

# Young Cities | Developing Energy-Efficient Urban Fabric in the Tehran-Karaj Region

## Aktueller Projektstand und Projekterfahrungen

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Berlin, 9. Februar 2009 | VINI-Roundtable-Gespräch zum Deutsch-Iranischen Projekt Young Cities, Hashtgerd New Town

A project sponsored by the



Federal Ministry  
of Education  
and Research

Funding program: Research for Sustainable Development of the Megacities of Tomorrow - Energy- and Climate-Efficient Structures in Urban Growth Centers

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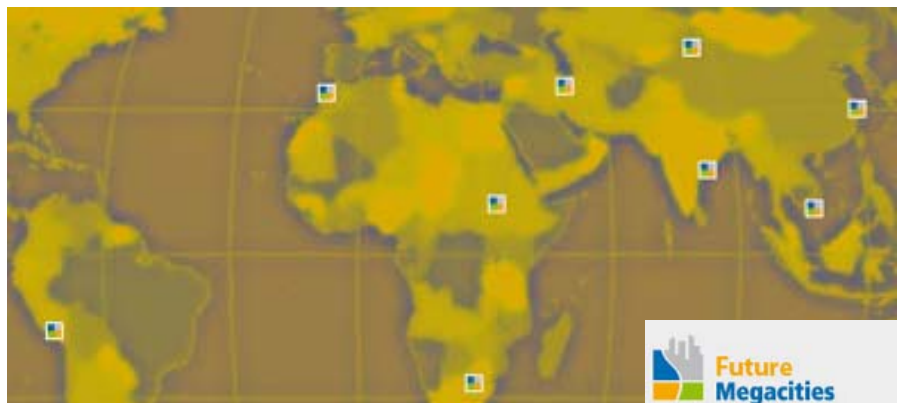


# 1. Der BMBF-Förderschwerpunkt Future Megacities



## Research for Sustainable Development of the Megacities of Tomorrow - Energy- and Climate-Efficient Structures in Urban Growth Centers

- Program focus: Research for climate and energy efficient structures in fast growing urban centers (Program website: [www.future-megacities.org](http://www.future-megacities.org))
- Program reach: 10 (out of 16) projects in the BMBF program reached the main phase (e.g. in Iran, Morocco, China, India, Vietnam, South Africa).
- Young Cities: After three years collaborating partly funded by BMBF, the main phase application of the Project Young Cities was successful.
- Young Cities: Project receives over € 6.2 Mio. (2008-2013 on German side).



## Vernetzung der BMBF Future Megacities-Projekte

- Joint activities of the 10 BMBF megacities projects (t.b.c.):
  - Networking and exchange on certain topics: e.g. transport/mobility, urban design, building/housing, simulation etc.
  - International Future Megacities Conference in Germany in late 2010
  - Building-up a joint database on comparable megacity related data, primarily related to Energy-Efficiency and Climate Change on the one hand and to issues of governance, institutions, planning methods on the other
- BMBF Main Phase Kick-off held November 27<sup>th</sup>/28<sup>th</sup> 2008 at TU Berlin by BMBF together with the Young Cities Project and the Casablanca/Morocco Project: Kick-off event for main phase and first networking workshop
- Second networking workshop on January 29<sup>th</sup> 2009 on data management
- BMBF Future Megacities part of German Megacities research initiative along with DFG and Helmholtz programs for Megacities research
- YC collaboration mainly: Berlin-based and urban development related projects



## DAAD Megacities Stipendien-Programm



- Program for the ten BMBF Megacities projects only
- Set up by BMBF and the German Academic Exchange Service (DAAD)
- Funding of € 2.7 Mio. for ca. 72 scholarships and 3 summer schools in Germany
- Six types of scholarships (related to one of the ten BMBF projects):
  - for senior scientists (14 days to 3 months of research in Germany)
  - for Postdocs (6 to 24 months of research in Germany)
  - for PhD students (3 years of PhD research and thesis in Germany)
  - for PhD students (6 to 24 months of PhD research in Germany)
  - for students (3 to 6 months of studies in Germany)
- Call for applications worldwide, deadline March 15<sup>th</sup> 2009
- Need for intensive promotion among all mentioned groups in Iran and Germany for involvement in Young Cities Project



