

# Housing market systems change wheel

The Housing Change Wheel explores examples of pathways that a housing and construction market system may take as the system becomes more inclusive. It considers the patterns of behavior that drive the market system, and the reinforcing and counterbalancing forces that support the change process.

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# Housing market systems behavior change wheel

Habitat for Humanity International's Terwilliger Center for Innovation in Shelter, in partnership with EcoVentures International, designed a Housing Market Systems Change Wheel that explores **examples of the possible pathways** that a housing market system may take as the system strengthens, becoming more competitive, inclusive and resilient for incremental or owner-driven construction<sup>1</sup> (ODC), particularly servicing low-income housing (LIH) communities or customer segments. It considers the patterns of behavior that drive the market system and the reinforcing or counterbalancing forces that shape the change process.

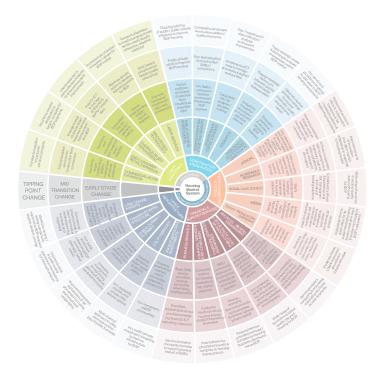


Figure 1: housing market systems change wheel

The Housing Change Wheel represents behavior change within core market systems (the labor and materials system and the construction and renovation system) and behavior change within the systems that act as counterbalances & reinforcements to change that takes place in the core market systems (the land and infrastructure systems, financial and support services systems, and other interconnected systems). While the core systems represent functions and behaviors that are central to the housing market system, the counterbalancing and reinforcing systems include are functions and behaviors that affect how the housing market system functions in ways that are more or less competitive, inclusive and resilient.

The Housing Change Wheel provides a more holistic overview and understanding of system change than a more linear results chain, which can serve other uses. Development practitioners can use the Housing Market System Change Wheel to identify which areas the housing project could work in and how to assess which stage of change they are targeting. It can also be used to better understand the relationship between different project activities targeting a financial services market system for housing, for example.

The Housing Change Wheel describes the behavior change that the market actors could realize as they become more inclusive. The behavior change is categorized by the level of change that may occur: the inner circle of the Housing Change Wheel, indicates early stage change, the middle circle indicates mid-transition stage, and the outer circle indicates the tipping point for the market system to becoming a well-functioning, inclusive system.

<sup>&</sup>lt;sup>1</sup>This change wheel primarily contemplates the housing market system for owner-driven or incremental construction, the way in which the majority of household's globally acquire housing. Unlike most households in the developed world that often purchase completed homes, in developing economies many households commonly engage in building, repairing, and improving their shelter on an informal and incremental basis. These individuals and households are often called "incremental builders," part of the owner-driven construction market. In this incremental construction process, families begin residing in a home with only the most basic features and build at the pace of their ability to finance additional construction.



Figure 1: core market systems of the housing market systems change wheel

# **Core market systems**

### Labor & materials market system

The physical, tangible inputs that go into home construction.

In the labor and materials market systems, there are frequently opportunities to facilitate the growth of construction material supply firms, distributors, hardware stores, and training providers which supply construction inputs and services to firms and service providers targeting lower income communities. Incremental builders access construction inputs and materials either directly, as they do the work themselves, or through some combination of hiring individual service providers or a contractor who can manage various skilled workers. By influencing firm behaviors, a development activity is able to drive market actors to consider the owner-driven construction market (often lower and low incomes communities) as a more integral part of their business strategy. In practice, integrating this customer segment would mean both a business to business and business to consumer set of tactics, as low-income communities are often in circumstances that push themselves to take on their own renovation/building tasks. There is also an emerging and increasingly more vibrant set of informal and formal construction service providers/contractors who are skilled as masons, carpenters, plumbers, electricians, etc. As materials firms realize the importance of the owner-driven construction (ODC) segment, they will need to invest in both the emerging construction businesses, as well as their end-customers through modern retail promotions and customer service strategies. Additionally, how labor markets are organized and support the emergence of these construction businesses including via skilled workers and safe/fair work environments is essential for incremental builders to generate positive returns from their housing investments. The emergence of a trusted and effective set of labor and materials market systems that incremental builders can rely on is an essential component of an increasingly inclusive housing market system.

