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## HOUSED by CHOICE, HOUSED by FORCE - Homes, Conflicts and Conflicting Interests

January 21 – 22. 2016

Architecture\_MPS, University of Cyprus; Cyprus Institute

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### **Abstract / Initial Proposal Form:**

**1. Paper / Proposal Title:**

2. Towards Sustainable Measures: A Methodology for Successful Retrofitting in the UAE Old Residential Sector

**2. Format:** Written Paper

*Written paper / verbal presentation / screening / short film / other – please specify*

**3. Author(s) Name:** Mohamed ELkaftangui,

Basem Eid Mohamed

**4. Email contact details:** [basem.mohamed@adu.ac.ae](mailto:basem.mohamed@adu.ac.ae)

[mohamed.elkaftangui@adu.ac.ae](mailto:mohamed.elkaftangui@adu.ac.ae)

**5. University or Company Affiliation:** Abu Dhabi University

**6. Abstract (300 words):** The Abu Dhabi Government has recently devised a program to promote sustainability guidelines and regulatory tools within the AEC industry in the UAE. The program; known as Estidama, proposes a set of strategies to ensure sustainable practices from design to operation, and maintenance for all building typologies and communities across the UAE. The program has been initiated by a group of

government agencies and developers to align the leadership's vision in transforming Abu Dhabi to a sustainable Arab Capital. Additionally, the program complements the country's vision for Plan 2030 primary ideologies and its recommendations for the city of Abu Dhabi future urban development.

Currently, the Estidama Design Guidelines have been directed towards new construction of residential and commercial buildings. Nevertheless, It is evident that existing buildings and other facilities should be considered in the future within the program's appraisal, given that they represent a large percentage of Abu Dhabi's built environment.

The paper addresses the status of the existing residential stock in the UAE built environment, which included around 185 000 units by the end of the year 2007, prior to the Estidama initiative. We analyze various contextual characteristics, then propose a methodology to integrate effective sustainable refurbishment strategies capitalize on the scope of Estidama's guidelines to potentially include a chapter for buildings overhaul in Abu Dhabi.

We believe that this research would be a valuable addition to the Estidama guidelines, and could compliment the national Abu Dhabi vision 2030.

#### 7. Author(s) Biography (200 words maximum for all authors):

Mohamed Elkaftangui: Completed his Architectural and superior studies on 1991 from "L'ecole National Superieur de Toulouse" and practiced Architecture during 10 years with different consultants in Paris and Toulouse. In 2002, he joined the Architecture Department of AAST in Alexandria and created REGEN Consultancy focusing on residential sector. He joined DAR ALHANDASSA in 2007 as a Design Manager for the new Senegal Airport project. From 2008 to 2011 he Joined "Sorouh" one of UAE real estate leaders specialized in residential buildings. Since 2012, Mohamed is assistant professor in Abu Dhabi University teaching Design and Building Technology and focusing his research on Sustainable Design and Residential Sector.

Basem Eid Mohamed: Basem has completed his Doctoral degree at McGill University School of Architecture. His research and design work focus on design strategies, information technology, computational design methods and fabrication tools to enable mass customization in the building industry, specifically in the realm of prefab housing. In the academic year 2010-11, Basem received a Mitacs accelerate research grant to explore the applicability of such an approach within the structure of a leading prefabricated housing company in Quebec province, Canada. The outcome of this endeavor was published in the journal Open House International. Besides other publications, and research projects, he has taught at McGill School of Architecture and AAST in Alexandria-Egypt. Additionally, Basem has collaborated with a number of architectural practices in Canada, UAE and Egypt on a diverse range of residential, and commercial projects. Currently, Basem holds the position of Assistant Professor of Architecture a Abu Dhabi University in the UAE, where he teaches design studios, and

digital design courses, and running a couple of research projects that aims at rethinking the housing industry in the UAE market.

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