## 2. Das Projekt Young Cities - Bewilligtes Programm



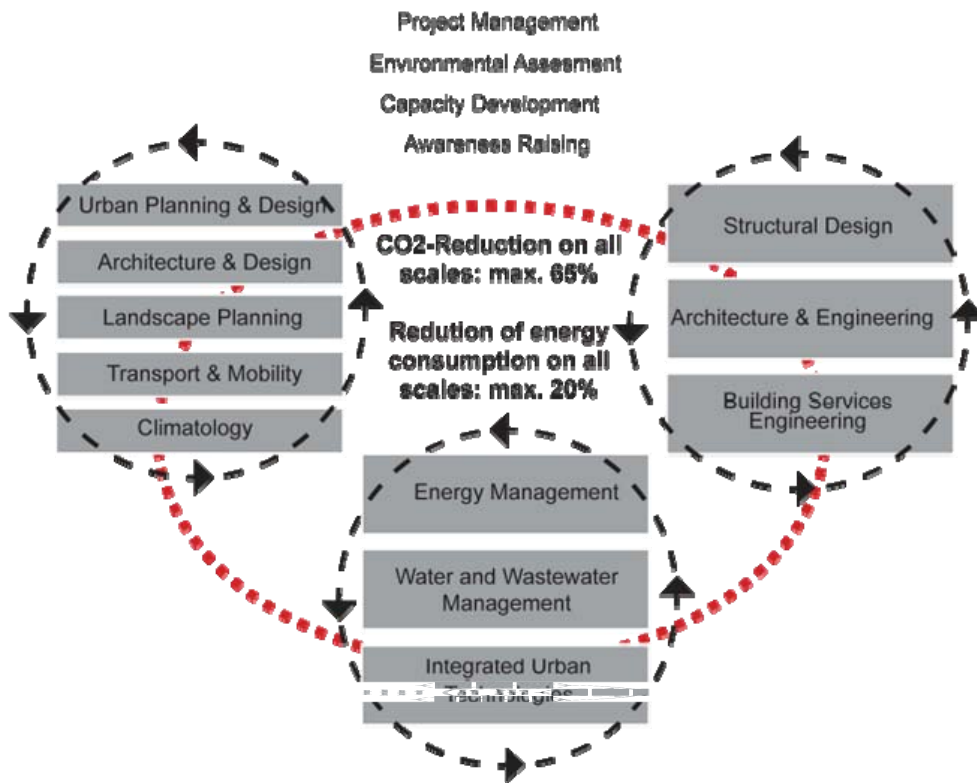
### Young Cities - Bewilligtes Programm

#### Projektziele

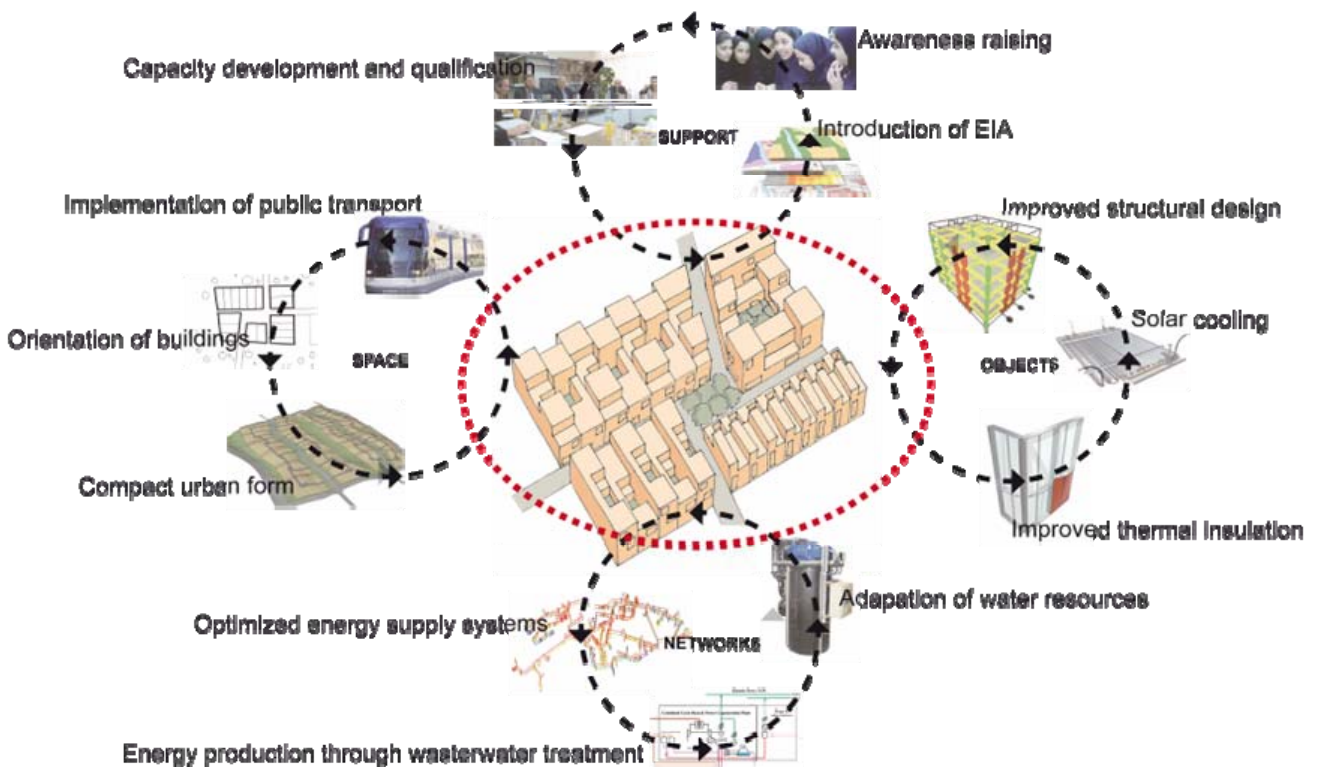
- Aim of the Main Phase: Development and implementation of building and planning schemes and technologies allowing to plan and build sustainable and energy-efficient towns & buildings ("energy-efficient urban fabric")
- Combine results, knowledge and experiences from the first Project phase with the aim of energy-efficient urban fabric
- Outcome: Technologies, Methodologies and Pilot Projects for energy-efficiency on three fields:
  - Urban Development and Design (Space),
  - Urban Infrastructure Systems (Networks), and
  - Buildings and Objects (Objects)



