Design Principles and Practices

July 2014
Berlin, Germany
Lecturers

Madeleine Gravell, CRX, CDP
GRAMACO
Stockholm, Sweden
Agenda

- Shopping Environments – History, Types, Planning and Design
- Role and Responsibility of Designer / Architect
- Design Phases and Deliverables
- Design Guidelines
- Shopping Centers Design Trends
Shopping Environments

History, Types, Planning and Design
Santorini
2000 B.C.
Harbour of Pompeii
200 B.C.
Ostia
200 B.C.
Ostia
200 B.C.
Trajan`s market
100-110 A.D.
Trajan's market
100-110 A.D.
Medieval local market
Trade face to face
Hansa trade harbour, 1486.
Isfahan, 1585.
Bazaar in Goa, 1595.
Holland, ~1600.
China, 17th century
Gloucestershire's Marketplace, 1627.
Fairs, St Germaine, 1650.
Spice shop,
Holland 1717.
Burlington Arcade, 1818. (photo 1905.)
St Johns Market,
Liverpool 1822.
The Queen's Bazaar, London 1833.
Les Halles, Paris 1840.
Constantinople, 15th century
Crystal Palace
London, 1851.
Au Bon Marché
Paris, 1852-54.
Department stores
NY, 1858-1900.
Escalators, 1859.
Galleria Vittorio Emanuele
Milan, 1865-67.
Les Grand Magasins
Paris, 1875.
Le Prinstemps Paris
Harrods escalator, 1898.
Boots, 1903-04.
Marks & Spencer, 1906.
Marshall Fields
Chicago, 1902.
Department stores in London, 1914.
Boots, 1915.
Lake Forest, 1916.
Lake Forest, 1916.
Lake Forest, 1916.
Piggly Wiggly 1918
Marks & Spencer
1922
Country Club Plaza
Kansas City 1923
DH Evans
London, 1934-37
Vienna, 1930
Seattle 1941
Seattle 1943
Los Angeles
1948
European Retail Property School

Los Angeles
1948
Northland Shopping Center
Michigan, 1951
Northland Shopping Center
Michigan, 1951
Southdale
Minneapolis, 1956
Southdale
Minneapolis, 1956
Southdale
Minneapolis, 1956
Southdale
Minneapolis, 1956
Southdale
Minneapolis, 1956
Victor Gruen 1959
European Retail Property School

The New Yorker  June 9, 1997
## Types of Shopping Centers

<table>
<thead>
<tr>
<th>Format</th>
<th>Type of Scheme</th>
<th>Gross Leasable Area (GLA)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Traditional</strong></td>
<td>Very Large</td>
<td>80,000 m² and above</td>
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<tr>
<td></td>
<td>Large</td>
<td>40,000 – 79,999 m²</td>
</tr>
<tr>
<td></td>
<td>Medium</td>
<td>20,000 – 39,999 m²</td>
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<tr>
<td></td>
<td>Small</td>
<td>Comparison-Based</td>
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<tr>
<td></td>
<td></td>
<td>Convenience-Based</td>
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<tr>
<td></td>
<td></td>
<td>5,000 – 19,999 m²</td>
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<tr>
<td></td>
<td></td>
<td>5,000 – 19,999 m²</td>
</tr>
<tr>
<td><strong>Specialized</strong></td>
<td>Retail Park</td>
<td>20,000 m² and above</td>
</tr>
<tr>
<td></td>
<td>Large</td>
<td>10,000 – 19,999 m²</td>
</tr>
<tr>
<td></td>
<td>Medium</td>
<td>5,000 – 9,999 m²</td>
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<tr>
<td></td>
<td>Small</td>
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<tr>
<td></td>
<td>Factory Outlet Center</td>
<td>5,000 m² and above</td>
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<tr>
<td></td>
<td>Theme-Oriented Center</td>
<td>Leisure-Based</td>
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<td>Non-Leisure-Based</td>
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<tr>
<td></td>
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<td>5,000 m² and above</td>
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<tr>
<td></td>
<td></td>
<td>5,000 m² and above</td>
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</table>
Types of Shopping Centers

A mixed-use development is a real estate project with planned integration of some combination of retail, office, residential, hotel, recreation or other functions. It is pedestrian-oriented and contains elements of a live-work-play environment. It maximizes space usage, has amenities and architectural expression and tends to mitigate traffic and sprawl.
## U.S. Shopping-Center Classification and Characteristics

