

MORPHOLOGICAL ANALYSIS OF LLORET DE MAR

A GIS and TLS Analysis of the
Historical Centre

A. MARAMBIO; J. CORSO; P.GARCIA-
ALMIRALL

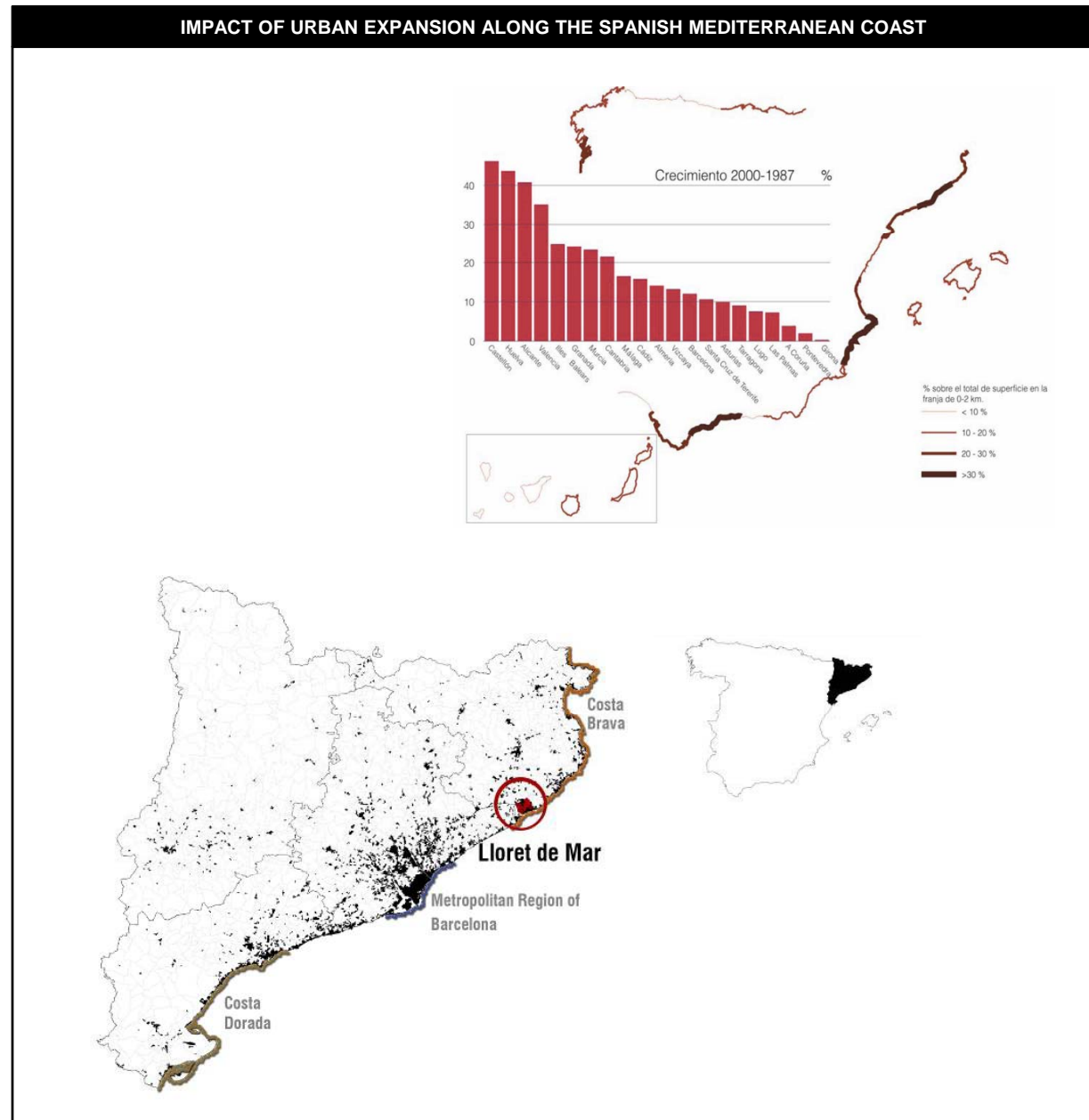


CLC 2000-1990

More than 40% of the artificial built up area is distributed in the first 2km.

Catalonia stands as the most urbanized area with more than 50% of the total surface urbanized.