Wissenschaftlicher Ansatz

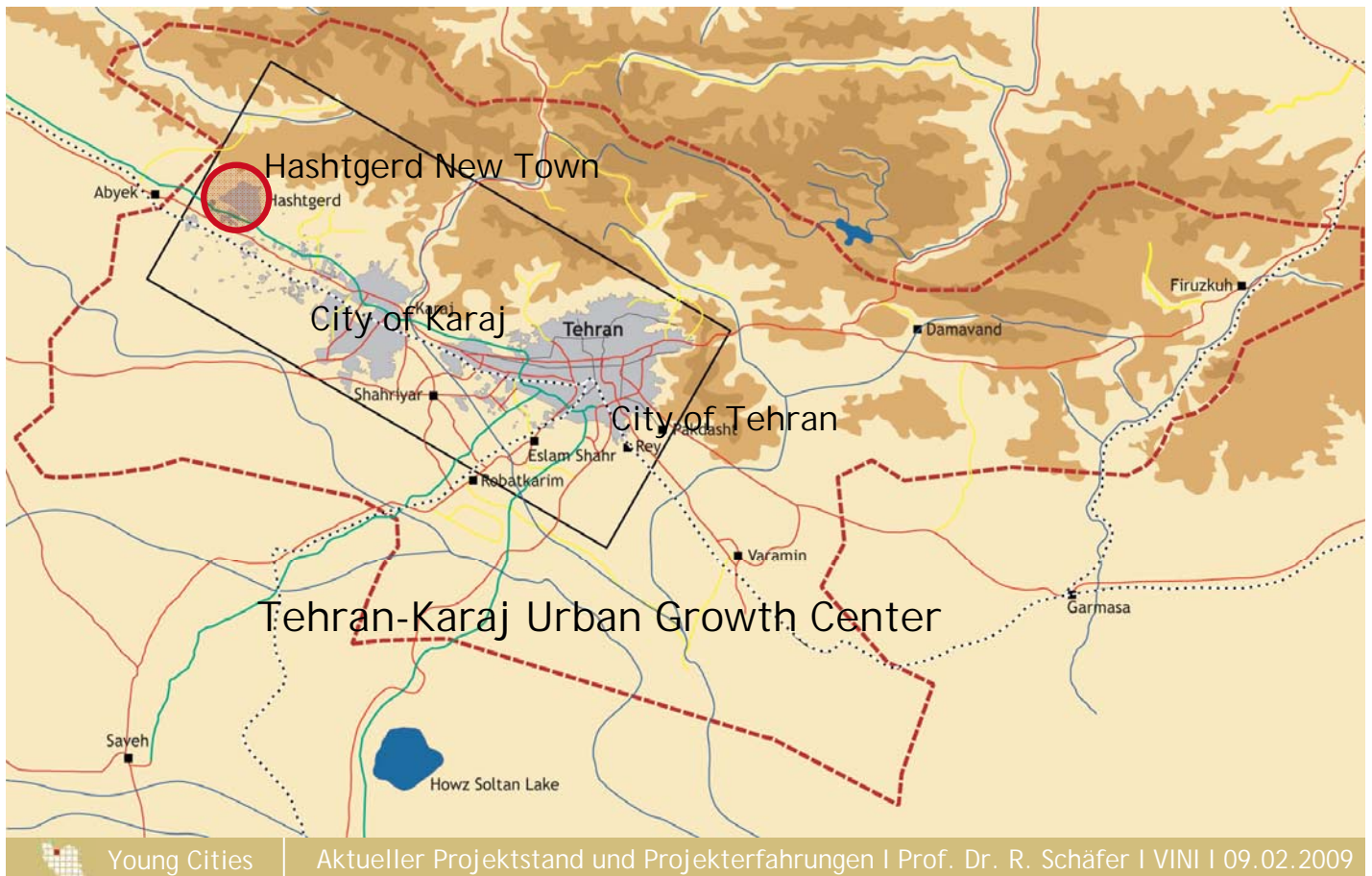


Wissenschaftlicher Ansatz und Umsetzung





## Projektgebiet



## Projektbudget und -laufzeit

- BMBF funding: 6,286,777 € for the German consortium from summer 2008 until summer 2013
- BMBF funding to be spent on:
  - Labor costs for German researchers,
  - Consumables and equipment,