Activities could support change within the following areas, among others, for market actors supplying labor and materials to service LIH communities (see Table I for practical examples of the change process for each area):

- Labor markets in terms of development and flow of quality assured labor that dynamically responds to opportunities and threats in the housing/construction market systems.
- Innovation and technology by increasing investment in developing technologies, such as digital platforms, and products that are appropriate for mass market housing requirements.

- **Evidence-based management** as housing/construction inputs/materials firms increasingly capture and use information to generate customer value and growth.
- End-consumer retail expansion (i.e., low income communities that ultimately use the improved housing) through customer engagement, multiple distribution channels and customer feedback.
- **Commercial retail expansion** (i.e., masons, contractors, etc. That buy materials and then use them to renovate low income community homes) through customer engagement, retail management that targets housing/construction SMEs and industrial developers.

### Construction & renovation market system

The services that go into home construction and renovation.

In the construction and renovation market system, there are frequently opportunities to facilitate the growth of quality assured construction and renovation services for low income communities via contractor firms and formal/informal services providers, the latter as the primary actors in the low-income housing market in many countries. By influencing their behaviors, an activity is able to drive these firms/services providers to consider ODC as a more integral part of their business strategy, as end consumers of their services. This, in turn, drives improved housing outcomes as services providers increasingly compete on the value they provide to incremental builders when they invest in their homes.

Activities could support change within the following areas, among others, for firms offering construction and renovation services to LIH communities or for households making use of professional construction firms (see Table II for practical examples of the change processes:

- **Public housing investment** as there emerges a public/political realization that housing is essential to an individual's ability to participate in society, resulting in increasing efforts and investment in housing for LIH segments.
- Incremental building and maintenance through customer engagement, multiple distribution channels and customer feedback.
- Evidence-based management as housing/construction firms increasingly capture and use information to generate customer value and growth.
- Alliances particularly alliances with materials suppliers, training providers, financial advisors/firms, etc to better serve the LIH customer segment.
- Platforms/services for consumers i.e., for the mass market housing system to evolve, it is important that a range of consumer protection/ education, shared-value quality assurance and other platforms, services, and/or tools emerge in order to improve and amplify customer feedback.

# **Counter-balancing and reinforcement systems**

To support the changes being facilitated in the core labor and materials system and construction and renovation system, there are several systems that provide counterbalances and reinforcements. The land and infrastructure system, the financial and other supporting services system, and other interconnected systems help to sustain the changes in the core market systems, and to drive these changes in the right direction. particulièrement d'afficher des résultats nettement moins bons en conséquence des flambées de covid-19 (Sampaio 2020).

# Land and infrastructure system

The functions such as utility services and land rights that encourage or inhibit better housing outcomes to emerge.

In the land and infrastructure system, there is an essential transformation in a range of interrelated functions that have to combine to create an eco-system that supports and encourages better housing outcomes to emerge. How these functions evolve individually and in combination with each other is critical to how materials suppliers and construction services providers see and interpret the ODC market as a key customer segment. Additionally, how these functions evolve as an eco-system will have an important effect on how the ODC market perceives/ understands the value proposition of investing in their homes. For example, as land tenure rights improve and roads and utilities reach these communities, the importance/value of investing in one's home tends to increase since they have greater certainty of the realizing the future value of investments, and the cost-benefit of certain investments increase dramatically.

Activities could support the following changes, among others, within market actors that impact land and infrastructure (see Table III for practical examples of the change process):

- Land tenure & rights that support the emergence of a commercial market for land is essential for increasing access and fairness in housing for LIH segments.
- Transport infrastructure emerging to connect LIH communities.
- **Public zoning/planning** especially for peri-urban and urban communities where the emergence of zoning and planning at the communal and government level is essential to improving the quality of housing and life for LIH segments.
- Utility services including access to reliable electricity, water, sewer and other utility services.
- Private services & investment that serve LIH communities that include related investments in infrastructure like roads, utilities, etc.

## Financial and other supporting services system

The support services that are important for market actors, emphasizing financial services but also service providers and business service providers.