- Introduction
- Data
- Catalonia Coastline
- Municipality Level
- Historical Centre
- Conclusion



DATA:

- CORINE Land Cover artificial surfaces for 1990, 2000 and 2006
- ICC's topographic 1:25.000 and 1:1.000 scale vector data and historical data
- IDESCAT tourism statistics
- TLS survey of the Historical Centre

Introduction

Data

Catalonia Coastline

Municipality Level

Historical Centre

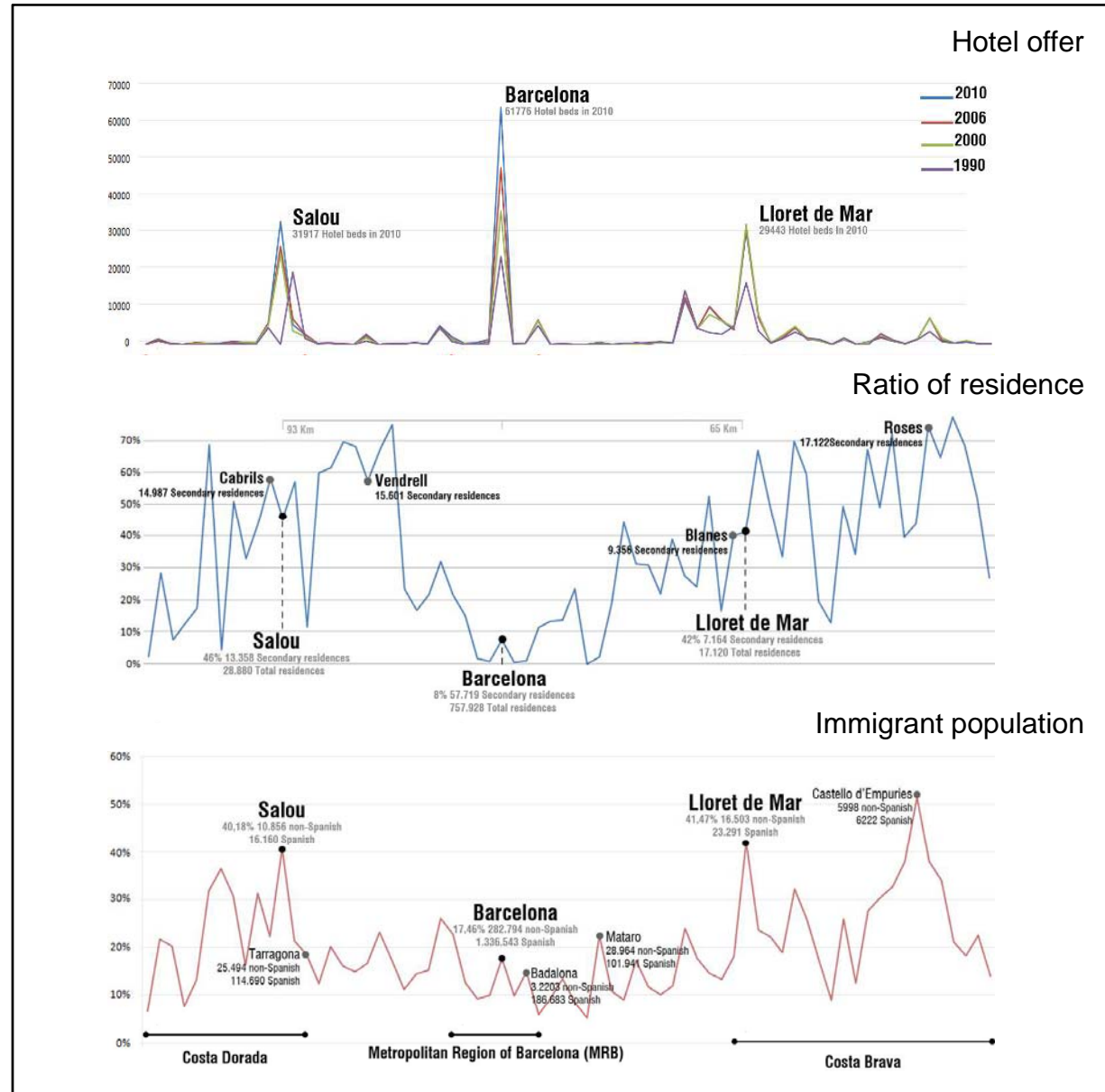
Conclusion

Catalonia

Composed by 70 municipalities
(12 regions)

