OCAD UNIVERSITY

OCAD University Open Research Repository

Faculty of Design

2014

Analyzing, projecting and synthesizing real-world problem from a designer perspective: Exploratory study to tackle poverty in Egypt

El Aidi, Doaa

Suggested citation:

El Aidi, Doaa (2014) Analyzing, projecting and synthesizing real-world problem from a designer perspective: Exploratory study to tackle poverty in Egypt. In: Proceedings of RSD3, Third Symposium of Relating Systems Thinking to Design, 15-17 Oct 2014, Oslo, Norway. (Submitted) Available at http://openresearch.ocadu.ca/id/eprint/2069/

Open Research is a publicly accessible, curated repository for the preservation and dissemination of scholarly and creative output of the OCAD University community. Material in Open Research is open access and made available via the consent of the author and/or rights holder on a non-exclusive basis.

The OCAD University Library is committed to accessibility as outlined in the Ontario Human Rights Code and the Accessibility for Ontarians with Disabilities Act (AODA) and is working to improve accessibility of the Open Research Repository collection. If you require an accessible version of a repository item contact us at repository@ocadu.ca.

RSD3-Relating System Thinking & Design 2014
AHO, Oslo, Norway . October 16-17th

BERGISCHE UNIVERSITÄT WUPPERTAL

Analyzing, Projecting and synthesizing Real-world Problem from a designer perspective: Exploratory study to tackle poverty in Egypt

Doaa El Aidi
Ph.D. Candidate at BERGISCHE UNIVERSITÄT WUPPERTAL, Germany
Assistant lecturer at the FACULTY OF APPLIED ARTS, Helwan University, Cairo, Egypt

System Thinking & design

System thinking will help designers to avoid falling into the trap described by Goethe in 1817 "One faces the danger of seeing and yet of not seeing." (qtd. in Findeli 2001, P. 11)

Interconnected thinking and the paradigm of Pattern (Vester, 2007)

recognizing the interconnecting relationships between components of the problem and its context (the paradigm of pattern)

1st and 2nd generation design methods (Rittel, 1972)

1st generation design methods

1. assume: Asymmetry of ignorance

-there is a professional expertise about other people's problems

-the designer is knowledgeable about other people's problem and how it can be solved.

2. Separation model

-designer plans for client who has the problem without involving him

3. Design process is not argumentative

Listening & understanding > thinking > solution

4. The aim of getting more involved

-planning for others /on behalf of others

1st and 2nd generation design methods (Rittel, 1972)

1st generation design methods	2nd generation design methods
1. assume: Asymmetry of ignorance -there is a professional expertise about other people's problems -the designer is knowledgeable about other people's problem and how it can be solved.	***1. assume: Symmetry of ignorance*** -the expertise and ignorance about the problem are distributed over all participants -nobody is knowledgeable about problems than others(different participants means activating different knowledge)
2. Separation model -designer plans for client who has the problem without involving him	***2. Conspiracy model of planning*** to overcome implementation problems -designer is like a teacher: his role is to show others how to plan for themselves
3. Design process is not argumentative Listening & understanding > thinking > solution	***3. Design process is argumentative*** the logic of reasoning by designer: asking questions > generating info. > forming judgments
4. The aim of getting more involved -planning for others /on behalf of others	***4. The aim of self-elimination*** -designer is an activist and modest -designer moderate optimism

Research problem and Research hypothesis

Since publishing the first Egypt Human Development Report (EHDR) 1995**, the role of design as a partner in the developing process to achieve sustainable development is not recognized yet** or even available in the local design discourse.

Through my research, I argue that **design can play a powerful role in contributing to ongoing efforts** of many institutions and organizations in Egypt that are trying to tackle 'poverty' in order to achieve sustainable development.

Methodological Approach

- → Pragmatic worldview with transformative character (exploring and empowering)
- → Ontology: Beyond duality of reality
- → Dynamic Sequential Mixed Methods approach*
- → Strategy of inquiry (Case study)
- → Methods (interviews, Vester's sensitivity model, Schwartz scenarios, different visual methods)

* Creswell and Clark (2011)