In the financial and other supporting services system, there needs to be a shift in a range of interrelated functions/sub-systems in order to create effective support for better housing outcomes to emerge. How these functions/sub-systems evolve individually and in combination with each other is critical to how incremental builders will perceive and then obtain their ambitions for better housing outcomes. Additionally, how these functions/sub-systems evolve will also have an enormous influencing role on how firms/services providers compete to deliver value to their business and/or end consumers customers. For example, as the financial services system sees low income consumers of construction and renovation services as important, they should also realize the value of the firms (i.e., formal and informal) that serve these communities, creating a substantial set of different, but related segments that require unique products and services, which in turn fuels ongoing growth in improved housing. Additional services related to quality assurance and improved business practices are central to reinforcing the value proposition of financial services targeting these segments, but also the value that ODC market derives from investments in its homes.

Activities could support change within the following types of financial and other supporting services for housing market actors (see Table IV for concrete examples of the change process):

- Business services including ICT, marketing/branding consulting, accounting and other services, which are essential to support the emergence of a customer-oriented and transparent housing market system.
- Financial services for end-consumers that increasingly target LIH customer segments' housing needs shifting lending analysis and decision making toward more sophisticated behavioral and asset value determinants.
- **Financial services for businesses** that are increasingly tailored to housing firm issues, which eases firm growth especially into LIH customer segments.
- Public goods via government and civil society that support core system functions and behaviors including effective and increasingly
  more varied mechanisms and services that lead to improved housing for LIH communities.
- Architect, design, engineering services targeting housing and construction firms through to a wide range of service types and providers.

## Interconnected systems

The cross-cutting functions that impact all previous systems, and those which are sometimes overlooked in housing discussions.

There are frequently opportunities to improve functioning of interconnected market systems to support the growth and behavior change of housing and construction market actors.

Activities could support functioning of the following interconnected systems, among others, in areas where they impact the housing market (see Table V for concrete examples of the change process):

- Policy/regulatory oversight practices are constantly adapted through an evidence driven, participatory process.
- Media giving a voice to their audience through to becoming an advocate and checks-and-balances entity in the market.
- Social/civil society separation from political interests through to merit-based advocating.
- Academia & research linkages with business through to cooperation around innovation.
- Judicial through independent, transparent, consistent and fair application of laws.

Table 1: labor and materials system: stages of behavior change

	Labor markets	Innovation and technology	Evidence-based management	End-consumer retail expansion	Commercial retail expansion
	Quality assured labor that dynamically responds to opportunities and threats	Increased investment in developing technologies & products that are appropriate for mass market housing	To capture and use information to generate customer value and growth	Through customer retention and expansion	Through customer retention and expansion targeting smes and industrial developers
Early stage change	Improved and more clear signals that message needs/opportunities to skilled labor that leads to emergence of investments in skills development from materials firms, SME contractors, individuals, and private and public services like vocational schools to deal with labor market gaps (i.e., initial signs that the system recognizes the value of quality assured labor)	Emergence of increasingly more clear requirements/ understanding of the LIH housing segments (i.e., firms identify types of technologies that are informed by scale, sophistication, and other characteristics of formal/ informal construction firms and end LIH consumers	Track basic information for analysis and decision making (e.g., customer retention, customer expansion, financial performance, inventory, product mix, human resources, etc.)	Initial shift in orientation to customer value and retention, aligning with a move to mass market retail expansion strategy (e.g., marketing, customer retention, customer services/satisfaction, growth rates), alongside investment in building effective distribution networks that are customer-oriented retailers	Initial shift in the orientation of some input firms targeting informal-commercial/SME construction firms and contractors/service providers as end customers (e.g., marketing, customer retention, customer services/ satisfaction, growth rates)
Mid-transition change	Emergence of specialized private sector services, public-private partnerships, job placement services, social media tools, research services/ tools, and improved connectivity between gov't, academia and private sector	Emergence of alliances between materials firms, research, academia, and public sector to invest in developing more tailored housing/construction products and materials for LIH housing segments	Invest in ICT tools to manage/ automate processes and gather/ analyze data – i.e., customer, inventory, finance, etc., with increasing focus on analytics for decision making and alliance building	Multiple retail channels and points including online and brick and mortar outlets emerge based on consumer demographics, and geography insights/evidence (i.e., a clearer emergence of channels targeting mass market home improvement customers including the LIH segment)	Develop loyalty clubs to engage/ manage best customers/ laborers as tool to track customer habits and solidify loyal and growing customer base
Tipping point change	Diversified and robust set of interconnected private sector, public sector, and civil society services and tools (i.e., quality assurance certification) that drive ongoing improvements in the labor market for the housing market system (i.e., substantial shift in labor market inclusivity based on quality assurance, effective feedback and adaptive capacity)	Increasing rate of new products that resonate with LIH segment that both increase quality assurance, efficiency, as well as investment by end consumers in construction and renovations (i.e., increasingly rich mix of services and products that meet the needs of LIH consumers and catalyzes feedback driving even more investment in innovation)	Active use and investment in data gathering and analysis to drive performance improvement (e.g., use of growth metrics to guide decision making especially in managing investments in branding and distribution networks)	Input firms expand via multiple channels targeting ODC segments and compete on customer value and loyalty with increasingly more tailored products, accessible retail points, increased education-based marketing/tactics	Establish customer referral programs to expand customer base

