

## Creativity in School Building Design

Alberto Treves, Design Section Manager

**Abu Dhabi Education Council, Education First**  
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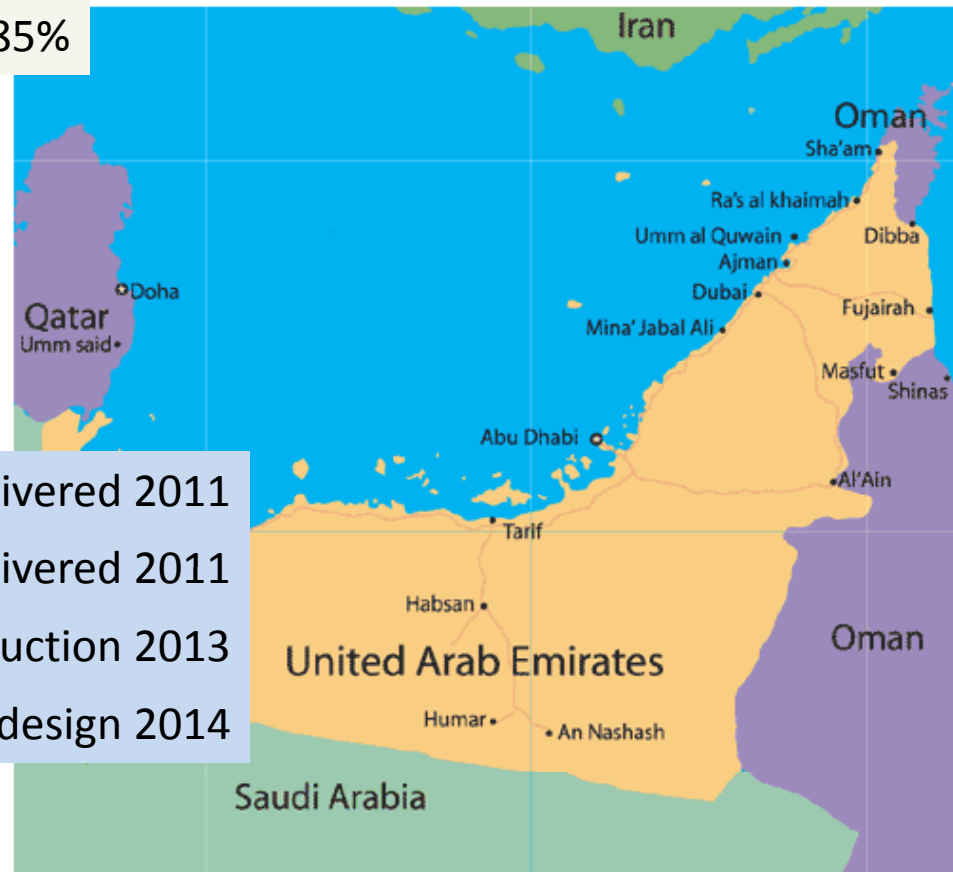
- 1- Work context
- 2- Methodology
- 3- Achievements

## 1- Work context: Geography, statistics

UAE Population	8,200,000
UAE Nationals	1,000,000
Area in km <sup>2</sup>	73,300
Urban population	85%

### Working team:

- 6 architects
- 1 interior designer
- 3 project managers
- Technical disciplines
- Support staff



Phase I	18 Schools	Delivered 2011
Phase II	7 Kinder	Delivered 2011
Phase III	15 Schools	Under construction 2013
Phase IV	10 Schools	In design 2014