<table>
<thead>
<tr>
<th>Type of Shopping Center</th>
<th>Count</th>
<th>Aggregate GLA (sq. ft.)</th>
<th>% Share of Industry GLA</th>
<th>Average Size (sq. ft.)</th>
<th>Typical GLA Range [sq. ft.]</th>
<th># of Anchors</th>
<th>% Anchor GLA</th>
<th># of Tenants</th>
<th>Typical Type of Anchors</th>
<th>Trade Area Size</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General-Purpose Centers</strong></td>
<td>110,353</td>
<td>842,592,069</td>
<td>12.3%</td>
<td>1,226,479</td>
<td>800,000+ to 1,200,000</td>
<td>3+</td>
<td>50-70%</td>
<td>NA</td>
<td>Full-line or junior department store, mass merchant, discount department store and/or fashion apparel store.</td>
<td>5-25 miles</td>
</tr>
<tr>
<td>Super-Regional Mall</td>
<td>667</td>
<td>485,962,137</td>
<td>6.5%</td>
<td>586,911</td>
<td>400,000+ to 600,000</td>
<td>2+</td>
<td>50-70%</td>
<td>40-80 stores</td>
<td>Full-line or junior department store, mass merchant, discount department store and/or fashion apparel store.</td>
<td>5-15 miles</td>
</tr>
<tr>
<td>Regional Mall</td>
<td>828</td>
<td>3,894,067,210</td>
<td>34.3%</td>
<td>1,233,310</td>
<td>125,000+ to 400,000</td>
<td>2+</td>
<td>50-70%</td>
<td>15-40 stores</td>
<td>Discount store, supermarket, drug, large-specialty discount (toys, books, electronics, home improvement/furnishings or sporting goods, etc.)</td>
<td>3-6 miles</td>
</tr>
<tr>
<td>Community Center</td>
<td>3,740</td>
<td>2,325,911,410</td>
<td>31.1%</td>
<td>72,021</td>
<td>30,000 to 50,000</td>
<td>1+</td>
<td>30-50%</td>
<td>5-20 stores</td>
<td>Supermarket</td>
<td>3 miles</td>
</tr>
<tr>
<td>Neighborhood Center</td>
<td>32,295</td>
<td>894,687,318</td>
<td>12.0%</td>
<td>13,349</td>
<td>&lt;30,000</td>
<td>3+</td>
<td>Anchor less than a small convenience store anchor.</td>
<td>NA</td>
<td>NA</td>
<td>Convenience store, such as a mini-mart.</td>
</tr>
<tr>
<td>Strip/Convenience</td>
<td>67,035</td>
<td>2,325,911,410</td>
<td>31.1%</td>
<td>72,021</td>
<td>30,000 to 50,000</td>
<td>1+</td>
<td>30-50%</td>
<td>5-20 stores</td>
<td>Supermarket</td>
<td>3 miles</td>
</tr>
<tr>
<td><strong>Specialized-Purpose Centers</strong></td>
<td>2,369</td>
<td>839,561,057</td>
<td>11.2%</td>
<td>411,550</td>
<td>230,000+ to 400,000</td>
<td>3+</td>
<td>70-90%</td>
<td>NA</td>
<td>Category killers, such as home improvement, discount department, electronics and off-price stores</td>
<td>5-10 miles</td>
</tr>
<tr>
<td>Power Center</td>
<td>2,040</td>
<td>127,605,868</td>
<td>1.7%</td>
<td>319,015</td>
<td>150,000 to 350,000</td>
<td>2+</td>
<td>50-70%</td>
<td>NA</td>
<td>Large format upscale specialty</td>
<td>8-12 miles</td>
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<tr>
<td>Lifestyle</td>
<td>400</td>
<td>75,003,550</td>
<td>4.0%</td>
<td>218,034</td>
<td>50,000 to 100,000</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>Manufacturers’ and retailers’ outlets</td>
<td>25-75 miles</td>
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<tr>
<td>Factory Outlet</td>
<td>344</td>
<td>26,157,926</td>
<td>0.3%</td>
<td>141,610</td>
<td>100,000 to 250,000</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>Restaurants, entertainment</td>
<td>25-75 miles</td>
</tr>
<tr>
<td>Theme/Festival</td>
<td>185</td>
<td>3,509,424</td>
<td>0.0%</td>
<td>1108,164</td>
<td>75,000 to 300,000</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>No anchors; retail includes specialty retail and restaurants</td>
<td>NA</td>
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<tr>
<td><strong>Limited-Purpose Property</strong></td>
<td>33</td>
<td>3,485,756,976</td>
<td>100.0%</td>
<td>66,038</td>
<td>1,108,164</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
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<tr>
<td><strong>Total Industry</strong></td>
<td>113,355</td>
<td>7,485,756,976</td>
<td>100.0%</td>
<td>66,038</td>
<td>1,108,164</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
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Sources: Appraisal Institute, CoStar Realty Information, Inc. (www.costar.com) and the International Council of Shopping Centers.
<table>
<thead>
<tr>
<th>Neighborhood</th>
<th>Malaysia</th>
<th>Thailand</th>
<th>Singapore</th>
<th>Indonesia</th>
<th>Australia</th>
<th>US</th>
<th>Asia Pacific (hypothetical)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size (sf)</td>
<td>up to 200,000</td>
<td>50,000-100,000</td>
<td>up to 200,000</td>
<td>up to 300,000</td>
<td>up to 100,000</td>
<td>30,000-150,000</td>
<td>&lt;200,000</td>
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<tr>
<td>No. of anchors</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1-2</td>
</tr>
<tr>
<td>Type of anchors</td>
<td>supermarket, (delete dept store 10 mins drive time)</td>
<td>supermarket</td>
<td>supermarket</td>
<td>supermarket</td>
<td>supermarket</td>
<td>supermarket</td>
<td>supermarket</td>
</tr>
<tr>
<td>Primary trade area</td>
<td>&lt;5 kms</td>
<td>3-5 miles</td>
<td>&lt;5 miles</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(normally department store operator)</td>
<td></td>
<td>not defined</td>
<td></td>
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<table>
<thead>
<tr>
<th>Community (or sub regional)</th>
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<th>Thailand</th>
<th>Singapore</th>
<th>Indonesia</th>
<th>Australia</th>
<th>US</th>
<th>Asia Pacific (hypothetical)</th>
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<tbody>
<tr>
<td>Size (sf)</td>
<td>200,000-400,000</td>
<td>400,000-500,000</td>
<td>200,000-400,000</td>
<td>100,000-400,000</td>
<td>100,000-350,000</td>
<td>200,000-400,000</td>
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<tr>
<td>No. of anchors</td>
<td>1+</td>
<td>supermarket, small department store / junior anchor store</td>
<td>supermarket, cineplex</td>
<td>supermarket, drug store, discount dept store</td>
<td>supermarket, drug store, discount dept store</td>
<td>supermarket, drug store, discount dept store</td>
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<td>Type of anchors</td>
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<td></td>
<td></td>
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</tr>
<tr>
<td>Primary trade area</td>
<td>15-20 mins drive time</td>
<td>up to 10 kms</td>
<td>3-6 miles</td>
<td>&lt;10 miles</td>
