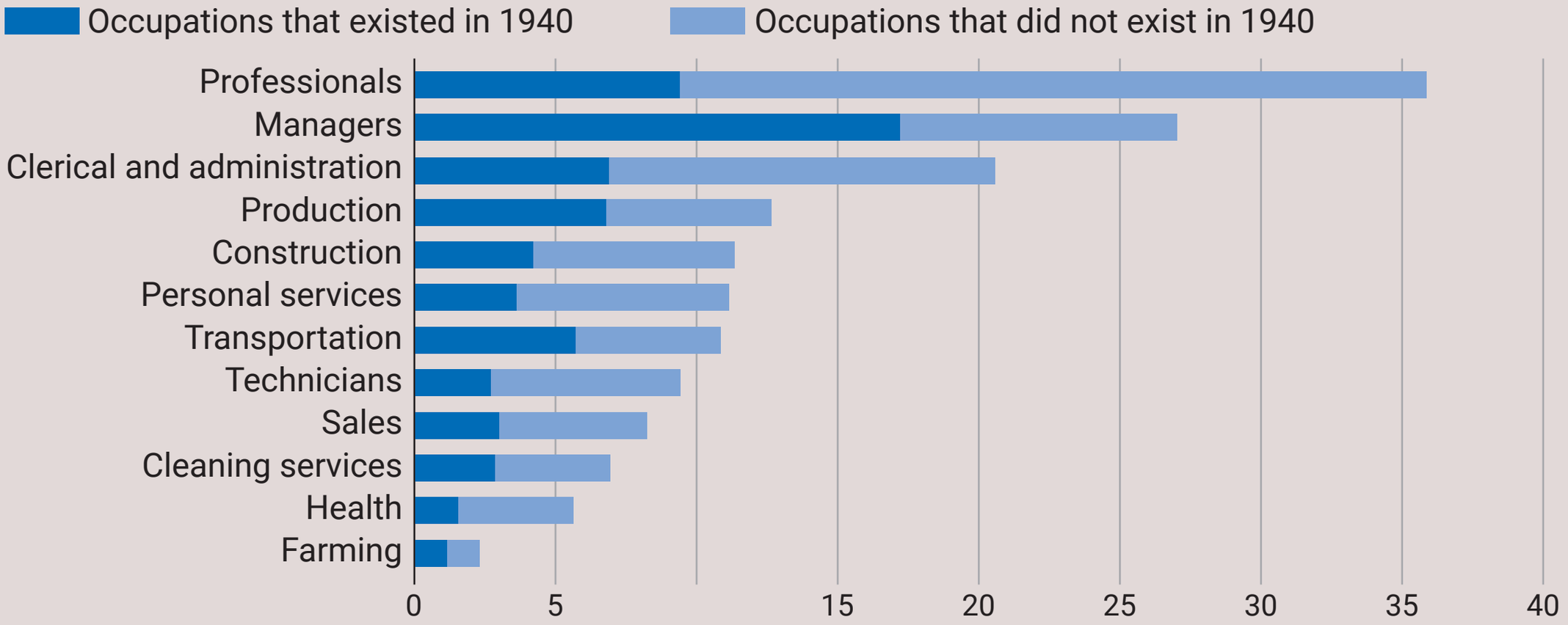
# COLLABORATION

# BREAKING SILOS

# SELF-CONFIDENCE

# United States: Changes in types of employment

## Millions of people employed in 2018.Most people employed in the United States in 2018 worked in jobs that did not exist in 1940




SOURCE: Goldman Sachs Research and Autor, "New Frontiers: The Origins and Content of New Work, 1940-2018", NBER Working Paper 30389; August 2022.

# SELF-CONFIDENCE

# BOLD VISION

# What's Next?

# The Measure of Success

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# Everybody is safe during disasters

Xavier Conesa for World Bank.

# Everybody has access to the right housing solution, at the right location and at the right price, before, during and after a disaster

Xavier Conesa for World Bank.

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CRISTAL
The housing gap is closed with the smallest carbon footprint
Xavier Conesa for World Bank.

Yi Gao for Shutterstock.

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# Thank you!

**Luis Triveño**
*ltriveno@worldbank.org*