## 1- Work context: Old Abu Dhabi, 1960



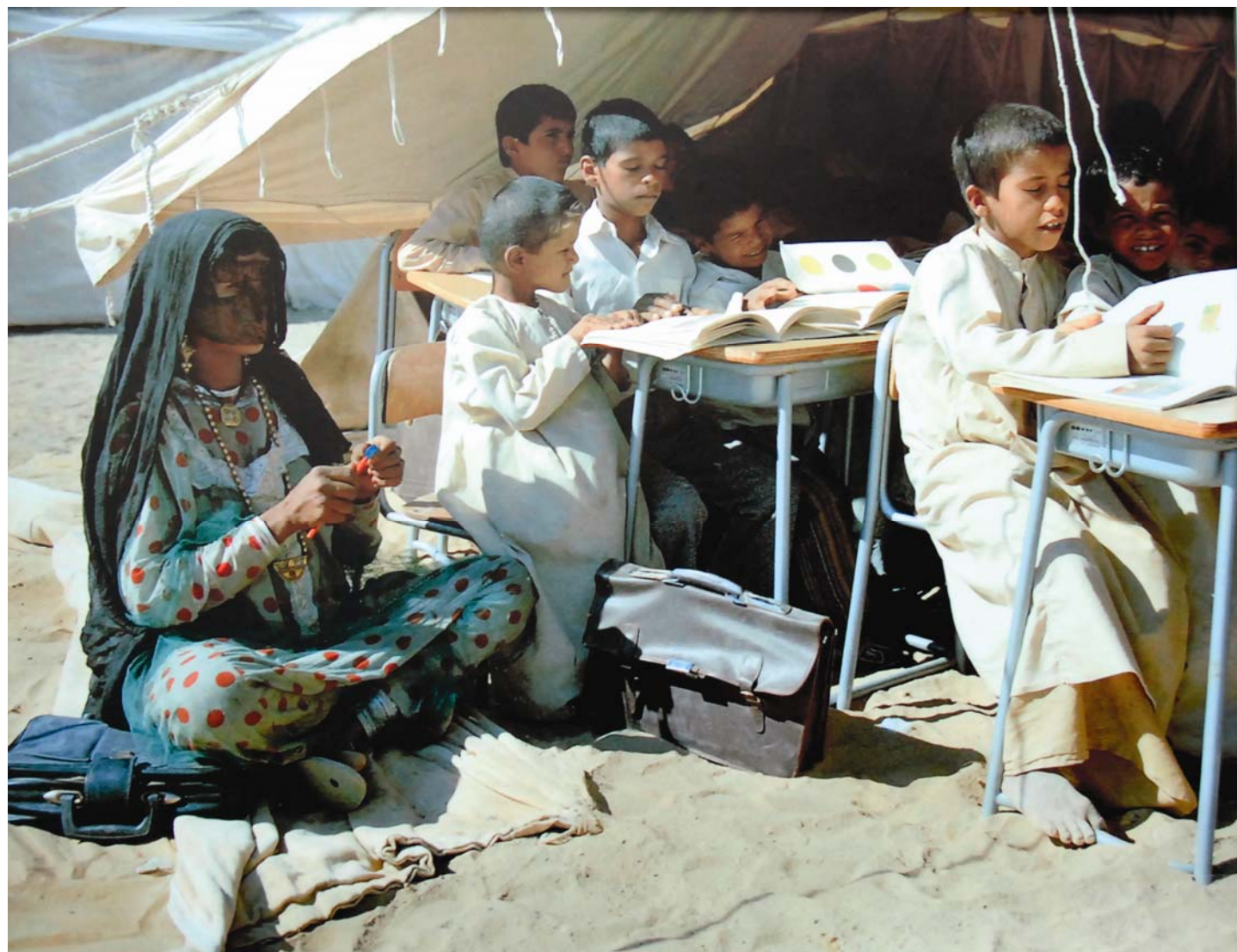


## 1- Work context: Old Abu