Table 2: construction and renovation system: stages of behavior change

	Public housing investment	Incremental building and maintenance	Evidence-based management	Alliances	Platforms/services for consumers
	Particularly for LIH segments	Through customer engagement, multiple distribution channel and customer feedback	To capture and use information to generate customer value and growth	To better serve LIH customer segment	In order to improve and amplify customer feedback
Early stage change	Emergence of political capital around the value of housing as an important social safety net consideration, resulting in stakeholder processes to identify potential investments/ programs	Emerging informal SME segment that targets rising income segments around incremental building, custom homes and maintenance services	Track basic information for analysis and decision making (e.g., financial performance, quality of workmanship, project management, etc.)	Embedded knowledge exchanges and co-investment with initial alliances (i.e., firms identify emergent alliances focused on market segment, supply chain management, etc., that improve service and expand market)	Emergence of public and civil society education services and platforms that improve LIH understanding and capacity to make informed housing investments, as well as other services that support LIH customers (i.e., real estate brokers, educational websites, NGO sponsored programs and advisory services, etc.)
Mid-transition change	Emergence of pilots by government and in partnership with private sector to improve housing for LIH segments (i.e., subsidies to encourage ownership)	SME construction firms and contractors (formal and informal) start to develop specialties related to key customer interests like roofing, interior remodeling, general contracting, etc., that also messages great clarity around labor requirements (and this emerging segment also begins to attract supporting services like finance, skills, etc.)	Invest in ICT tools to manage/ automate processes and gather/ analyze data to effectively find and support value addition for customers, suppliers and staff	Regular meetings that form rules, define joint interests, and build social capital between key emerging allies, forming more strategic longer-term alliances	Multiple service providers emerge in key service areas that include real estate brokerage, quality assurance, etc., that leverage social media/shared value models (i.e., shift in favor of targeting mass customer segments via services like consumer facing quality assurance home repair services, etc.)
Tipping point change	Increasingly more sophisticated public and public-private partnership investments and programs that better align incentives for ongoing improvements in housing for LIH segments	Increasingly formal and specialized SME construction segment is supported by a set of services to ensure quality control, limit unprofessional behavior, and favor well run customer-oriented firms	Active use and investment in data gathering and analysis to drive performance improvement (e.g., use of more sophisticated analytics to support resource and investment decisions like growth metrics, data on firm/industry performance, etc.)	Yearly strategic review and planning processes resulting in co-investments to expand growth in key market segments especially mass/ODC market segments	Wide range of services and providers competing and innovating to add value to LIH segments and housing investments (i.e., competitive landscape shifts in favor of more innovative service providers that can deliver value to LIH customers around education, quality assurance services, etc.)