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<table>
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<th>Regional</th>
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<th>US</th>
<th>Asia Pacific (hypothetical)</th>
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</thead>
<tbody>
<tr>
<td>Size (sf)</td>
<td>600,000-800,000</td>
<td>500,000-800,000</td>
<td>400,000-800,000</td>
<td>600,000-800,000</td>
<td>400,000-800,000</td>
<td>400,000-800,000</td>
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<tr>
<td>No. of anchors</td>
<td>2+</td>
<td>2+</td>
<td>2+</td>
<td>2+</td>
<td>2+</td>
<td>2+</td>
<td>2+ discretionary</td>
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<tr>
<td>Type of anchors</td>
<td>supermarket, dept store, cineplex</td>
<td>supermarket, dept store, cineplex</td>
<td>hypermarket, dept store, cineplex</td>
<td>supermarket, dept store, cineplex</td>
<td>dept store, discount dept store</td>
<td>dept store</td>
<td>(e.g. depart store)</td>
</tr>
<tr>
<td>Primary trade area</td>
<td>20 mins drive time</td>
<td>up to 15 kms</td>
<td>5-15 miles</td>
<td>&lt;15 miles</td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Malaysia</td>
<td>Thailand</td>
<td>Singapore</td>
<td>Indonesia</td>
<td>Australia</td>
<td>US</td>
<td>Asia Pacific (hypothetical)</td>
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<tr>
<td><strong>Super regional</strong></td>
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<tr>
<td>Size (sf)</td>
<td>1,000,000+</td>
<td>1,000,000+</td>
<td>800,000</td>
<td>1,000,000+</td>
<td>800,000+</td>
<td>800,000+</td>
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<td>supermarket,</td>
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<td>supermarket,</td>
<td>supermarket,</td>
<td>mainly</td>
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<td></td>
<td>dept store,</td>
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<td>dept store,</td>
<td>dept store,</td>
<td>dept store,</td>
<td>discount dept</td>
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<td>supermarket,</td>
<td>supermarket,</td>
<td>supermarket,</td>
<td>store</td>
<td>store</td>
<td>(e.g. dept</td>
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<tr>
<td></td>
<td>cineplex</td>
<td>cineplex</td>
<td>cineplex</td>
<td>cineplex</td>
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<td>store)</td>
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<td>discretionary</td>
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<tr>
<td></td>
<td>time</td>
<td></td>
<td>200,000-300,000</td>
<td></td>
<td>150,000-500,000</td>
<td></td>
<td>(e.g. dept</td>
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<td>store)</td>
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<td></td>
<td>5-25 miles</td>
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<td>&lt;25 miles</td>
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<tr>
<td><strong>Lifestyle</strong></td>
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<td>450,000-800,000</td>
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<td>entertainment</td>
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<td>entertainment</td>
<td>entertainment</td>
<td>0-4</td>
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<td></td>
<td>none necessary</td>
<td>entertainment &amp; F&amp;B driven</td>
<td></td>
<td></td>
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<td>discretionary</td>
</tr>
<tr>
<td></td>
<td>but strongly F&amp;B driven</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>(e.g. dept store)</td>
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<tr>
<td>Type of anchors</td>
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<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>30 mins drive</td>
<td></td>
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<tr>
<td>Primary trade area</td>
<td></td>
<td></td>
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<td></td>
<td>&lt;15 miles</td>
</tr>
<tr>
<td><strong>Power</strong></td>
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<td>No. of anchors</td>
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<td>&lt;600,000</td>
</tr>
<tr>
<td></td>
<td>homes, hardware, IT</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>0-multiple</td>
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<tr>
<td></td>
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<td></td>
<td></td>
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<td></td>
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<td>mainly</td>
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<td>Type of anchors</td>
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<td>Home goods</td>
<td>Home goods</td>
<td>discretionary</td>
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<tr>
<td></td>
<td>up to 30 mins</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>discretionary</td>
</tr>
<tr>
<td>drive time</td>
<td></td>
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<tr>
<td>Primary trade area</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>up to 15 kms</td>
<td>5-10 miles</td>
<td>&lt;10 miles</td>
</tr>
<tr>
<td></td>
<td>Malaysia</td>
<td>Thailand</td>
<td>Singapore</td>
<td>Indonesia</td>
<td>Australia</td>
<td>US</td>
<td>Asia Pacific (hypothetical)</td>
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<td>-----------------------------</td>
</tr>
<tr>
<td><strong>Retail podium/plaza</strong></td>
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<td>not defined</td>
<td>not defined</td>
</tr>
<tr>
<td>Size (sf)</td>
<td>up to 300,000</td>
<td>50,000-250,000</td>
<td>up to 300,000</td>
<td>up to 300,000</td>
<td>not defined</td>
<td>not defined</td>
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</tr>
<tr>
<td>No. of anchors</td>
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<td>none necessary</td>
<td>none necessary</td>
<td>none necessary</td>
<td>not defined</td>
<td>not defined</td>
<td>not defined</td>
</tr>
<tr>
<td>Type of anchors</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>not defined</td>
<td>not defined</td>
<td>not defined</td>
</tr>
<tr>
<td>Primary trade area</td>
<td>immediate</td>
<td></td>
<td></td>
<td></td>
<td>not defined</td>
<td>not defined</td>
<td>not defined</td>
</tr>
</tbody>
</table>