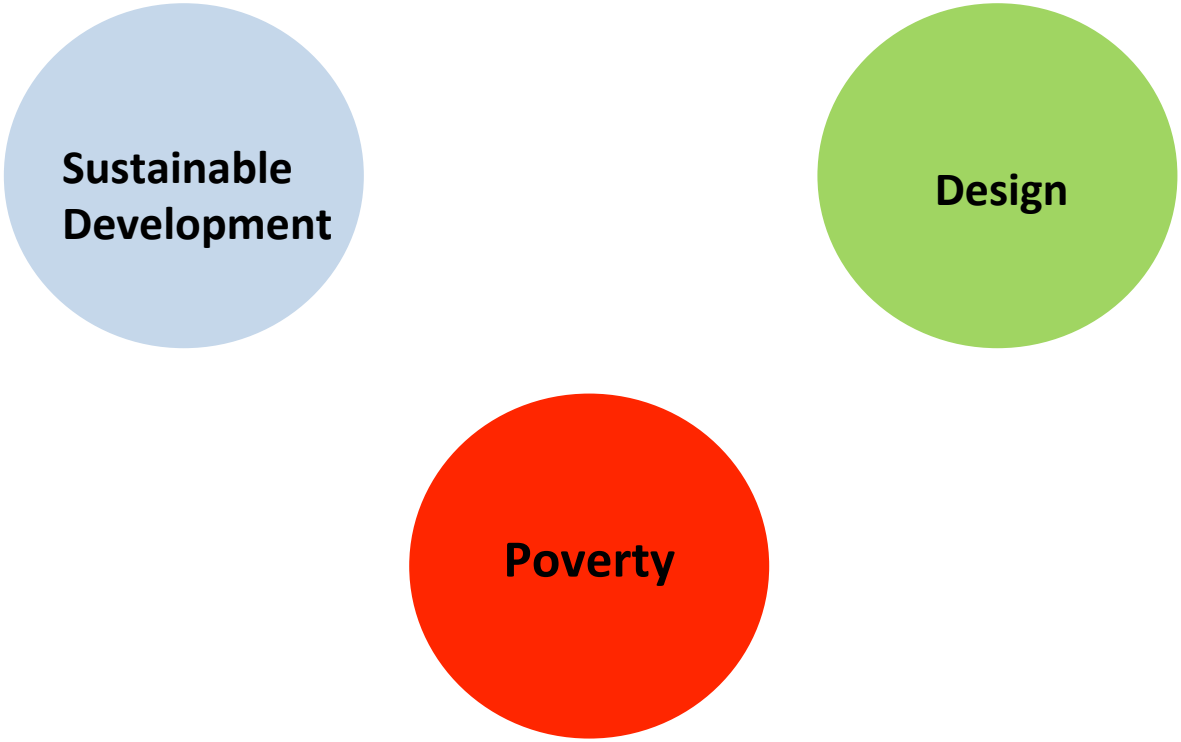
KEY RESULTS

Theoretical Foundation to answer the following question: **What do sustainable development and design have in common?** Answering this question is vital to find out the connection between design and sustainable development.(know-what)

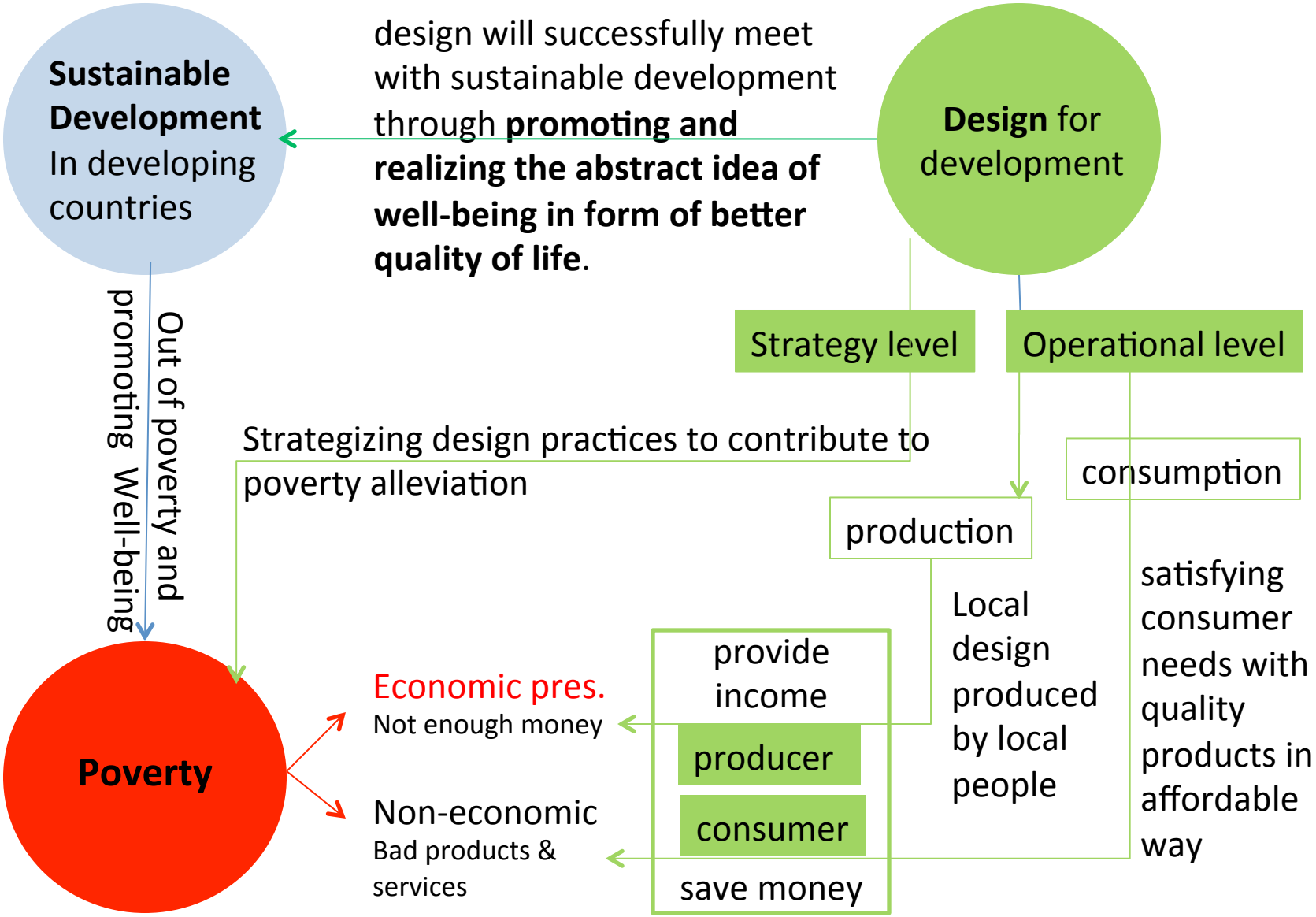
Operational Framework to guide processing the data; using different methods from different backgrounds where system thinking, scenario building and strategic planning and acting are important methodological components synthesized in this framework (know-how)