Table 3: land and infrastructure system: stages of behavior change

	Land tenure & rights	Transport infrastructure	Public zoning/planning	<b>Utility services</b>	Private services & investments
	To support the emergence of a commercial market for land is essential for increasing access and fairness in housing for LIH segments	To connect LIH communities	Emergencing of zoning and planning at the communal and gov't lelvels in peri-urban and urban communities	Reliable electricity, water, sewer and other utility services	That serve LIH communities
Early stage change	Emergence of legal structures and frameworks for secure tenure/ownership of land (not only legal foundations but also key mechanisms such as land registries, transfer rights, etc.	Emergence of basic roads into and out of LIH communities including some roads within the community, along with informal or private transport services	Emergence of informal/ communal processes for determining, managing disputes around, and enforcing sanctions related to land use issues	Informal access to power emerges via informal connections to public systems, individual generator/solar cells, etc.; water and sewer service access is informal and managed at the individual level - present risks of fire, disease, extractive pricing, etc., which is difficult of LIH communities to manage	Emergence of more formal SME investments to service LIH communities that includes retail/trading, restaurants, etc., as well as limited investments in infrastructure (localized SME investments that includes some road improvements and expanded access to utility services
Mid-transition change	Emerging marketing for commercial land paves the way for clear and fair market mechanisms for personal/ family owned land including the emergence of services to help LIH customers secure property rights and learn cost-benefit of buying a home	Increasing public investment in more formal, high quality road networks leading to and from LIH communities, as well as increasing investment to improve internal community road networks and related infrastructure such as drainage  Increasing sophistication of informal transport services that may include risks related to monopolistic/extractive tendencies	Emergence of more formal zoning, planning and dispute resolution functions that set rules and develop mechanisms for how land can be used that include the associated rights of the owner – leading to quality baselines for incremental home improvements (primarily in periurban and urban regions, initially focusing on zoning to isolate industrial usages, but should evolve to include residential/LIH communities)	Expanded access to public services in urban and peri-urban regions, as well as the emergence of private sector options, especially for cost effective technologies, but rate of new access tends to remain slow	Some larger investments most likely in retail-oriented urban and peri-urban LIH communities emerge that can include substantial infrastructure investments, as well as increased SME investments that raise awareness and increase investment in infrastructure
Tipping point change	Increasingly robust market for buying and selling homes/land that continues to expand into LIH segments (i.e., alternative forms of property emerges, like condos); cultural norms weaken around personal/family connection to land and strengthen around land as a commercial asset	Increasing connectivity improves quality of life via roads and public quality assurance mechanisms for informal transport services, as well as some investment in formal public transport services (to ensure quality and access)	Increasingly improving processes for zoning, planning and land usage right functions that are participatory, transparent and perceived as fair (i.e., LIH communities increasingly have a voice in how their neighborhoods evolve and grow, including how commercial activities evolve)	Shifts in public dialogue and thinking in support of a more multi-channel approach that drives more investment into promising private sector options	Increasing investments in large and small commercial activities targeting LIH communities creates a more robust feedback loop in favor of improving infrastructure

Table 4: financial and other supporting services system: stages of behavior change

	Business services	Financial services for end- consumers	Financial services for businesses	Public goods via gov't and civil society	Architect, design, engineering services
	ICT, marketing/branding consulting, accounting, etc	Tailored to LIH customer segments' housing needs LIH communities	Tailored to housing firms issues	Effective & increasingly more varied mechanisms and services to improve housing for LIH segment	Targeting housing and construction firms through to a wide range of services and providers
Early stage change	Basic SME service providers emerge (for accounting, advertising, business plan development, etc.) to sell services to SMEs and contractors	Financial service providers identify finance for housing as an important market segment (i.e., land/tenure rights emerge as a viable form of collateral, as well as other systemic changes that amplify the value proposition of housing finance)	Financial service providers, primarily banks, identify SME/commercial finance, especially for housing firms as an important market segment (i.e., financial service providers start to test products like working capital, input finance, growth capital, etc.)	Initial efforts would come from civil society and focus on subsidy programs and educational efforts to ease or improve access to quality assured housing (e.g., subsidies to lower costs to mortgages, support to register land, public insurances to reduce risks, etc.)	segments, housing contracts and construction firms emerge (e.g., architecture, design, engineering, research, etc.)
Mid-transition change	Emergence of more diversified and sophisticated service providers targeting housing SMEs/firms that include services such as financial management, marketing and branding, ICT management tools, customer research, etc.	Financial service providers actively promote housing financial products that shift incentives toward customer acquisition and retention, amplifying customer feedback (i.e., customer feedback increasingly drives innovations from financial service providers around housing-related financing, including insurance)	Increasing diversity emerges in financial service providers targeting commercial housing and renovation firms that include non-bank, value chain, and private capital service providers (i.e., commercial-customer feedback increasingly drives innovations from financial service providers that includes tailored private capital, alliancedriven supply chain finance, etc.)	Increasingly innovative programs from civil society, as well as increased investment from gov't to increase access to quality housing for LIH communities (i.e., emergence of diversified programs like down payment schemes, commercial investment incentives, consumer protection/quality assurance services, etc.)	Multiple service providers emerge, creating some competitive pressure in key support service areas that include architects, engineers, research, etc. (i.e., the housing market system shifts in favor of targeting mass customer segments, as evidenced by the emergence of robust specialized service providers that result in increased systemic efficiencies)
Tipping point change	Emergence of a robust set of service providers constantly innovating to compete via tailored services for a growing market of housing SMEs/firms	Financial service providers actively innovate to compete for additional customer segments shifting the competitive landscape for housing finance from a singular view of mortgages to an array of products addressing the breadth of incremental housing financial needs (including insurance and other types of financial services)	Financial service providers actively innovate to compete for developers and housing inputs and service provider clients that target increasingly lower-income customer segments, shifting the competitive landscape for housing finance that better supports the varied needs of commercial housing firms	Increasingly wider range of innovative services that expand quality assured housing for LIH communities (i.e., shift in political and social norms favoring social investments in LIH communities increases robustness, effectiveness and rate of innovation of these programs)	Wide range of services providers competing and innovating to improve performance and increase the pace of growth in the housing market system, especially expanding into even lower income segments (i.e., competitive landscape shifts in favor of more innovative service providers)