| **Hypermart**        |          |                 |           |           | not defined | not defined | <300,000 |
| Size (sf)            | 150,000-500,000 | 100,000+       | 100,000-200,000 | 150,000-300,000 | not defined | not defined | <5 miles |
| No. of anchors       | 1        | 1               | 1          | 1         | not defined | not defined | not defined |
| Type of anchors      | hypermarket | hypermarket     | hypermarket | hypermarket | not defined | not defined | not defined |
| Primary trade area   | up to 30 mins | drive time     | drive time | drive time | <5 miles   | <5 miles   | <5 miles |

| **Niche/destination retail** |          |                 |           |           | not defined | not defined | not defined |
| Size (sf)              | 300,000  | 300,000         | 200,000   | 300,000   | not defined | not defined | not defined |
| No. of anchors         | none     | none            | none      | none      | not defined | not defined | not defined |
| Product classification | IT, mall | IT,home         | / retail   | / retail   | not defined | not defined | not defined |
| Primary trade area     | > 30 mins| > 30 mins       | > 30 mins | > 30 mins | not defined | not defined | not defined |

<p>| <strong>CBD center</strong>        |          |                 |           |           | not defined | not defined | &lt;1,000,000 |
| Size (sf)             | 150,000-400,000 | 1,000,000     | 10,000-600,000 | 300,000-1,000,000 | not defined | not defined | &lt;5 miles |
| No. of anchors        | 1        | 3+              | 0-2        | 3+        | not defined | not defined | not defined |
| Type of anchors       | supermarket, | supermarket,   | varies     | discretion | not defined | not defined | not defined |
| Primary trade area    | department store | dept store   | CBD        | (e.g. dept CBD) | not defined | not defined | not defined |</p>
<table>
<thead>
<tr>
<th>Factory outlet center</th>
<th>Malaysia</th>
<th>Thailand</th>
<th>Singapore</th>
<th>Indonesia</th>
<th>Australia</th>
<th>US</th>
<th>Asia Pacific (hypothetical)</th>
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<tr>
<td>Size (sf)</td>
<td>300,000-400,000</td>
<td>none</td>
<td>50,000-250,000</td>
<td>50,000-400,000</td>
<td>none</td>
<td>0-2</td>
<td>&lt;400,000</td>
</tr>
<tr>
<td>No. of anchors</td>
<td>none</td>
<td>none</td>
<td>none</td>
<td>none</td>
<td>none</td>
<td>dept store clearance</td>
<td></td>
</tr>
<tr>
<td>Type of anchors</td>
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<td>none</td>
<td>none</td>
<td>none</td>
<td>&lt;60 miles</td>
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<tr>
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<td></td>
<td></td>
<td></td>
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</tbody>
</table>

First Steps Toward a Shopping Center
Typology for Southeast Asia, Asia-Pacific and Beyond

Ungku Susclawati Omar
DTZ Debenham Tie Leung

Michael Baker
Michael Baker Independent Retail Consulting
Role of Designer / Architect

A Typical Open Air Shopping Center

A Shopping Center as seen by Major Tenant

A Shopping Center as seen by the Developer

A Shopping Center as seen by The City
Role of Designer / Architect

The Design Architect is a **Creative Thought Leader** on the development team, responsible for Managing, Planning, Designing and Observing / Monitoring the Construction of a larger vision, usually buildings.