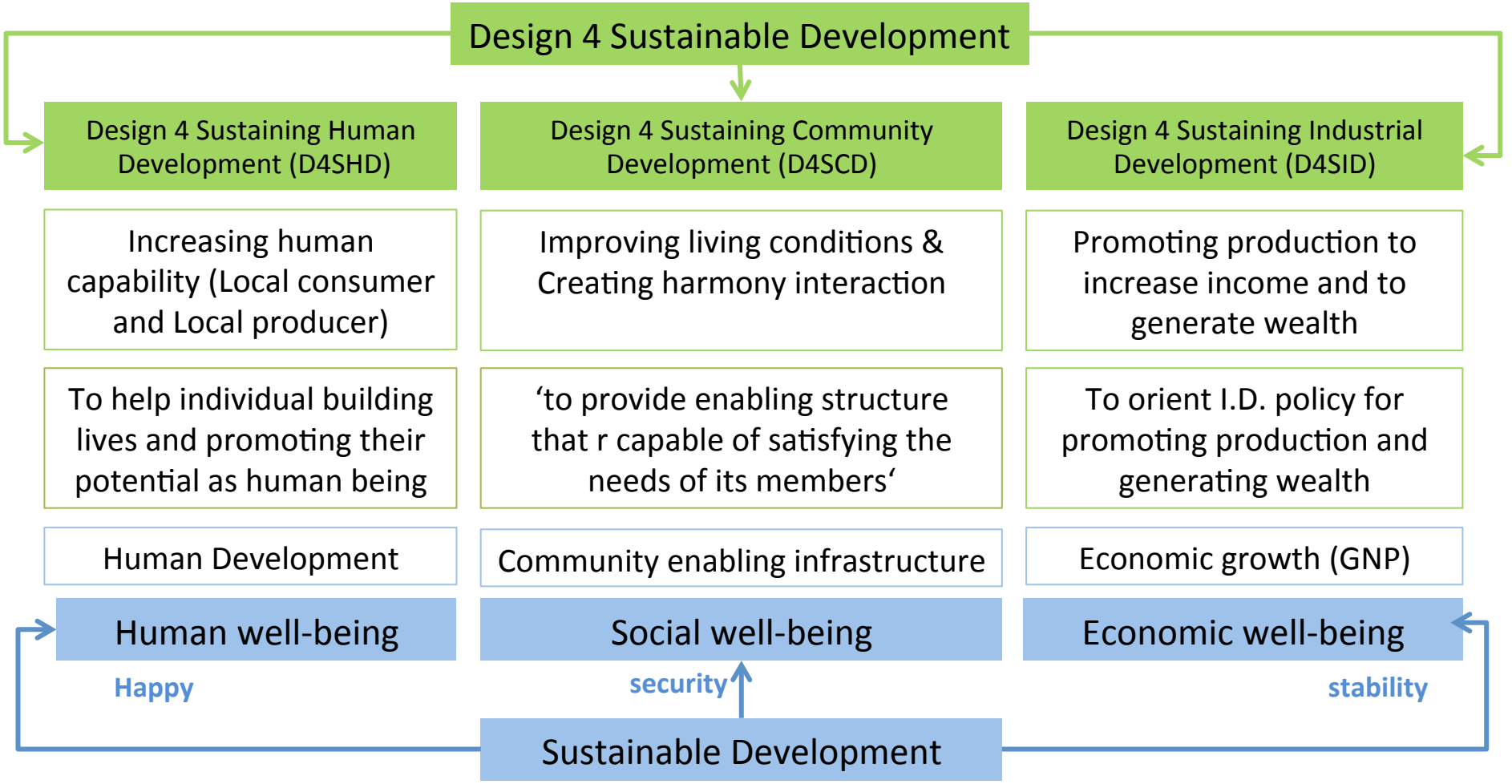
Case Study for **visualizing the proposed design thinking process** to solve Real-world problems that ending up with a prototype for the solution in form of design social business model.