  - Travel expenses for German scholars to (and in) Iran and for Iranian Project members in Germany
- BMBF mid-term evaluation in late 2010, deciding on the continuation of BMBF funding until 2013

## Projektmitglieder

The German consortium involves 12 chairs from different fields of TU Berlin, non-academic research institutions, companies and associations:

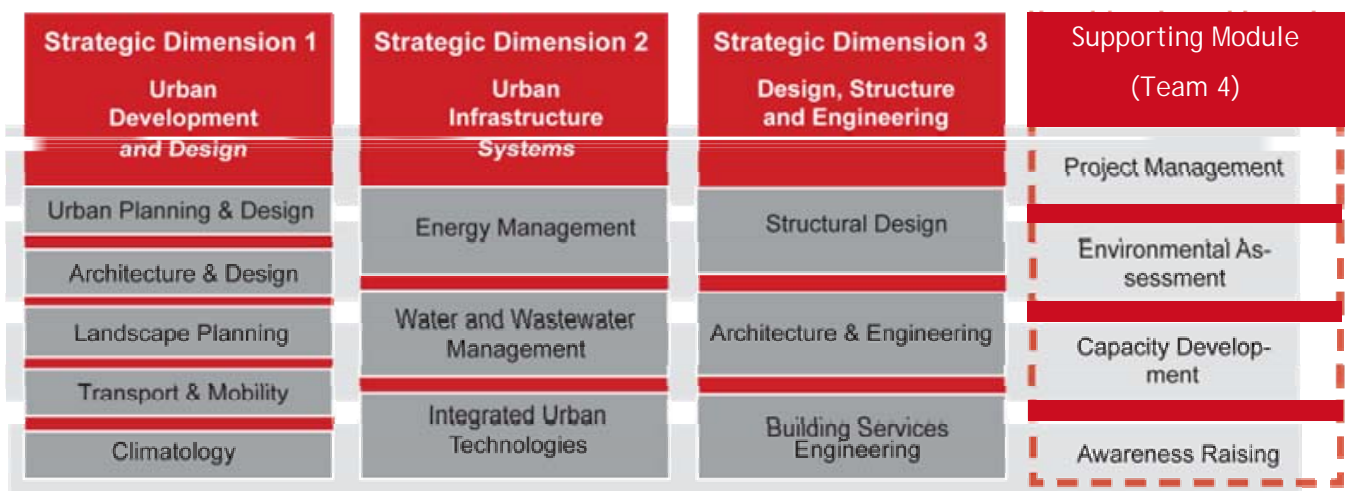


The Iranian consortium involves as main partners:

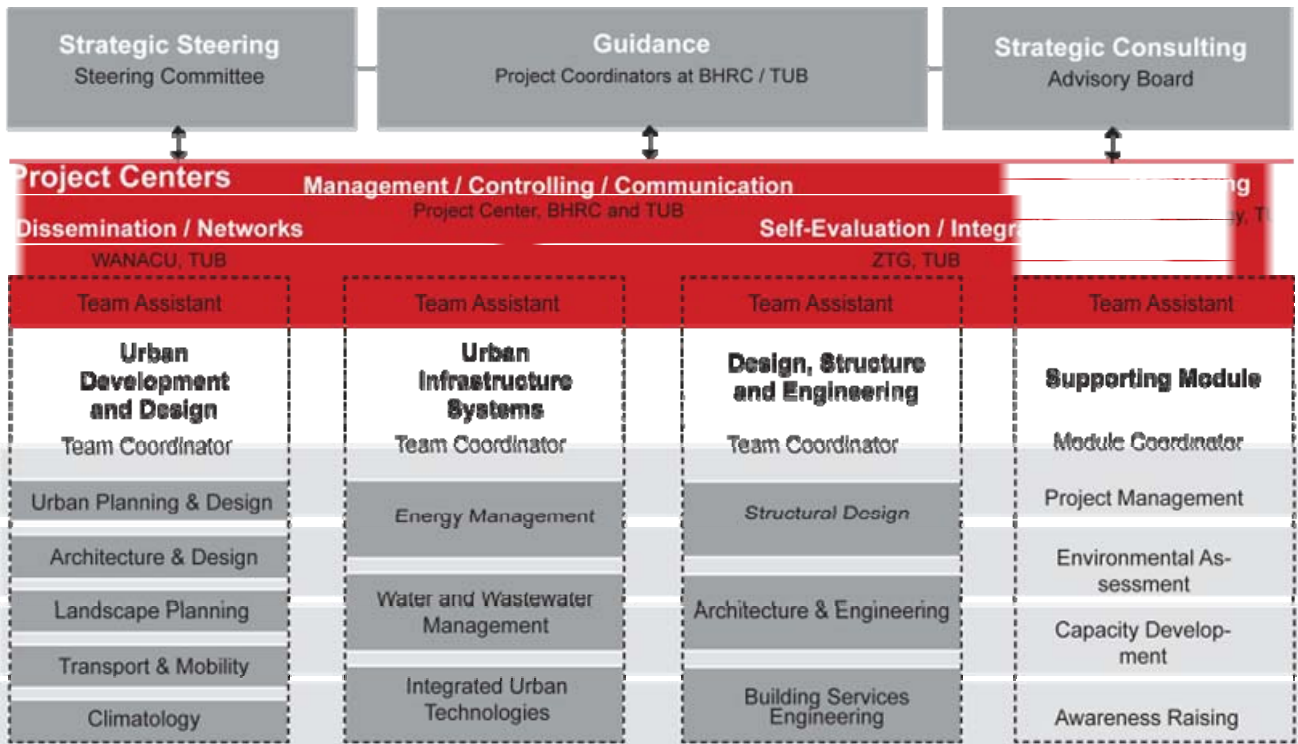
- Ministry for Housing and Urban Development
- Building and Housing Research Center
- Iranian New Towns Development Corporation



