



STATEMENT OF INTENTION IN SUPPORT OF INDUSTRY 4.0

Background

The **Fourth Industrial Revolution** (or **Industry 4.0**) is the ongoing automation of traditional manufacturing and industrial practices, using modern smart technology. *Industry 4.0* is the realization of the digital transformation of the field, delivering real-time decision making, enhanced productivity, efficiency, flexibility, and agility. This is accomplished through expanded use:

- Digitization of materials and processes,
- Advanced automation and robotics,
- Machine-to-machine and human-to-machine communication,
- Artificial intelligence (AI) and machine learning, and
- Sensor technology and data analytics, and
- Prefabrication building methods

Though generally applied to smart manufacturing, many industries, inclusive of the residential construction industry, can be advanced through *Industry 4.0* efforts. From the digitization of planning and permitting processes to the use of advanced building technologies whether on site or at the factory, Industry 4.0 has the potential to revolutionize modern residential construction practices.

The industry advancements which can be achieved through *Industry 4.0* are broad and impact the entire life cycle of a structure beginning with design through completion and ongoing operation. This being the case, the benefits of *Industry 4.0* are broad as well and can support all involved in the construction process and operation of residential buildings, including builders, designers, product suppliers, laborers, building officials, warranty providers, consumers, etc.

The advancements available through *Industry 4.0* processes and technologies can result in efficiencies, from materials use to labor requirements, that can directly and positively impact the cost, in both time and money, and affordability of housing.

Intent:

The signatories—designated "we" in this public statement—have a common interest in supporting the continuing development and implementation of *Industry 4.0*.

In pursuit of this:

- We will establish an IHA Working Group to further the discussion of *Industry 4.0* adoption.

- We will share updates regarding the growth and implementation of *Industry 4.0* practices throughout the residential construction industry, highlighting the areas in which the greatest benefits are achieved.
- We will share best practices on how to benefit from the digitization of processes common to the residential construction industry furthering the adoption of *Industry 4.0* and streamlining the time and resources required to support processes such as planning and permitting.
- We will document how *Industry 4.0*, particularly the use of new building technologies, can assist in addressing the skilled trades challenges currently experienced by many of the IHA members.
- We will study and document pathways which successfully further the adoption of *Industry 4.0*.
- We will review the benefits to housing affordability of the implementation of *Industry 4.0* and communicate these findings to our IHA partners and the broader global residential construction industry.
- We will use relevant existing industry organizations, associations, interest groups, or other forums or create new forums as required for our collaboration.

Review Commitment:

This statement is not intended to be legally binding on any of the IHA Member Organizations. No cause of action will arise with respect to compliance, or lack thereof, of any signatory party to the guidance and intent expressed in this Statement. This Statement is not intended to create, nor does it create, any right, benefit, or privilege, substantive or procedural, enforceable at law or in equity, against any of the IHA Member Organizations supporting this Statement.

The IHA Members will conduct a biennial review of this Statement of Intention and ratify or revise it, based upon consensus.

- This statement became effective upon affirmative vote by two-thirds of the IHA members on September 30, 2021.
- This statement was updated and reaffirmed by the IHA members on February 25, 2022.
- This statement was updated and reaffirmed by the IHA members on March 2, 2024

IHA Secretariat



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