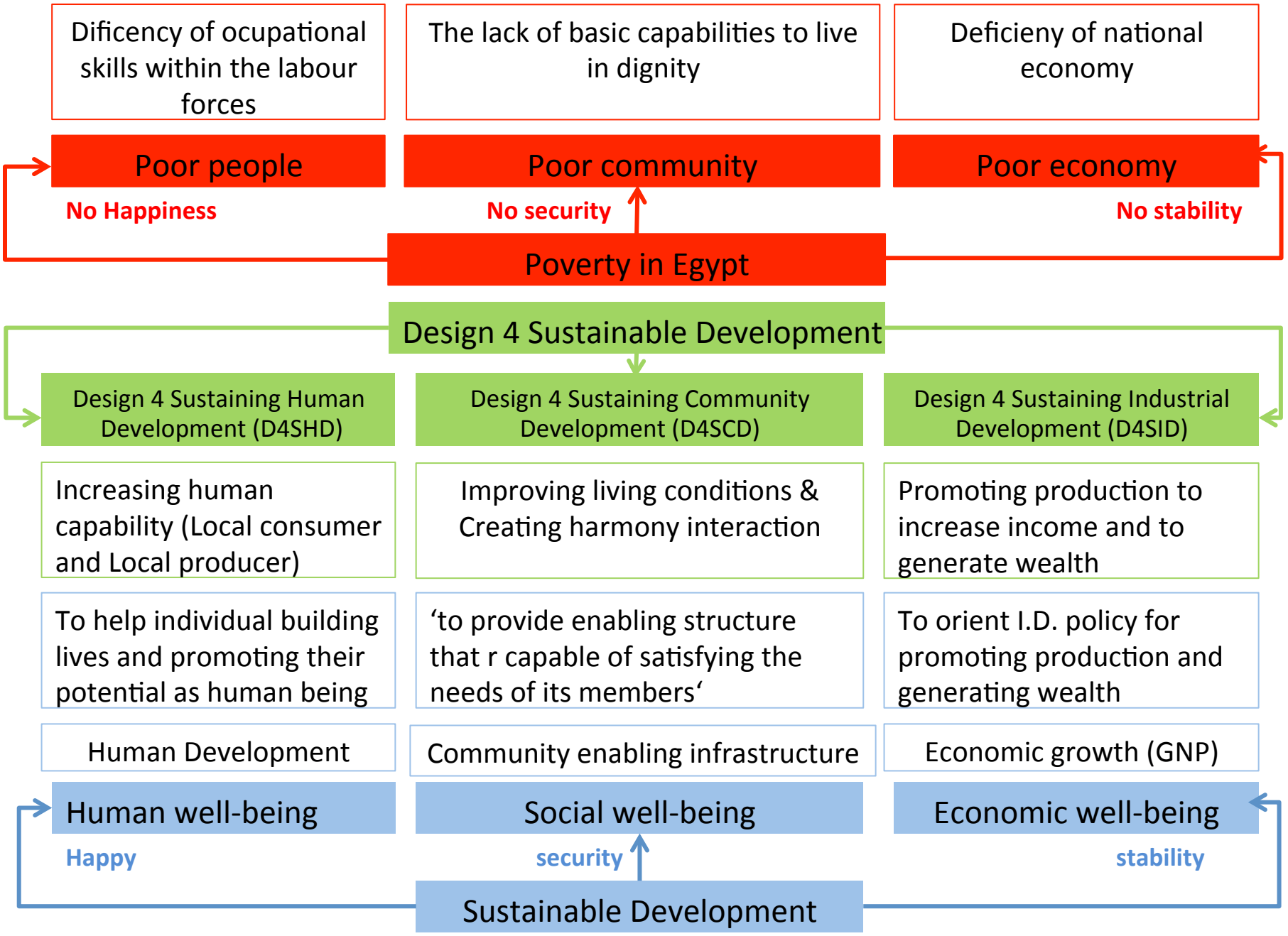
Research fields



Research fields




Design 4 Sustainable Development
Design 4 Sustaining Human Development (D4SHD)
Design 4 Sustaining Community Development (D4SCD)
Design 4 Sustaining Industrial Development (D4SID)
Increasing human capability (Local consumer and Local producer)
Improving living conditions & Creating harmony interaction
Promoting production to increase income and to generate wealth
To help individual building lives and promoting their potential as human being
'to provide enabling structure that r capable of satisfying the needs of its members'
To orient I.D. policy for promoting production and generating wealth
Human Development
Community enabling infrastructure
Economic growth (GNP)
Human well-being
Social well-being
Economic well-being
Happy
security
stability
Sustainable Development


Dificency of ocupational skills within the labour forces
The lack of basic capabilities to live in dignity
Deficieny of national economy
Poor people
Poor community
Poor economy
No Happiness
No security
No stability
Poverty in Egypt
Design 4 Sustainable Development
Design 4 Sustaining Human Development (D4SHD)
Design 4 Sustaining Community Development (D4SCD)
Design 4 Sustaining Industrial Development (D4SID)
Increasing human capability (Local consumer and Local producer)
Improving living conditions & Creating harmony interaction
Promoting production to increase income and to generate wealth
To help individual building lives and promoting their potential as human being
'to provide enabling structure that r capable of satisfying the needs of its members'
To orient I.D. policy for promoting production and generating wealth
Human Development
Community enabling infrastructure
Economic growth (GNP)
Human well-being
Social well-being
Economic well-being
Happy
security
stability
Sustainable Development

What kind of methods and tools do designers need to develop their skills for coping with challenges they are facing; especially when they are approaching Real-world-problems?