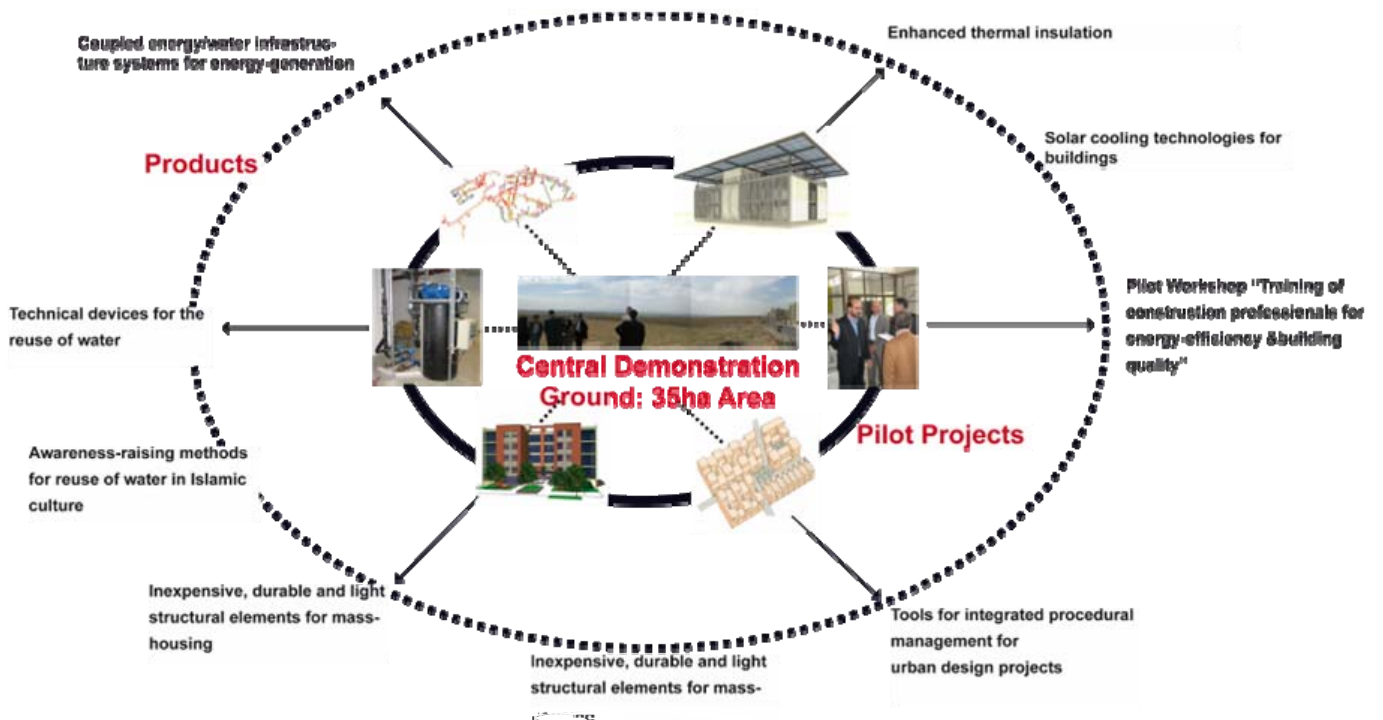
## Strategic Dimensions des Projektes (Teams)



## Projektmanagement

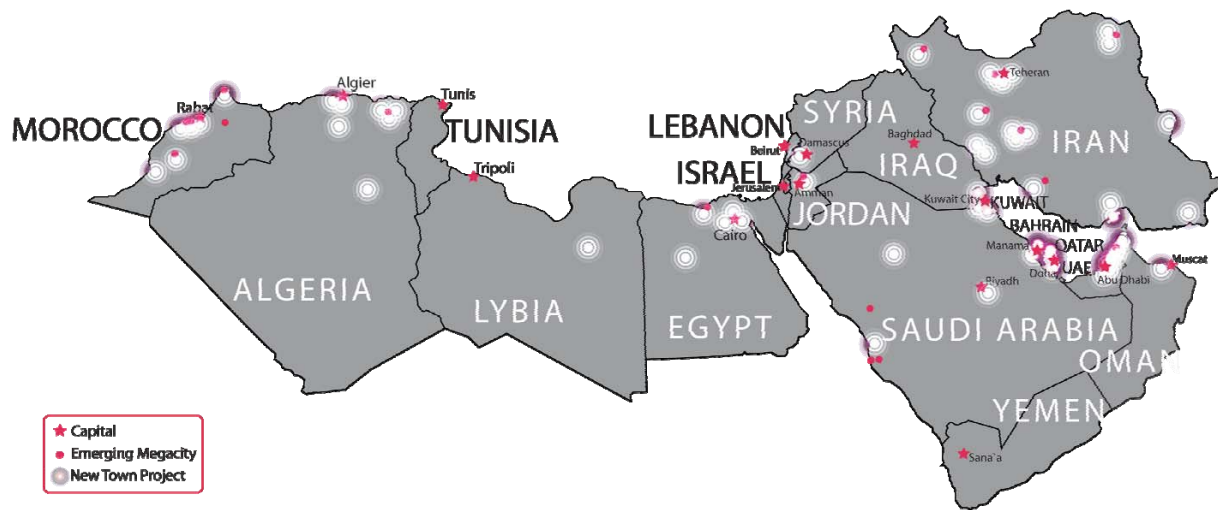


## Pilotprojekte





## Dissemination



- > Iranian Transfer: New Towns program and NTDC as reference framework
- > MENA Reference and Competence: WANACU and MENASHDA
- > Global Networking: "New Towns Research Cluster"
- > Project Cluster: „Climate-efficient spatial structures“ (China, Morocco, Vietnam)