Design can and should be a **collaborative process** of three primary parties: the Owner, the Designer and the Contractor.

**Architect is being affected** with external influences - public or private owner, community, regulations, environmental concerns, tenants retail requirements - trying to shape architect`s services.
Role of Designer / Architect

Design and Project Life Cycle

- Phases
- Participants
- Architects Role within the Phases
Role of Designer / Architect

Design Team

An **Architect** is said to be a man who knows very little about a great deal and keeps knowing less and less about more and more until he knows practically nothing about everything.

On the other hand an **Engineer** is a man who knows a great deal about very little and goes along knowing more and more about less and less, until finally he knows practically everything about nothing.

A **Contractor** starts out knowing practically everything about everything, but ends up knowing nothing about nothing, due to his association with architects and engineers.
European Retail Property School

As the developer promoted the swing
As the architect proposed the swing
As the building code required the swing
As the structural engineer conceived the swing

As the mechanical and electrical engineers specified it
As the contractor interpreted the plans
As the workmen installed the swing
The swing the user needed wanted and could afford
Role of Designer / Architect

Design Team Selection

- **Link to stakeholders** – Most often developers select architect they have already know and have worked with successfully. It can also be prudent to work with architect who has a link to neighborhood, knowledge of the government relationships or requirements as well as to community leaders.

- **Comparative Selection** – Several architects are considered on a comparative basis. Selection based on the interview process alone is the simplest form. A more sophisticated approach is for the owner to distribute a request to qualified Architects. Submissions are evaluated and a “short list” of firms are then interviewed. The interview allows the Owner to evaluate how each firm will approach the project and more importantly how strong the “chemistry” is between the Owner and the Architect.
Role of Designer / Architect

Design Team Selection

- **Design Competitions** – This approach enables the Owner to decide which design firm has the appropriate talent, skills, experience or attitude for a particular project. Often, the work completed is of little use in future phases of design as decisions were made without Owner.

- **Competitive Bidding** – The Architect provides a cost for service, which is a function of time. Bidding requires that the least amount of time possible be spent on the project. Even a well qualified firm may be forced to cut corners in order to be competitive.

- **Design/Build Selection** – The Owner may leave the selection of the Architect up to the selected Contractor. In this case, Designer reports to Contractor not to the Owner or Developer.
Role of Designer / Architect

20 Questions to ask your Architect

1. Whom will I be dealing with directly? Is that the same person who will be designing the project? Who will be designing my project?
2. How will the architect(s) approach our project?
3. How will the architect(s) gather information about our firm’s operations, project site and so forth?
4. How will the architect(s) establish priorities and make decisions?
5. What does the architect see as important issues or considerations in the project? What are the challenges of the project?
6. What is the architect’s design philosophy?
7. What are the steps in the design process?
8. How busy is the architecture firm?
9. How interested is the architect in this project?
10. What sets this architect/architecture firm apart from the rest?
Role of Designer / Architect

20 Questions to ask your Architect

11. How does the architect/architecture firm establish its fees?
12. How does the architect organize the process?
13. What does the architect expect us to provide?
14. What is the architect’s experience in obtaining local government approvals? Handling public hearings?
15. What is the architect’s experience/track record with cost estimating?
16. What will the architect show us along the way to explain the project? Models? Drawings? Sketches?
17. Inevitably there are changes that occur with a project. How does the architect handle change orders? Who pays for changes?
18. If the scope of the project changes later in the project, will there be additional fees? How will these fees be determined?
19. What services does the architect provide during construction?
20. Ask for list of clients the architect/architecture firm has worked with in the past.
Responsibilities of Designer / Architect

Basic Services

Basic Services include the disciplines of Architecture, Structural, Mechanical, Electrical and Plumbing engineering for the phases of design, including:

- Schematic Design
- Design development
- Bidding
- Contract documents
- Contract administration

Basic Services do not include the design phases of pre-design, master planning or concept design.
Responsibilities of Designer / Architect

Additional Services

- Changes to the site
- Changes to the scope of work
- Changes to the schedule
- Changes to the budget/financing
- Tenant required changes
- Changes to the regulatory and review process (?)
- Post occupancy evaluations
- Lease Outline Drawings
- Tenant Design Guide and Manuals
- Tenant Store design consultations
- Graphic Design
- Lighting Design
- Sustainability
- Marketing material, renderings, models
Role of Designer / Architect

Compensation

- **Stipulated (lump) Sum** – This method establishes a fixed amount of compensation tied to a specific set of services to be provided. Used when project scope and quality are well defined.

- **Cost-Plus-Fee** – Compensation based on time and expenses. This method is used when there are many unknowns about the project and the required scope of work. Variations of this method include: Multiple of direct salary expense (DSE); Multiple of direct personnel expense (DPE); or hourly billing rates.

- **Percentage of Construction Cost** – Compensation based on the cost of construction, not on the scope of work. Usually 6-8% for commercial buildings.