	PROBLEM PRESENTATION	PREDICTION	DESIGNING
Herbert Simon (1996)	Make it transparent as possible by designing intelligent information-filtering system	Constructing alternative scenarios for the future by allocating the time & attention perspective between present & future satisfactions	Designing an evolving system where each step of implementation created a new situation provided a new goal

Design Process	Setting of variables: > Filter out vital data	Criteria matrix > Check the variables	Influence matrix > Studying interactions	Systemic role > Determining role within the system	Listing 2 driving forces: Critical uncer-tainties	Define 2 extreme values of driving forces:	Selecting scenario logics: 2x2	Fleshing out the scenarios: 'Context scenario' matrix	Identify unmet wants & needs in 'a user-story board'	Collect-ing relevant info. to Market force	Designing the problem system-map	Trans-form the info. into business model
	Frederic Vester (2007): sensitivity model				Peter Schwartz (1986): developing scenarios				Developing Design strategies			
Out-put:	→Intervention point & context scenarios				→strategic insight				→ solution prototype			

	A1	A2	A3	A4	P1	P2	P3	P4	S1	S2	S3	S4
Hugentobler; Jonas; Rahe (2004)	Gettin g data	Make sense 'Knowledge'	Understand 'worldviews'	Presenting IS Situation	Getting future data	Interpreting Data	Possible futures Scenarios	Presenting scenarios	Data on shall be	Evaluating	Design solutions	Present-ing
	ANALYSIS ,the true' how it is today				PROJECTION ,the ideal' how it could be				SYNTHESIS ' the real' how it is tomorrow			

Image source: http://everydaytrash.com/2009/03/03/al-azhar-park/

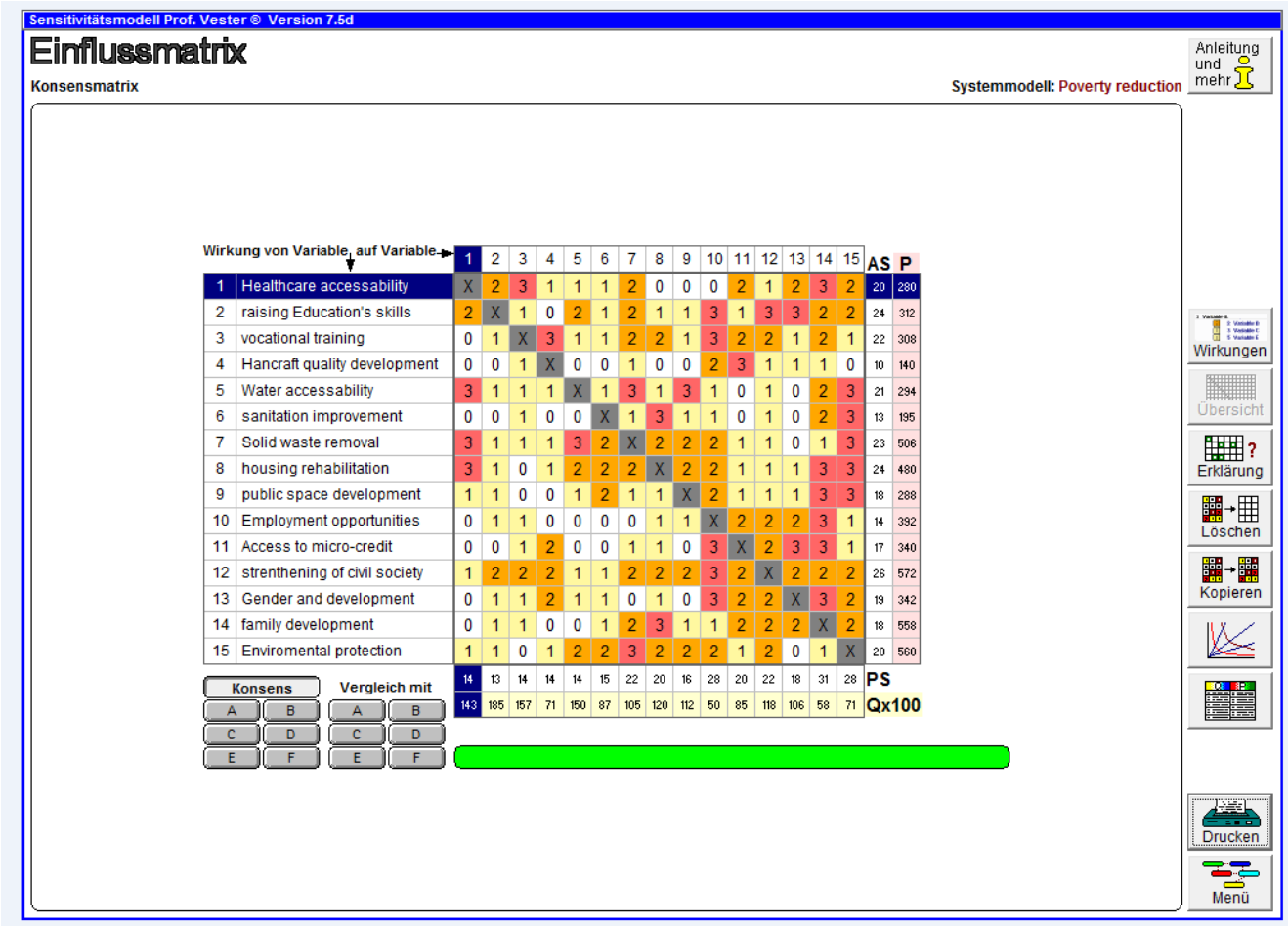
Al·Darb Al·Ahmar
Community Development Company