### 3. Erste Ergebnisse in der Young Cities-Hauptphase



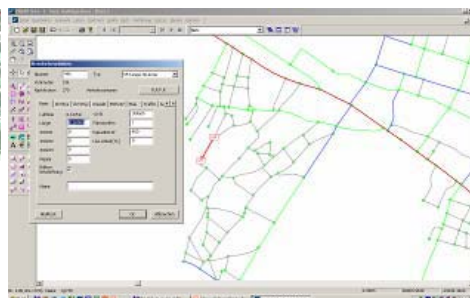
## Aktuelle Themen im Projekt

- Speeding-up of 35ha Area Pilot Project and update of work plan accordingly
- Expansion of Iranian consortium: incl. ministries, governmental agencies, construction and consulting companies, universities and NGOs (ongoing)
- Intensification of information on the Project: Newspaper articles in national and regional German papers, radio interviews with national and regional broadcasters, prospective long-term coverage by European TV channel 3sat)
- Employment of more than 15 researchers and 15 student assistants for Young Cities within the German consortium
- Establishment of the Iranian Young Cities Project Office at BHRC
- Project web GIS and Project web server for online exchange and working to be launched in February 2009 (BSCW)
- Relaunch of project website [www.youngcities.org](http://www.youngcities.org)



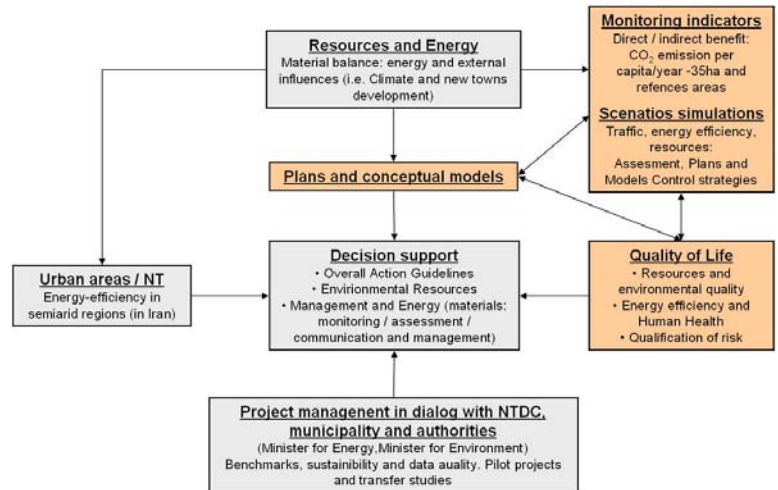
## Pilotprojekte

- 35ha Area Pilot Project in Hashtgerd New Town: Master plan in preparation incl. transport and landscape planning, EIA, energy, water and wastewater infrastructures, climatic simulation, and participation and awareness raising
- Erection of Pilot Projects from the first phase: New Quality building in Hashtgerd New Town and New Technology building in Tehran to be started
- New Generation Pilot Projects: Detailing for building and building elements, Pilot Projects include one educational, residential and office building each
- Vocational Training Pilot Projects: Detailing of case studies, workshops and Construction Training Center in Hashtgerd New Town



## Begleitende Forschungsaktivitäten and -strategien

- Accomplishment of accompanying analytical research
- Preparation for Environmental (Impact) Assessment of the Pilot Projects
- Preparation for supervision and monitoring of Pilot Project implementation
- Preparation for Capacity Development through training and "co-planning"
- Preparation for Awareness Raising targeted at certain stakeholder and groups
- Preparation for dissemination in the MENA Region (e.g. through MENASHDA)
- Preparation for an indicator-based evaluation strategy of the results and possible effects of the Young Cities Project



## Projektkommunikation und -tools

- Hashtgerd Web GIS ([click for start of online version](#))

### Hashtgerd

**Konstruktion**

- Masterplan Blatt
- Masterplan Netz (500m)

**Verkehr**

- mpe\_ai2shp\_line

**Flächennutzung: Nutzung**

< all other values >

NUTZUNG

- Grünflächen
- Behoerde-Militaer-Polizei
- Grundschule
- Handel-Behoerde
- Kindergaerten
- Kultur
- Mittelschule
- Oberstufe
- Speicher/reservierte Flaechе
- Sportflaechе
- Werkstaett
- Wohnflaechе mit einer geringen Dichte von 80%
- Wohnflaechе mit einer hohen Dichte von 240%
- Wohnflaechе mit einer mittleren Dichte von 160%
- Wohnstraesse

Maßstab 1: 16472 OK

Zoomen auf ...