650 km shoreline

- Introduction
- Data
- Catalonia Coastline**
- Municipality Level
- Historical Centre
- Conclusion



URBAN FOOTPRINT

1956
0,8%

2006
38%

87,7%

9,5%

2,8%

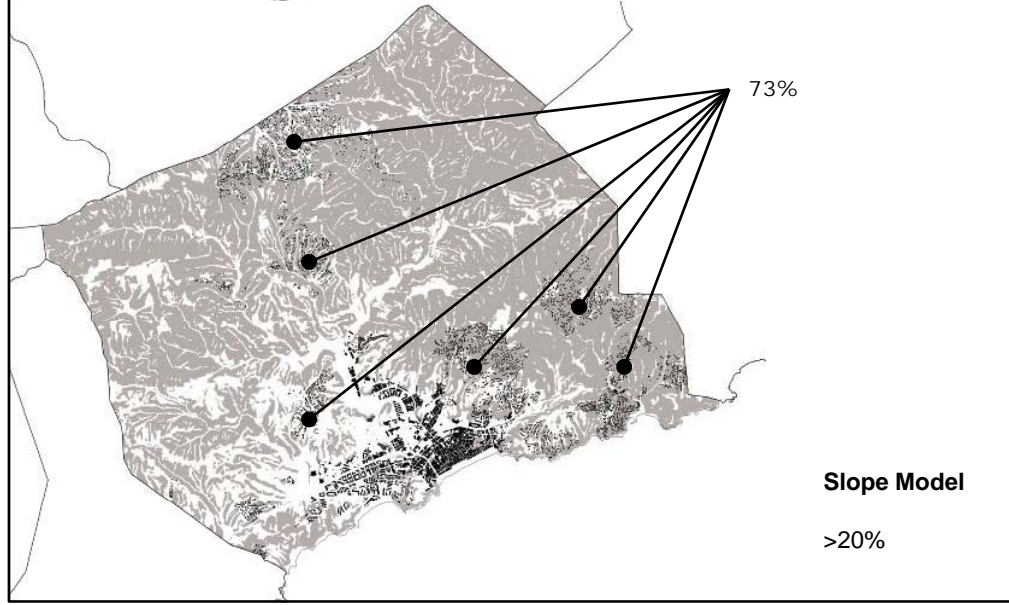
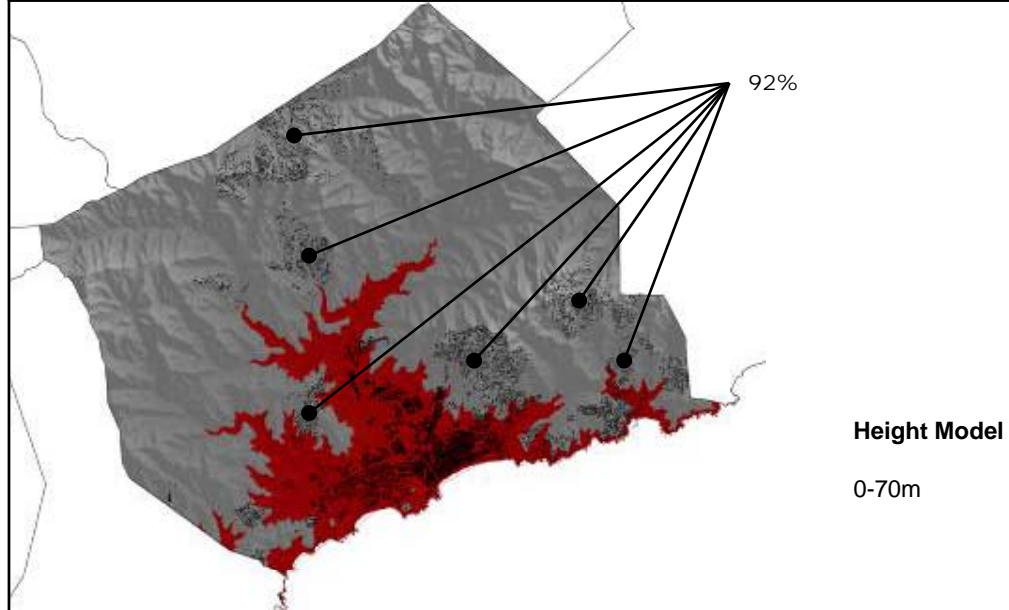
Building area / artificial area ratio (%)