Dhabi, school 1960





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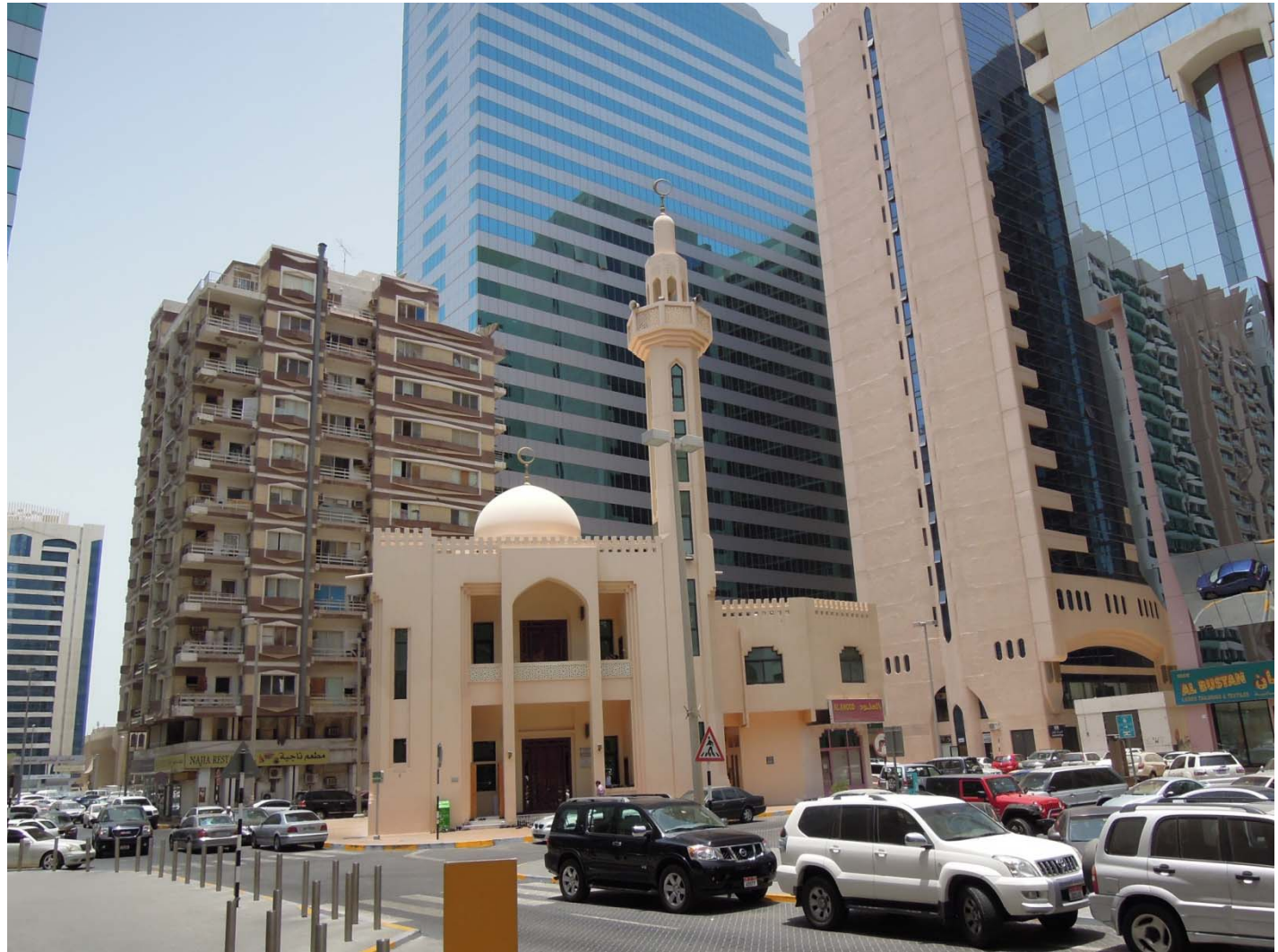