- **Unit - Cost Method** – Fee based on cost per square meter.
Role of Designer / Architect

Standard Agreement Terms

- Details for adding professional services
- Compensations details
- Time requirements
- Owner responsibilities
- Construction costs and fixed limits to costs (designing per budget)
- Ownership of documents
- Dispute resolution
- Termination of the agreement
- Governing law, etc.
Responsibilities of Designer / Architect

Design Team

Leading architect / Author / Concept designer + Local architect support

Structural, Mechanical, Electrical, Plumbing Engineering
- Most often contracted through the Architect
- Architect coordinates the efforts

Others most frequently requested or included trades:
- FP Consultant
- Landscape Architecture
- Graphic Design
- Lighting Design
- Sustainability
Role of Designer / Architect

Design Team

Others – usually contracted directly by the Owner / Developer:

- Civil Engineering
- Tenant Coordination
- Marketing
- Branding
- Merchandizing / Tenant Mix planning
- Leasing
- Facility Planning and Programming
Role of Designer / Architect

Design Team Coordination

- Good communication
- Organization – selecting team members and establishing procedures
- Execution – project design and production of documents
- Quality assurance – project and design meetings, checklists, maintaining communication, cross checking documentation

Common problems

- Omissions
- Discrepancies
- Terminology differences
Design Phases and Deliverables

Project Delivery Approach

- Traditional - Design Bid Build
- Fast Track
- Design / Build

<table>
<thead>
<tr>
<th>CONTRACTUAL</th>
<th>PROCESS</th>
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<tbody>
<tr>
<td>Separate Responsibility For Design and Construction</td>
<td>Sequential Design and Construction</td>
</tr>
<tr>
<td>Single Responsibility For Design and Construction</td>
<td>Overlapped Design and Construction</td>
</tr>
</tbody>
</table>

- Design-Bid-Award-Build
- Fast-Track
- Design/Build
- Design/Build (Fast -Track)
Design Phases and Deliverables

Project Delivery Approach

Sequential Design and Construction

- Design
- Bid / Award
- Construction

Overlapped Design and Construction

- Design and First Documents
- Remaining Documents Packages
  - Award and Construction (Contract 1)
  - (Contract 2)
  - (Contract 3)
  - (Contract 4)

NOTE: Architect is involved in design, bidding and negotiation, and construction during this period

Total Project Time

Time Savings
Design Phases and Deliverables

- Pre Design & Programming
- Master Planning & Concept Design
- Schematic Design
- Design Development
- Construction Documents
- Bidding
- Construction Administration
- Best Practices and Examples
Design Phases and Deliverables

Pre Design & Programming

- Contextual Analysis
- Site Analysis
- Building footprint requirements
- Open space requirements
- Alternative site feasibility studies
Design Phases and Deliverables

Pre Design & Programming

Contextual Analysis

- Climatic Geography
- Urban context (Urban pattern, Zoning, Transportation)
- History (Tradition, Style, Prior use)
- Social (Culture, Community, Religion, Economy, Political situation)

Site Analysis

- Topography
- Easements (right of use)
- Public Transit
- Utilities
- Environmental contamination
- Geotechnical survey (soil)
- Setbacks
- Roads
- Visibility, Views
- Access/Egress
- Environmental contamination
Design Phases and Deliverables

Pre Design & Programming

Building footprint requirements

- Boundary Survey (Construction line of the building)
- Parking requirements (5 spaces per 93m² retail GLA, shared parking analysis to reduce number of spaces, parking distances, organization and position – teaser parking)
- Landscape Requirements (as per local regulations, % of lot area)
- Ground Coverage (% of lot area)
- Floor Area Ratio

Studies are done in order to determine GBA, GLA, number of floors, configuration of building, area per floor.
Design Phases and Deliverables

Pre Design & Programming

Open space requirements

- Setbacks
- Wetlands
- Landscaping buffers
- Service docks
- Site circulation
- Utility easements
- FP requirements (distances, fire fighting access)
Design Phases and Deliverables

Pre Design & Programming Objectives

The Pre Design process can help owner/architect/contractor team to determine the general cost and schedule for project - financial viability.

- Establishing strategic planning constraints
- Analyzing relationships with other developments
- Reviewing the type of shopping format (to match the location)
- Agreeing the overall size
- Testing the fit with site
- Preparing a wish list of tenants
- Balancing the mix between unit shops, anchor stores and catering (food-court)
- Establishing relationship with the different modes of public transport
- Establishing the type and nature of shopping environment
Example
Site Analysis: Position, Surroundings, Traffic, Transportation
Example
Site Analysis: Topography and Views
Example
Site Analysis: Traffic and external movements
Example
Site Analysis: Solar and Wind profile
Design Phases and Deliverables

Master Planning and Concept Design

“Napkin Design”

Arch. Renzo Piano
P&C Department Store
Cologne, Germany
Design Phases and Deliverables

Arch. Renzo Piano
P&C Department Store
Cologne, Germany
Design Phases and Deliverables

Schematic Design

- The architect establishes the general **scope**, **scale** and **relationships** of a project (buildings, their location, size and relationships to each other), delivering the overall lot plan.