80%-100%
30%-80%
0%-30%

Historical Centre
Hotels and new housing
Single Family Residences

Introduction
Data
Catalonia Coastline
Municipality Level
Historical Centre
Conclusion

URBAN FOOTPRINT



- Introduction
- Data
- Catalonia Coastline
- Municipality Level**
- Historical Centre
- Conclusion

LEVELS

48% desired building height

Introduction
Data
Catalonia Coastline
Municipality Level
Historical Centre
Conclusion

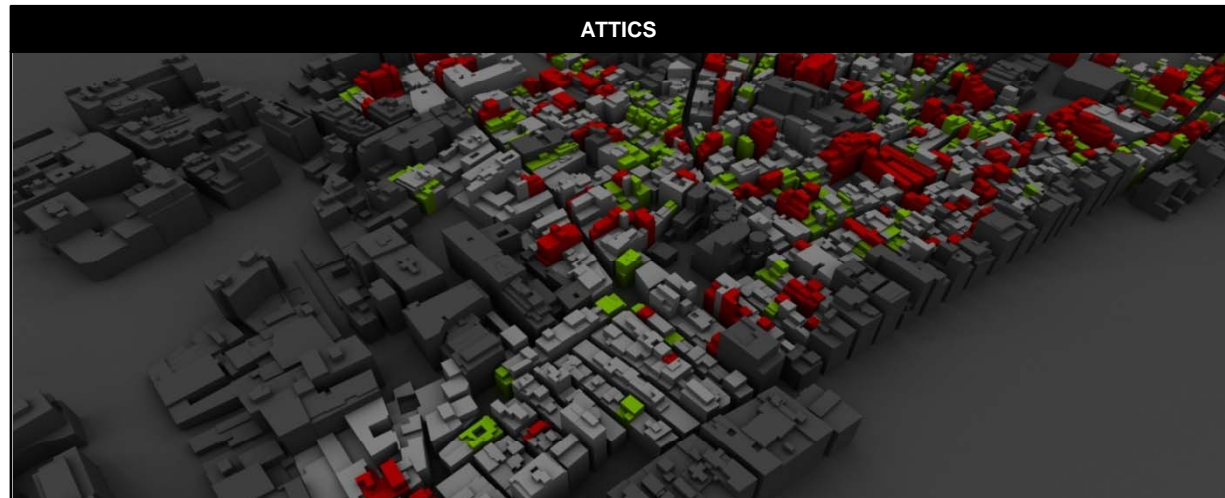


ATTICS

26% (323) +ATIC

185 no compleix

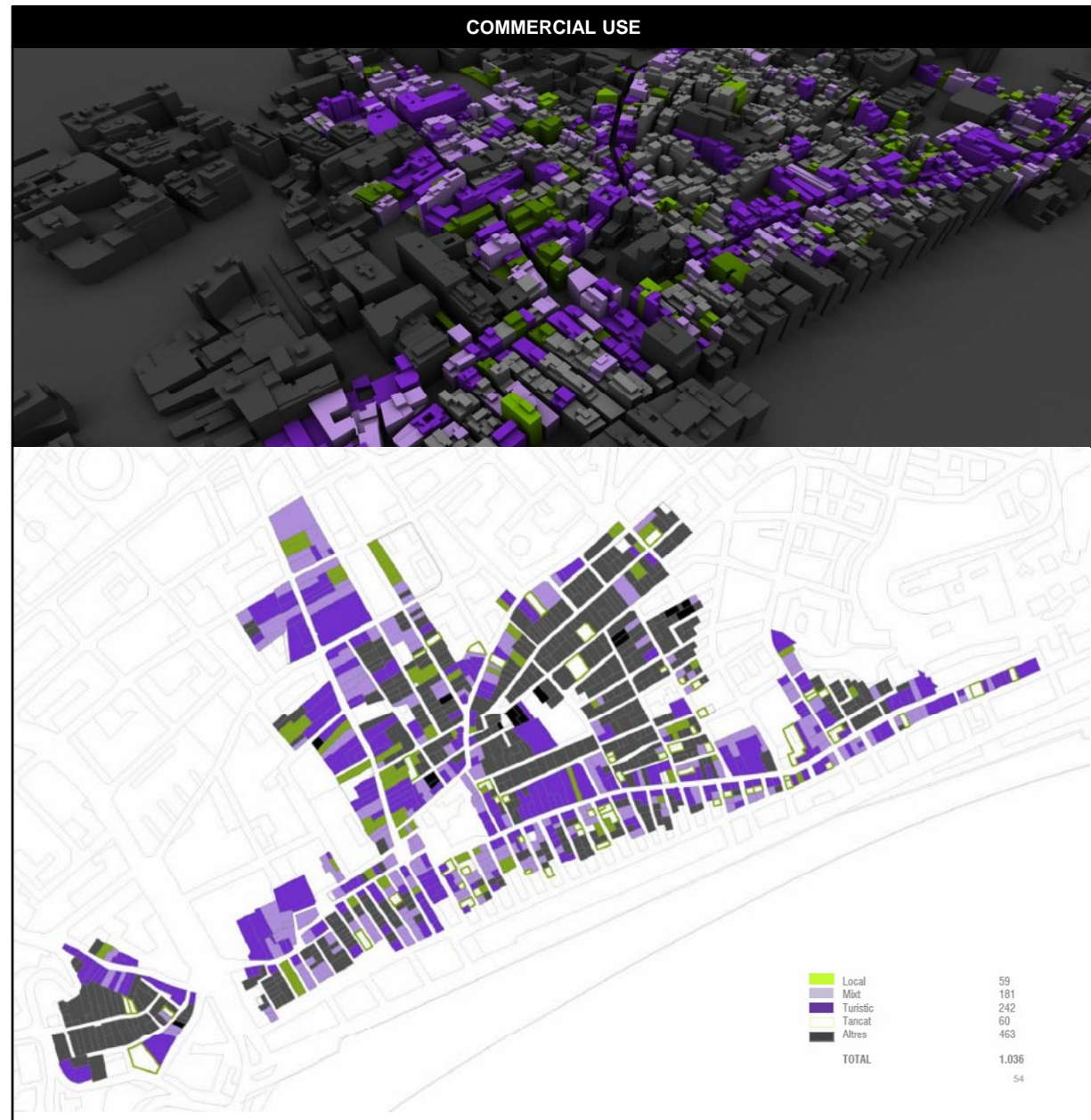
138 compleix



Introduction
Data
Catalonia Coastline
Municipality Level
Historical Centre
Conclusion

COMMERCIAL

242 turistic vs 59 local



Introduction
Data
Catalonia Coastline
Municipality Level
Historical Centre
Conclusion

ARCHITECTURAL FINISHES

G	134
O	68
T	96
V	8

ARCHITECTURAL FINISHES



- Introduction
- Data
- Catalonia Coastline
- Municipality Level
- Historical Centre**
- Conclusion

ARCHITECTURAL FINISHES

ARCHITECTURAL FINISHES



- Introduction
- Data
- Catalonia Coastline
- Municipality Level
- Historical Centre**
- Conclusion

Lloret stands out as one of the most important tourism destinations, whose market extends Catalonia and is centred in Europe.

Hotel and secondary residence have a high pressure for a view to the sea which transforms in an important impact in land consumption at municipality level and in height values for the historical centre; as low density areas consumes 87% of all the built-up area and hotels average in the range of 25-40m high above desirable new Plan height of 15m.

Secondary residence has an enormous impact in land consumption and can be easily differentiated from high density areas by analysing buildings heights versus artificial area, or building and artificial area ratio. The relationship with mayor cities must be further studied as urban expansion index differs from average cities growth.

Coast viewshed analysis could help detect sensible - probable low density urbanized areas for protection, as they consume high slope areas.

Building heights including DTM values, helps understand spatial distribution and high interest in view line of sight to the sea.

For the Historical Centre, terrestrial laser scanning offers different advantages in the 3d modelling of complex surfaces, appropriate point density is needed for different level of detail and scales, and GIS technology enriches the 3d virtual environment, allowing different standard analysis to work interactively with the virtual model.

- Introduction
- Data
- Catalonia Coastline
- Municipality Level
- Historical Centre
- Conclusion**