**Flächennutzung: Nutzung**

CODE 2

NUTZUNG: Wohnflaechе mit einer mittleren Dichte von 160%

Autor: Wolfgang Straub  
Firma: TUB  
E-Mail: wolfgang.straub@tu-berlin.de  
Datum: 05. Dezember 2008  
Projektion: WGS 1984 UTM Zone 39N  
Test



## Projektinformation

- Project website [www.youngcities.org](http://www.youngcities.org)



## Anstehende Aktivitäten

- Feldstudien, Befragungen, Konzeptgespräche, Baustellenaufnahmen, Expertengespräche etc. im Iran in den kommenden Monaten in Teams 2 (v.a. Wasser- und Abwassermanagement) und 4 (Berufsbildung, Partizipation, Umweltprüfung etc.)
- Fertigstellung und Genehmigung des städtebaulichen Planes für 35 ha-Pilotprojekt bis Ende April 2009
- Detaildefinition des Forschungs- und Planungsprogramms der New Generation-Pilotprojekte (Vocational Training Center, Büro-, Wohngebäude)
- Umsetzung, Training, Supervision, Monitoring und Evaluation der Pilotprojekt-gebäude New Quality und New Technology
- Nächster bilateraler Workshop Anfang Mai 2009 im Iran
- Statusseminar mit Project Advisory Board in Berlin im Mai/Juni 2009
- Nächster bilateraler Workshop in Deutschland im Oktober 2009



## 4. Einladung zur Zusammenarbeit an VINI



### Zusammenarbeit Young Cities - VINI

#### Kurzfristige Möglichkeiten der Zusammenarbeit

- Bedarfe aus dem Projekt Young Cities:
  - Fachgespräche zwischen einzelnen VINI-Mitgliedern und Fachexperten aus dem Projekt zu bestimmten Themen (z.B. Bau-Berufsbildung, Zertifizierung, Immobilienmarkt, Umweltprüfung, Partizipation etc.)
  - Information über VINI-Medien über Projekt und bestimmte Projektanliegen (Stellen-/Stipendienausschreibungen etc.)
  - Vermittlung und Vorauswahl von Promotionsinteressenten etc.
- Möglichkeiten des Projektes Young Cities:
  - Regelmäßige gegenseitige Information über VINI- und Projekt-Aktivitäten
  - Gegenseitige Öffnung von Kontakten und Zugang zu Partnern im Iran und international
  - Praktikumsmöglichkeiten für (studentische) VINI-Mitglieder bei Projektpartnern in Berlin und im Iran
  - Gemeinsame Mitteleinwerbung für gemeinsame Aktivitäten
  - Gegenseitige Mitwirkung an Konferenzen etc. (z.B. ähnliche Veranstaltungen wie 2. Konferenz Energieversorgung und Klimawandel am 15.5.2009)





## Längerfristige Möglichkeiten der Zusammenarbeit

- Hashtgerd Planning and Building Exhibition -  
Center of Competence for Sustainable New Town Development
- Vision: Hashtgerd New Town planning and construction as a long-term  
Planning and Building Exhibition
- Rich experience with Berlin region building exhibitions:  
1957 Interbau Berlin  
1978-1987 International Building Exhibition IBA Berlin  
2000-2010 IBA Fürst-Pückler-Land Lusatia (southeast of Berlin)
- New Towns as a place of innovation in science and technology oriented  
industries: Technology park
- Experience of TU Berlin involvement as partner in development of technology  
parks (Technologie- und Innovationszentrum Berlin TIB)



## Längerfristige Möglichkeiten der Zusammenarbeit

- Elements of the Hashtgerd Planning and Building Exhibition:
  - Building AND Planning
  - Commitment to Sustainability
  - Process Character
  - Presentation of Pilot Projects
  - Realisation of Experiments
  - Documentation of Experiences and Results
  - Forum for Discussion and Transfer of Experiences
  - Training of Professionals
  - International Character
- Where Lessons Can Be Learnt:
  - IBA Interbau Berlin 1957
  - IBA Berlin 1978-1987
  - IBA Emscherpark 1991-2001
  - National Garden Exhibitions in Germany (every second year, latest in  
Munich, Rostock, Gelsenkirchen, Potsdam, Magdeburg, Stuttgart)



Vielen Dank !