## 1- Work context: The new Abu Dhabi, 2007



## 1- Work context: the new Abu Dhabi, 2012



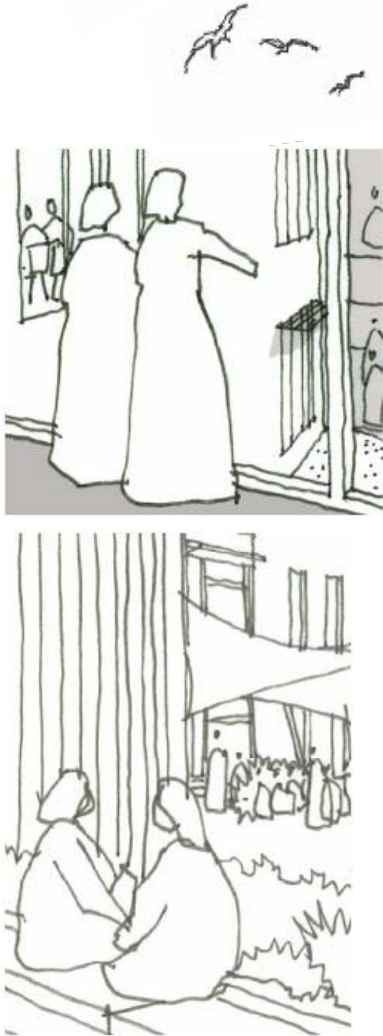


## 1- Work contex: unattractive school entrance

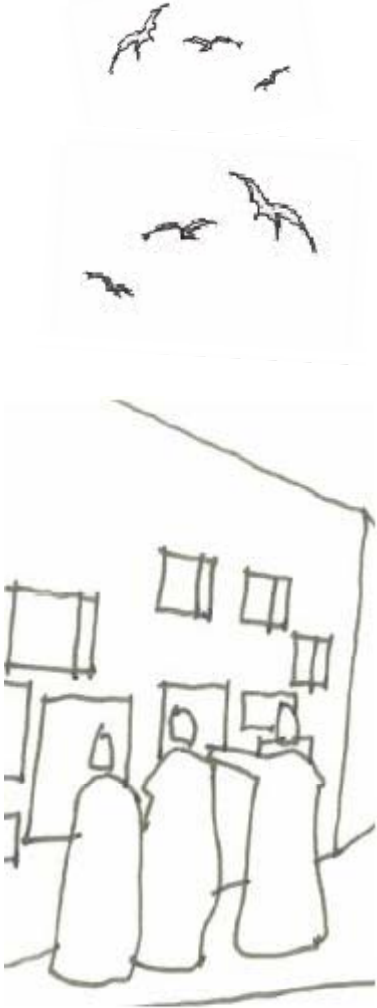




## 1- Work context: Long corridors organizing classrooms

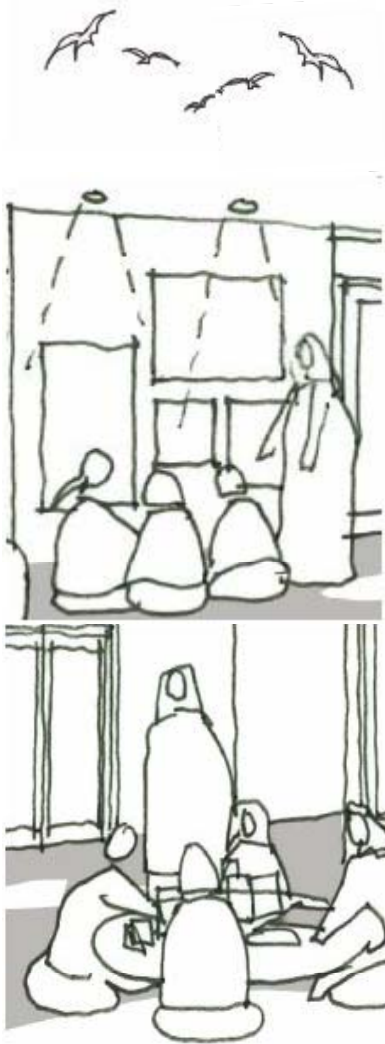


## 1- Work context: Un-interestig spaces





## 1- Work context: Overcrowding, obsolescence, inefficiency



## 2- Methodology: Starting points, initial decisions

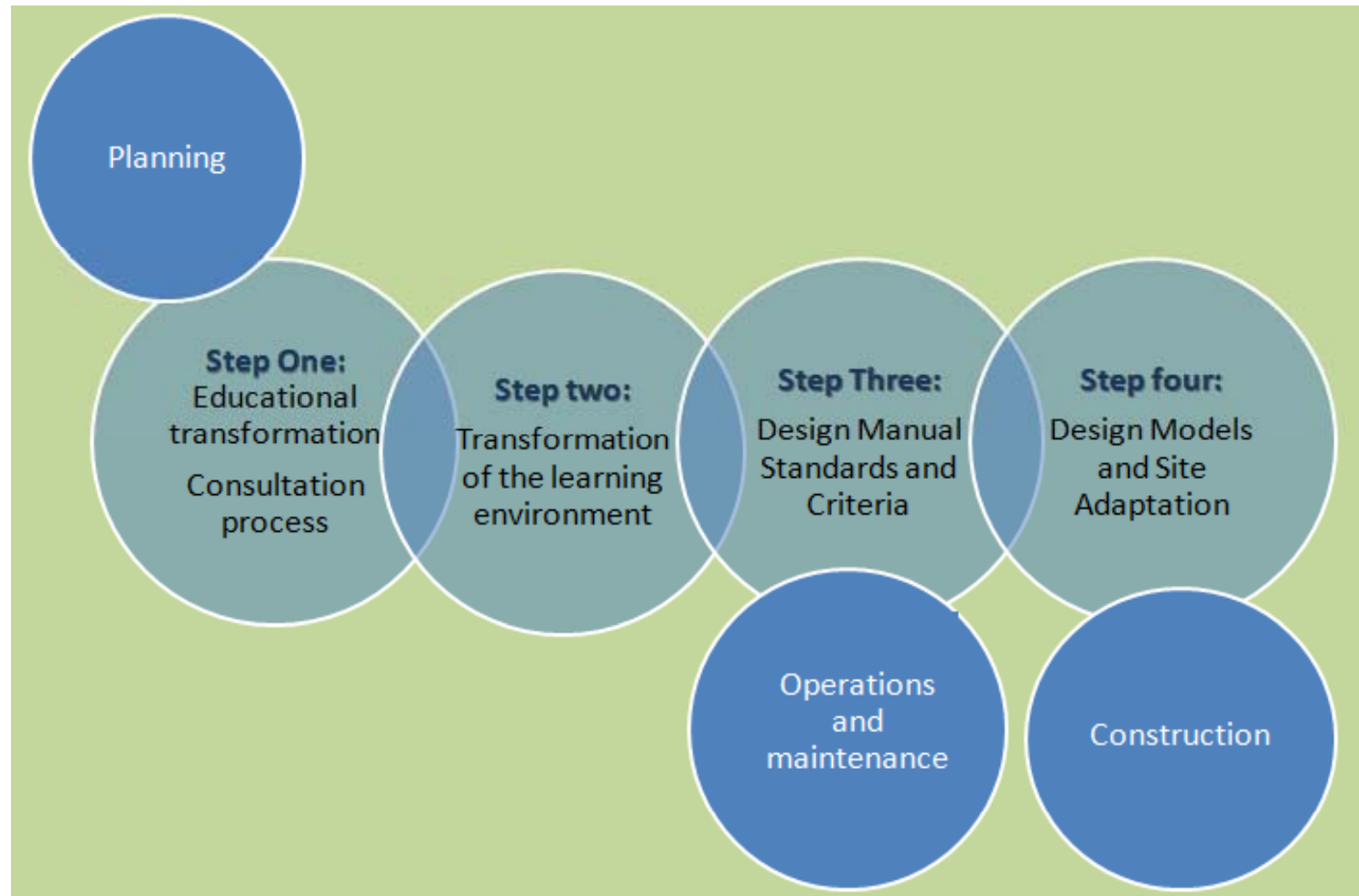
- The spaces we create, condition individuals and support activities
- We can't be indifferent to what we see
- The quality of space influences educational outcomes
- Educational planning and physical planning should happen together
- Transformation should deep, quick, and bold
- Architecture should sustainable



## 2- Methodology: Starting points, initial decisions

- The student is the center of the educational process
- Provide multiple opportunities of learning
- Make intense use of educational technology
- Integrate school and community activities
- Establish and follow a design method