Case Study

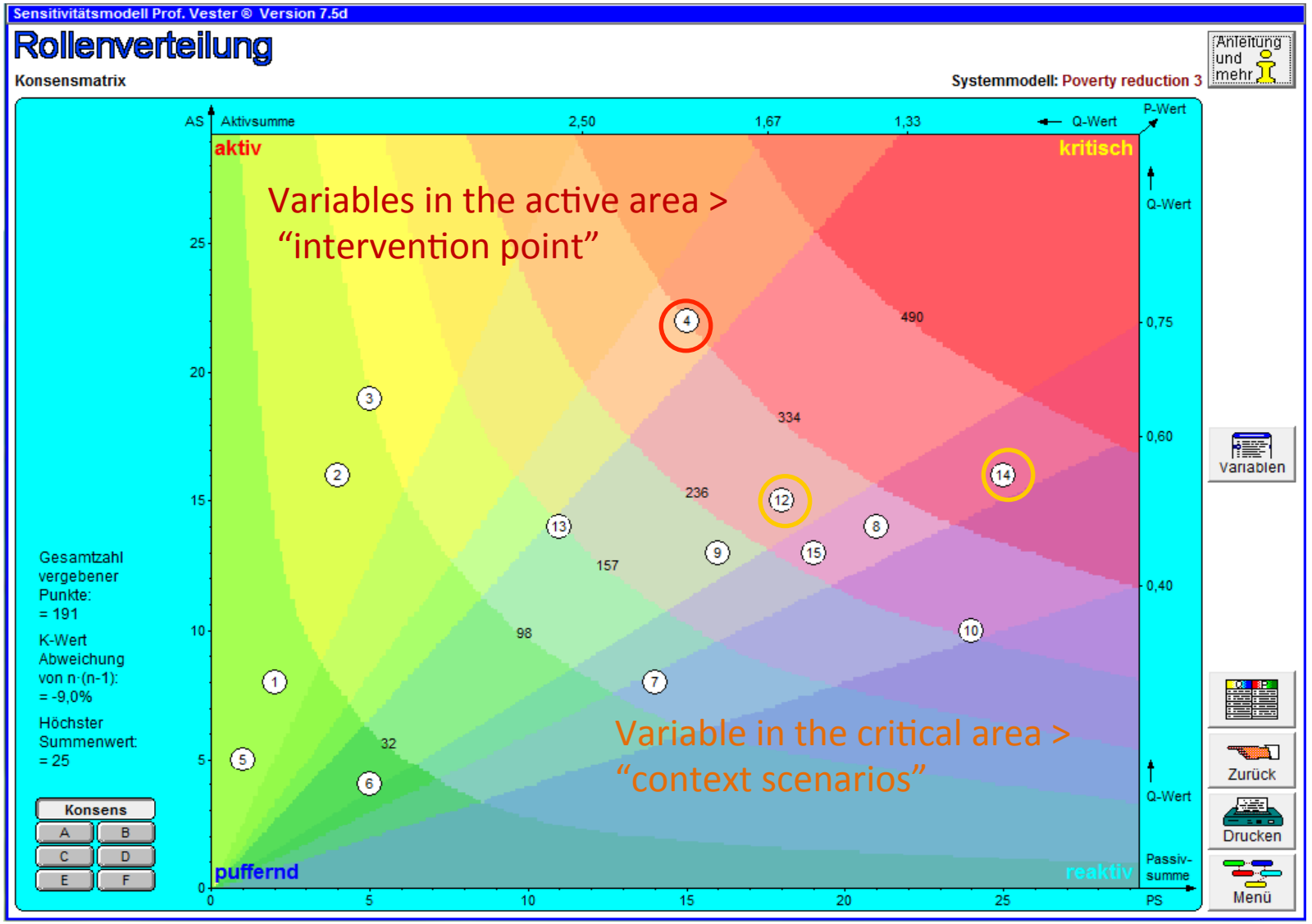
92,000 people living there

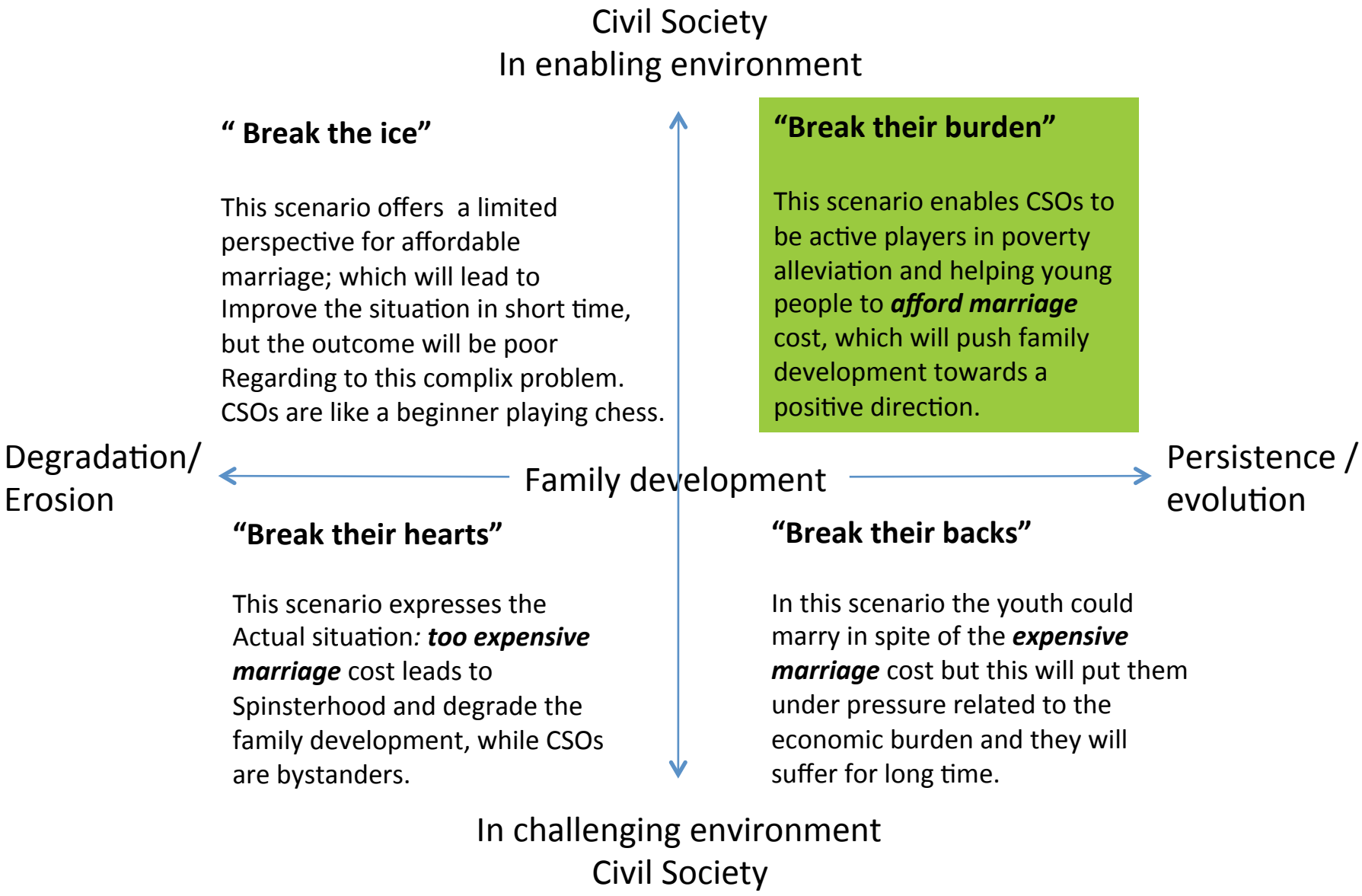
Improve the quality of life for communities living in dilapidated historic cities through increasing physical, economic and social assets.

Vester senstivity model: Set of variables > Criteria matrix > Influence matrix >Role allocation



Vester senstivity model: Set of variables > Criteria matrix > Influence matrix > Role allocation




Civil Society
In enabling environment
" Break the ice"
This scenario offers a limited perspective for affordable marriage; which will lead to Improve the situation in short time, but the outcome will be poor Regarding to this complix problem. CSOs are like a beginner playing chess.
"Break their burden"
This scenario enables CSOs to be active players in poverty alleviation and helping young people to afford marriage cost, which will push family development towards a positive direction.
Degradation/ Erosion
Family development
Persistence / evolution
"Break their hearts"
This scenario expresses the Actual situation: too expensive marriage cost leads to Spinsterhood and degrade the family development, while CSOs are bystanders.
"Break their backs"
In this scenario the youth could marry in spite of the expensive marriage cost but this will put them under pressure related to the economic burden and they will suffer for long time.
In challenging environment
Civil Society