- Architect explores options for design and construction based on owners program and budget, considering zoning constrains and requirements.

**Deliverables**

- Site plans: plot plans indicating placement of buildings, streets, parking …
- Floor plans
- Elevations and Building Sections
- Renderings, Models and other presentations and specifications to explain overall project concept
Design Phases and Deliverables

Schematic Design

Question:
What might be the impact of a Fast Track delivery approach in Schematic Phase of Design?
Design Phases and Deliverables

Design Development

- Establishes the **character** and **size** of each phase of development and adds more details and coordination to produce a real project
- This phase takes into account compliance with life safety codes, zoning implications and surrounding infrastructure

**Deliverables**

- Site plans
- Floor plans
- Enlargements of plans, elevations, sections
- Detailed sections of critical material and building intersections
- Material defined and specified
- Detailed Renderings, Models and other presentations and specifications to explain design direction and introduce major building system into the design concept
Design Phases and Deliverables

Detailed Design

*Again:*
What might be the impact of a Fast Track Construction process in Detailed Design phase?
Design Phases and Deliverables

Construction Documents

- **ARE** drawings and specifications created by an architect that set forth in detail requirements for the construction of the project, and assist the owner in preparing the necessary permitting, bidding and contractual information for construction.

- **ARE NOT** intended to be a complete set of instructions on how to build the project or to define means, methods, techniques, sequences, procedures, and site safety precautions. Construction Documents are not Shop Drawings.
Design Phases and Deliverables

Construction Documents

- Drawings annotating the size and scope of the project
- Specifications outlining the quality standards for construction
- Contract Forms and Conditions outlining the rights, responsibilities and duties of the owner, contractor and others involved in the process (including the architect)
- Bidding Requirements information and bidding forms
Design Phases and Deliverables

Documentation Organization
Design Phases and Deliverables

Bidding

- The drawings and specifications created by an architect that set forth in detail requirements for the construction of the project and assist the owner in preparing the necessary bidding and contractual information for construction.
Design Phases and Deliverables

Bidding Documents include:

- Bid solicitation form
- Instructions to bidders
- Information available to bidders
- Bid forms and supplements

Bidding Documents establish following goals:

- Project Delivery
- How contracts will be structured
- Contract award system
- Contractor compensation
# Design Phases and Deliverables

## Budgeting During Design

<table>
<thead>
<tr>
<th>Phase</th>
<th>Documents and Information</th>
<th>Pricing Type</th>
<th>Pricing Accuracy</th>
<th>Schedule Type</th>
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<td>(no such thing as a complete set of CD’s!)</td>
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<tr>
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<td></td>
<td>GMP / Final Budget</td>
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</tbody>
</table>
Design Phases and Deliverables

Construction Administration

- Realization
- Design intention maintenance
- Adjustments
- General activities coordination
- Tenants` design issues handling
Design Phases and Deliverables

Construction Administration

Arch/Eng

Contractor

Owner

Design/Build
Design Phases and Deliverables

Construction Administration

Architect responsibilities

- Observing construction work for conformance to drawings and specifications
- Processing contractors shop drawings, product data, submittals and samples
- Review the fabrications and materials from shop fabricators to ensure design intent
- Review results of construction tests and inspections
- Evaluate contractors request for payment
- Handle requests for changes during construction
- Address and resolve claims brought by contractor and owner
- Responses to contractors for information
Design Phases and Deliverables

Construction Administration

Owners responsibilities

- Site information
- Selecting and awarding contract
- Construction insurance
- Legal notices
- Notifying of defects and deficiencies
- Compensation
- Making decisions during construction

The Tenant Criteria Manual (Design and Site coordination Manual) is issued, by the owner, to coordinate work of Tenants` design and construction for the center. It has heavy input from design team.
Design Phases and Deliverables

Construction Administration

Contractor responsibilities

- Following contract documents and laws and regulations effecting construction
- Selecting construction means and methods
- Supervising and coordinating the work
- Paying for labor, materials, equipment, utilities and services
- Fulfilling contractual responsibilities for permits, bonds and other written notices approvals and submittals
Design Phases and Deliverables

Construction Administration

Terminology

- RFI – Request for Information
- RFC – Request for Change
- CO – Change Order
- Shop Drawings
Design Phases and Deliverables

Tenant Criteria Manual

/Tenant Design Guide or Tenant Coordination Manual/

- Document establishing criteria to ensure tenant`s improvements completion on time, and achieve appearance of tenant space in accordance with overall design and ambiance of the Center
Tenant Criteria Manual

- General Mall Information
- Tenant submission requirements
- Shopping Center design guidelines
- Tenancy Design guidelines
- Tenancy Fit-out guidelines
Tenant Criteria Manual

Design Guidelines

Shopfront Design Controls
- In-line facades compulsory
- Recessed entrances are not allowed
- Closure must be maintained at the lease line
- No maximum door width control
- Minimum door width allowed is 1200 mm
- Minimum 60% transparent shopfront is required
- Display area of 1500 mm from the lease line is required
- Design control area within 1500 mm from the lease line is applicable