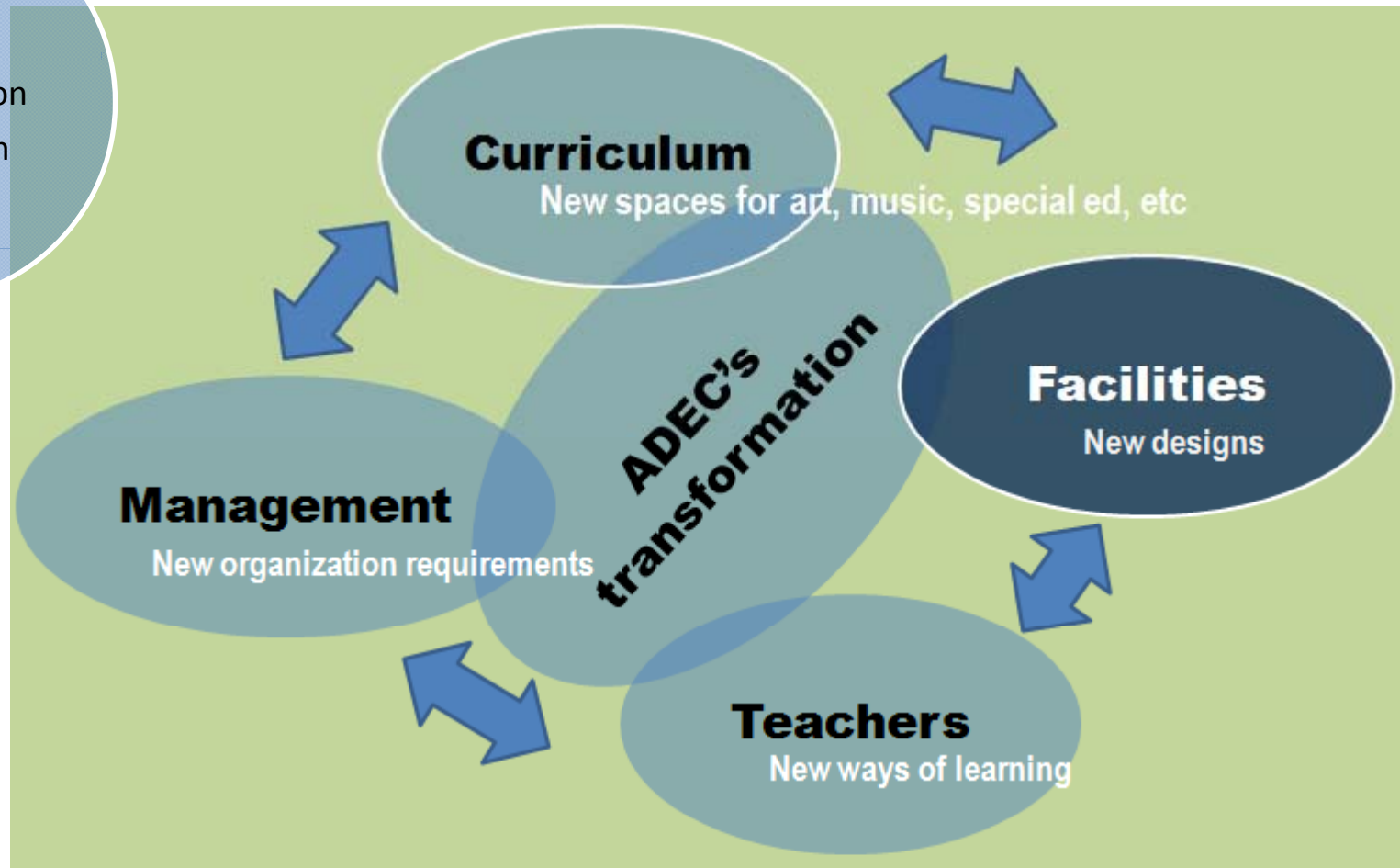
## 2- Methodology: Four steps design process





## 2- Methodology: Educational transformation

**Step One:**  
 Educational transformation  
 Consultation process



## 2- Methodology: Consultation process

**Step One:**  
 Educational  
 transformation  
 Consultation  
 process



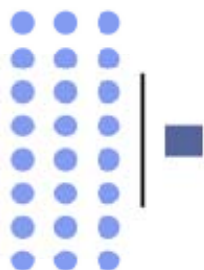
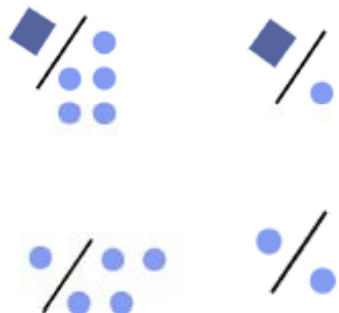
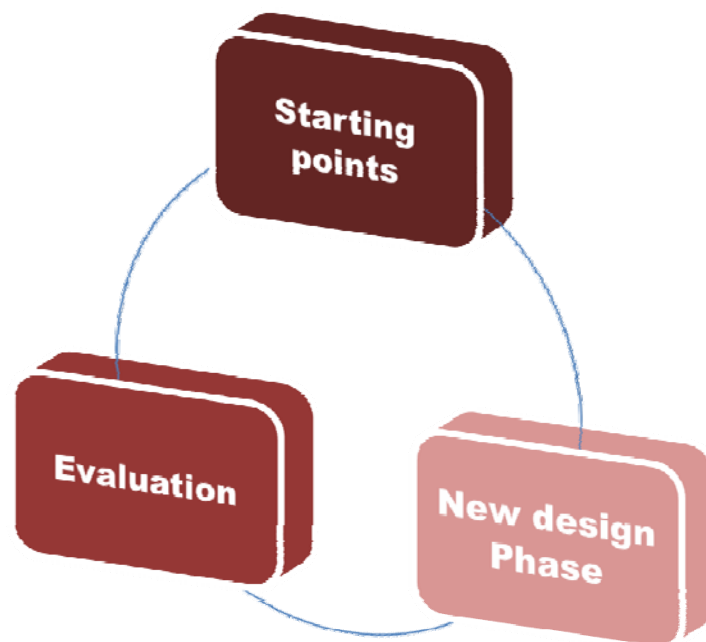
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## 2- Methodology: Learning environment transformation