Market issues	Generally, the Egyptian market of furniture is suffering from a deep stagnation (Wahab 2009, youm7) There is a shift in the Egyptian market, considering home furniture market, from buying local manufactured furniture towards imported furniture. This considers a crucial issue affecting local furniture marketing in Egypt … (Bakr 2010, almasryalyoum)
Market segment	Young people (between 20 - 40 years old) are the most important customers, as they want to marry and furnish their new homes in a simple and modern way. In Egypt, according to the official statistic, there are 13 million unmarried Youth older than 35 years and the rate of spinsterhood between girls is 17%.
Needs and demands	Strong need for simple, modern and affordable furniture. Whereas the cost is considered the important factor that affect their choice. They need to furnish their houses at the lowest price as possible, considering that the Chinese furniture serves these points very well.
Switching costs	The low prices of the Chinese furniture enabled these products to find their way into almost all segments of the Egyptian society. Although the quality is still very poor in comparison to the local manufactured furniture, the guarantee they offer to their products is supporting the demands by Egyptian for Chinese furniture. (Bakr 2010, almasryalyoum) the reason behind this is the logic of short loss to long win that young people are adapting. (Wahab 2009, youm7)
Revenue attractiveness	The customers are really willing to pay for simple and quality furniture in a reasonable cost

80% incresing demand for imported furniture

Threathen The local workers

Search for another ..... opportunity

Imported Furniture From China

92% unempolyment Under 30 years

Young couple

Cause the closure of furniture factories

craftsmen

High cost of living

Low salary

Furniture prieces are increasing

Furniture Gallery

Not enough money

Increasing in Timber Prices

Business model + Social Profits + Social benefits = „Social business model“ of design

Vision:

enabling young couple to **enjoy** their life at home and **feel happy** to furnish their homes in affordable way, and empowering craftsmen through upgrading their skills and insuring generating income.

Business idea:

Connecting between the STRENGHTH of local crafts people (after developing their skills) and (the needs of young people who want to marry regarding to affordable furniture) as an OPPORTUNITY for marketing the furniture produced by craftspeople in order to offer a combination of cost-effective simple furniture and interior services in affordable way

-Supporting business with specific social mission -Local employment -facilitating active society: students, academia, artisan, private and public sectors work together to help each others SB			-Alleviate poverty through supporting local artisan to generate income and supporting young couple to save money in furnishing their homes -To reduce Unemployment between local artisan -To reduce spinsterhood between youth by offering them quality products and services in affordable way SP	
KP مركز تحديث الصناعة INDUSTRIAL MODERNISATION CENTRE **DAR Project** SFD الصندوق الاجتماعي للتنمية Social Fund for Development **Academic design school** بنك الزواج المصـــري NSB	KA Interior and Furniture design services Produce-on-demand Network management Repair services KR Packaging and logistics	VP **To generate income** • Free modern furniture designs • Free Training workshops • Products Marketing **To save money** • Free basic interior design services • Premium interior services (On-site customer support) • Highly cost-effective modern furniture (repair services guaranteed)	CR tailored services CH Design students Young couple to be married	CS • Niche Producer: local artisan in three craft sectors: carpentry, leathers and patchwork • Niche Consumer: young couple
CS Design services Network management Repair services Packaging and logistic			RS Sales commissions (low) Interior service fees Free (Get the basic for free, pay for more p.96) Generate small revenues (selling less of more p.67 long tail B.M.)	

"Like slavery and apartheid, **poverty** is not natural. It is man-**made** and it can be overcome and eradicated by the actions of **human** beings."

Mandela

References:

Creswell and Clark (2011): Designing and Conducting Mixed Methods Research.2. ed., SAGE press

Findeli, Alain (2001): Rethinking Design Education for the 21st Century. Theoretical, Methodological, and Ethical Discussion. In Design issues, Volume 17, Number 1, Winter 2001, pp. 5-17

Vester, Frederic (2007): The Art of Interconnected Thinking. Tools and Concepts for a New Approach to Tackling Complexity. Germany: MCB Verlag

Rittel, Horst W. J. (1972): second-generation Design Methods. In: Cross, Nigel (ed.) 1984: Developments in design methodology, pp. 317–327

Simon, Herbert A. (1996): The sciences of the artificial. 3. ed.,. Cambridge, Mass.: MIT Press

Schwartz, Peter (1991): The art of the long view. The path to strategic insight for yourself and your company. New York: Doubleday currency

Hugentobler, H. Kaspar; Jonas, Wolfgang; Rahe, Detlet (2004): Designing a Methods Platform for Design and Design Research. presented at Futureground, DRS. Melbounrne.

BERGISCHE UNIVERSITÄT WUPPERTAL

Thank you…

Ph.D. Candidate Doaa El Aidi
doaaelaidi31@hotmail.com
doaaaidi@gmail.com
#D3aa