Signage
- Creative signage format is encouraged subject to SSA review and approval
- Signage is subject to individual design parameters and is not restricted to fixed signage zoning control
- Horizontal bulkhead signage across the full width of the shopfront is not allowed, vertical signage is encouraged
Design Guidelines

General Layout objectives

- Layout should form unique and interesting place that is convenient, safe and enjoyable to use
- It should be easy to understand
- The arrangement should establish strong pedestrian flows which will allow customers to pass along all the retail frontages
- Anchor stores and other major attractions should be positioned to generate and reinforce pedestrian flow

- at the end of a run of shops, thereby drawing customers past the shopfront
- located at a change of direction in the layout in a way which is clearly visible and draws customers in from both directions
- strategically positioned to form a focus and point of punctuation in a large complex layout.
   Anchor stores should be located in positions that are easily understood and achieve good visibility within the internal layout and have an external presence.
Design Guidelines

Shop Units

Size requirements

- Majority of tenants (63%) seek floor space of 95-380m²
- Strong preferences for units in range 190-325m²
- Small proportion (19%) require unit less than 95m²
- A proportion (18%) require larger than 380m²

For large and regional shopping centers to be viable ideal proportion of unit shops to the total should range between 55-70% of GLA
Design Guidelines

Shop Units

*Frontage Module*

Another key consideration in shop unit planning will be the dimension of the frontage module. Frontage size has similarly increased with the evolution of shopping centres. The typical shop unit frontage accepted today by tenants is a module between 7.5 and 8 m (24–26.2 ft).

Typical shop unit proportions: single shop unit width to depth proportions should not exceed 3:1 or 4:1. Where units are combined to make larger units these proportions still apply. *(Source: Peter Coleman)*
Design Guidelines

Vertical visibility

Dimensional requirements
Shopping Centers Design Trends

- Landmark Architecture - Form Over Function
- Colors and Lights
- Vertical Retailing
- Sustainable Design & Green Roofs
- Discovery Spaces
- Technology: Facades and Interiors
Landmark Architecture

Selfridges
Birmingham, UK
Department Store

Arch. Future Systems
Landmark
Architecture

Selfridges
Birmingham, UK
Department Store

Arch. Future Systems
Colors and Light

Galleria Hall West
Department Store
Seoul, South Korea

Arch. UN Studio
2004
Sevens Department Store
Dusseldorf, Germany
Arch. RKW

Vertical Retailing
Green Roofs

**Namba Parks**
Mixed use development
Osaka, Japan

Arch. Jerde Partnerships
Hi – Tech

“a shopping mall with dancing façade”

Galleria CenterCity
Department Store
Choenan, South Korea

Arch. UN Studio, Ben van Berkel, Amsterdam
2011
Hi – Tech

LED dynamic facade

Zeilgalerie
Frankfurth, Germany
3delux Company
Hi – Tech

Mall Taman Anggrek, Jakarta, Indonesia
Arch. Altoon and Porter
Liverpool One
2008
Mediacité
Liege 2009
Manufaktura
Lodz, Poland 2005
Manufaktura
Lodz, Poland 2005
Palladium
Prague, 2006
Palladium
Prague, 2006
?????

Palladium
Prague, 2006
Liljeholmstorget
Stockholm, 2009
Liljeholmstorget
Stockholm, 2009
Maastricht Bookstore
2006
European Retail Property School

City North Arizona
2008
Iconic Architects

Vällingby City
Kfem, 2008
Iconic Architects

Vällingby City
Kfem, 2008
Iconic Architects

Westside
Bern, Switzerland, 2008
Top 5 Tips

1. **Have 2 Architects:**
   one international with solid retail commercial knowledge and experience
   one local with solid knowledge of local construction law, regulations and requirements

2. **If you are fast tracking the design and building process** have a person on site specifically checking drawings prior to going out to bid, to catch the errors and omissions of the drawings rather than these turning up later as expensive change orders

3. **Build strong communication lines between design team trades/members** – ensure all trades are informed about each and every change proposed

4. **Provide more time in schedule** – complete design earlier so that plans are available sooner

5. **If you want to keep your project competitive** – build sustainable building as per latest design trends
Literature and Sources

- CDP Handbook – ISCS
- Shopping Environments – Peter Coleman, Architectural Press 2006
- Shopping Malls and New Shopping Malls – Carles Broto, 2007
- Going Shopping – Ann Sattertwaite, Yale University
- Harvard Design School Guide till Shopping
- Victor Gruen from Urban Shop till New City – Alex Wall
- English Shops and Shopping – Kathryn A. Morisson, Yale University Press
- Marchall Field’s – Jay Pridmore, Chicago Architecture Foundation
- Personal photo collection Madeleine Gravell

Note: Examples taken from Confluence PM business portfolio
Class Evaluation:

Please remember to complete the class evaluation by using your smartphone or tablet.

Class Evaluations Link:

survey.icsc.org/2014ERPS