**Step two:**  
 Learning  
 environment  
 transformation



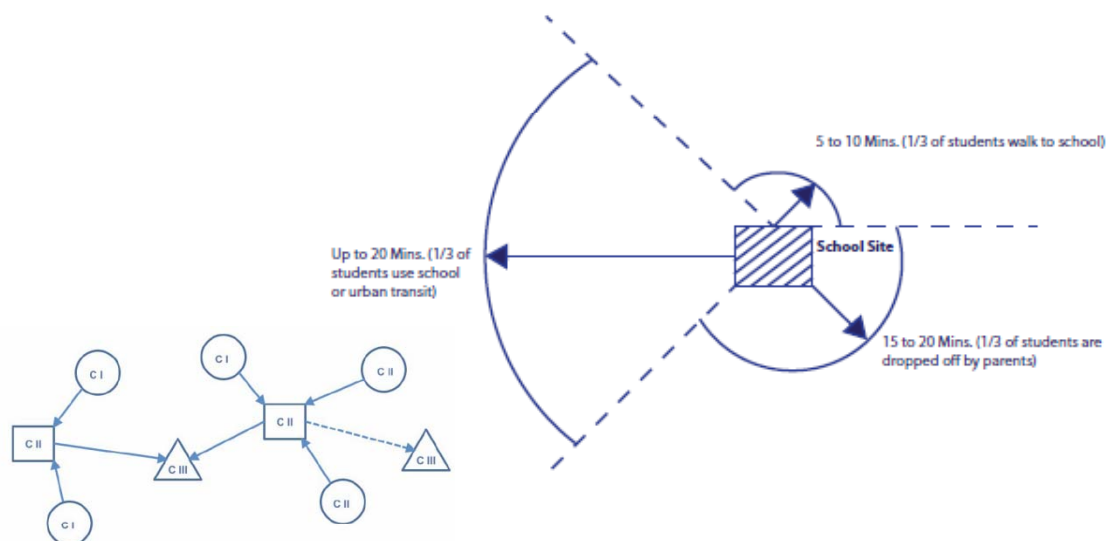
### 3- Methodology : Design Manual

## School Area of Influence

#### Step Three:

Design Manual  
Standards and  
Criteria

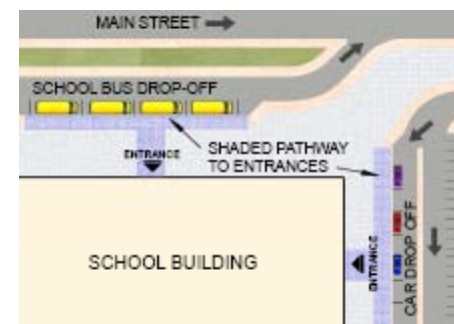
School Sites



School Type and Size

Parking and Drop Off

Cycle	Cycle I		Cycle I + KG		Cycle II and III	
Kindergarten			240	320		
Number of students	625	1250	865	1570	875	1225
Gross area	9,900	18,000	12,500	22,600	14,300	18,200
Site area	20,400	30,400	23,800	36,000	23,800	30,400
Minimum site dimensions	170 x 120	190 x 160	170 x 140	200 x 180	170 x 140	190 x 160



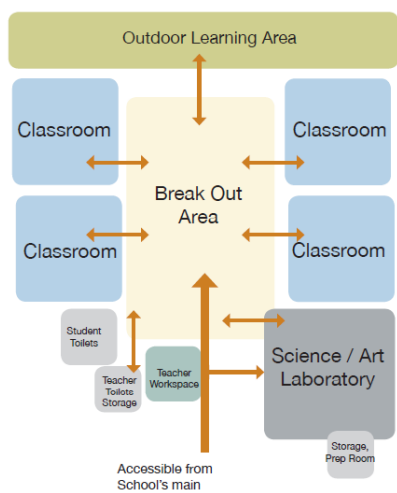


### 3- Methodology : Design Manual

#### Step Three: Design Manual Standards and Criteria



## School Design



## Educational Program Analysis

$$\text{Number of specialized rooms} = \frac{\text{Number of periods per week taught in that room.} \times \text{Number of groups/sections taking that class}}{\text{Number of periods per week that the room is available.} \times \text{Utilization Factor}}$$