Table 5: interconnected systems: stages of behavior change

constituents / wider society

	Policy / regulatory oversight	Media	Social / civil society	Academia & research	Judicial
	Policies are constantly adapted through an evidence driven, participatory process	Giving a voice to their audience through to becoming an advocacy and checks-and- balances entity in the market	Separation from political interests through to merit-based advocating	Linkages with business through to cooperation around innovation	Through independent, transparent, consistent and fair application of laws
Early stage change	Policies and regulatory oversight practice developed via participatory and evidence-based processes, based on participation of some key stakeholders with some level of credible evidence. Translation process is not always transparent or fair and doesn't align with policy / regulatory objectives	Media outlets increasingly give a voice to their audience (i.e., moving to audience-driven growth model that aligns commercial incentives with providing more quality assured programming that notes and begins to include housing-related programming on their platforms)	Social / civil society starts to evolve localized funding and constituent led missions and visions for housing solutions. Funding from external vested interests declines over time	Academia and research links to housing market system needs, including regulatory oversight capacity (e.g., via interns, incubation, professional training, adapted curriculum and improved research initially)	Improved awareness of laws and rights, coupled with resources to support citizens when engaging the judiciary (courts) via public education, clear/transparent access to rules and responsibilities, etc. For housing, emergen reform movement around land and land tenure rights is central, including squatter rights, especially in urban and peri-urban areas
Mid-transition change	Monitoring is performed by a range of governmental, civil society, market actors, researchers, and consumers, which results in evidence that is used in a participatory manner to adapt/create new policies	Media outlets develop entertainment programs and sell advocacy and investigative journalism as commercial products that focus on owner- driven construction (i.e., housing- related programming gains same prominence that other special interest programming receives)	Social / civil society is constituency-driven and funded by local sources to support more fair, transparent and valued housing solutions	Academia cooperates with housing firms, civil society and regulatory oversight organizations via various platforms (e.g., exchanges on content, research, internships, curriculum development, entrepreneurship, innovation, etc.)	Increasing pockets of judicial system that are known to be independent, transparent, fair and consistent, with clear and accessible options for handling complaints, corruption, civil society monitoring and advocating agains corruption or malfeasance, media investigation
Tipping point change	Overall policy / regulatory oversight process is evidence-driven, adaptive and grounded in constituent value, driven by constituent needs and interests, active participation, and objective-based monitoring. Wider political system's competitive landscape favors actors who deliver value to	Media becomes an independent force in the system, advocating for its audiences, acting as an effective counterbalance to private sector and government (i.e., housing and its related issues are prominently portrayed on various media platforms in ways to protect and support LIH customers)	Diversified civil society that can effectively advocate based on evidence / merit for more inclusive housing solutions. Civil society actors evolve effective ways to build coalitions around joint issues, as well as compete around other issues	Academia becomes an important source of / resource for innovation, revitalization and disruption, as well as mechanism for ongoing adaptation of the labor market in response to housing market system requirements	Widespread access to efficient, independent, transparent, fair and consistent judiciary that includes robust and trusted mechanisms to investigate malfeasance / improper conduct, robust civil society and media systems that monitor / advocate for fair, transparent and judicial integrity

# everyone