#### Learning Community; Functional Requirments

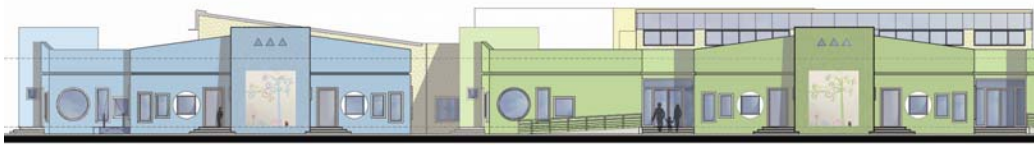
Function	Teaching/ learning employs multiple modes of learning.
	4 or 5 Classrooms + 1 Science/ Art Lab in Cycle I and 1 Science Lab in Cycle II and III per Learning Community.
	Teacher stations in Teacher Workspace inside Learning Community
	Students, Teachers work in varied-size groups and spaces for varied periods of time each day. 1 Teacher + 1 Aide per Instructional Space.

#### Learning Community; Interior Standards

Floors	Non-slip PVC or Linoleum resilient flooring. Area rugs in KG
Walls	Block with non-toxic/low VOC plaster, paint with tack board on two walls. Opaque operable walls to be vinyl. Double pane, transparent glass operable walls with metal frames in certain options.
Ceilings	Prefer no drop ceiling. Acoustic ceiling, 3m in height, minimum. Indirect lighting.

### 3- Methodology : Design Models, site adaptation - KG

**Step four:**  
 Design Models  
 and Site  
 Adaptation





### 3- Methodology : Design Models, site adaptation – C I

## Step four: Design Models and Site Adaptation





### 3- Methodology : Design Models, site adaptation – C II, III

**Step four:**  
Design Models  
and Site  
Adaptation



### 3- Achievements: Integration to urban network





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### 3- Achievements: Cultural integration





### 3- Achievements: Cultural integration



### 3- Achievements: Shaded intermediary spaces







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### 3- Achievements: Shaded intermediary spaces



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### 3- Achievements: : Attractive colors







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### 3- Achievements: Incorporation of art



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### 3- Achievements: Incorporation of art





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### 3- Achievements: Incorporation of art







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### 3- Achievements: Relevance of main entrance



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### 3- Achievements: Concept of learning community



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### 3- Achievements: Concept of learning community





### 3- Achievements: Classroom and outside learning



### 3- Achievements: Classroom and outside learning





### 3- Achievements: Sustainability





### 3- Achievements: Relationship with nature





### 3- Achievements: School use after hours

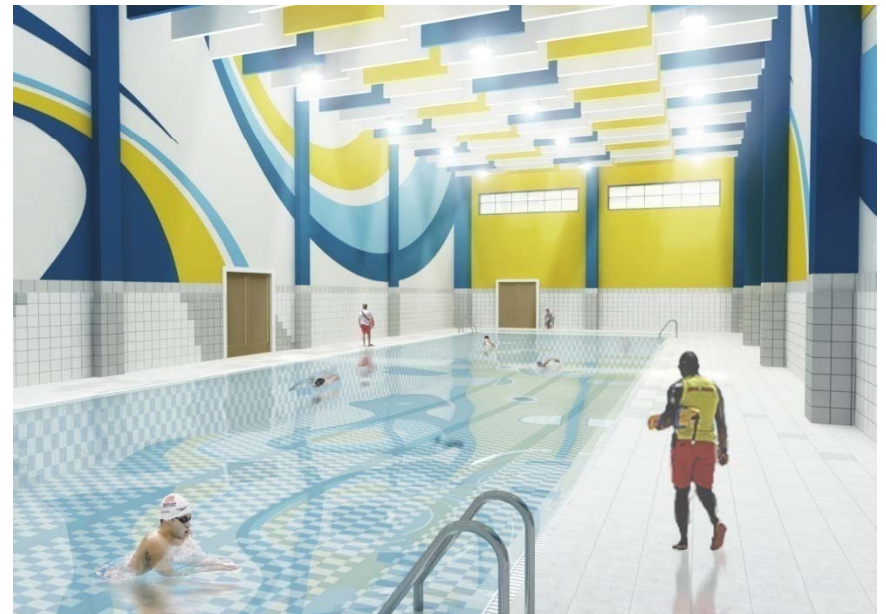


### 3- Achievements: School use after hours





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- **Think big**
- **Create alliances**
- **Act fast**



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**Thank you  
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