

WSMM

Windblown
Sand
Modeling and
Mitigation

Industrial Consulting - Research - Development

Mitigation
Measures
Design

Computational
Simulation

Site
Characteristics

Optimization



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Windblown sand problems

Windblown sand represents an issue for every human artefacts, as infrastructures (railways, roads), buildings (tows, villages) as well as farms and archeological sites, in arid and costal regions worldwide.

Transport infrastructures



Railway line
Marocco



Sand on road
French Coastline

Industrial facilities



Murzuq rafinery
Libia



Oil pipeline
Central Sahara

Built enviroment



Building in Waldport
Oregon, USA



Nouakchott Town
Mauritania

Historical sites and Farms



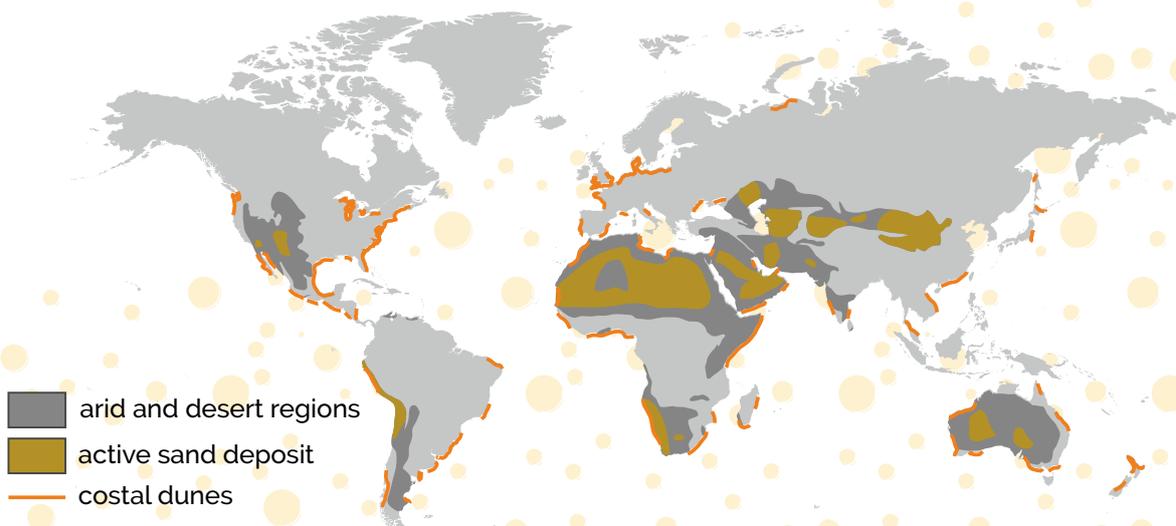
Begrawiya Pyramids
Sudan



Palm Plantation
Algeria

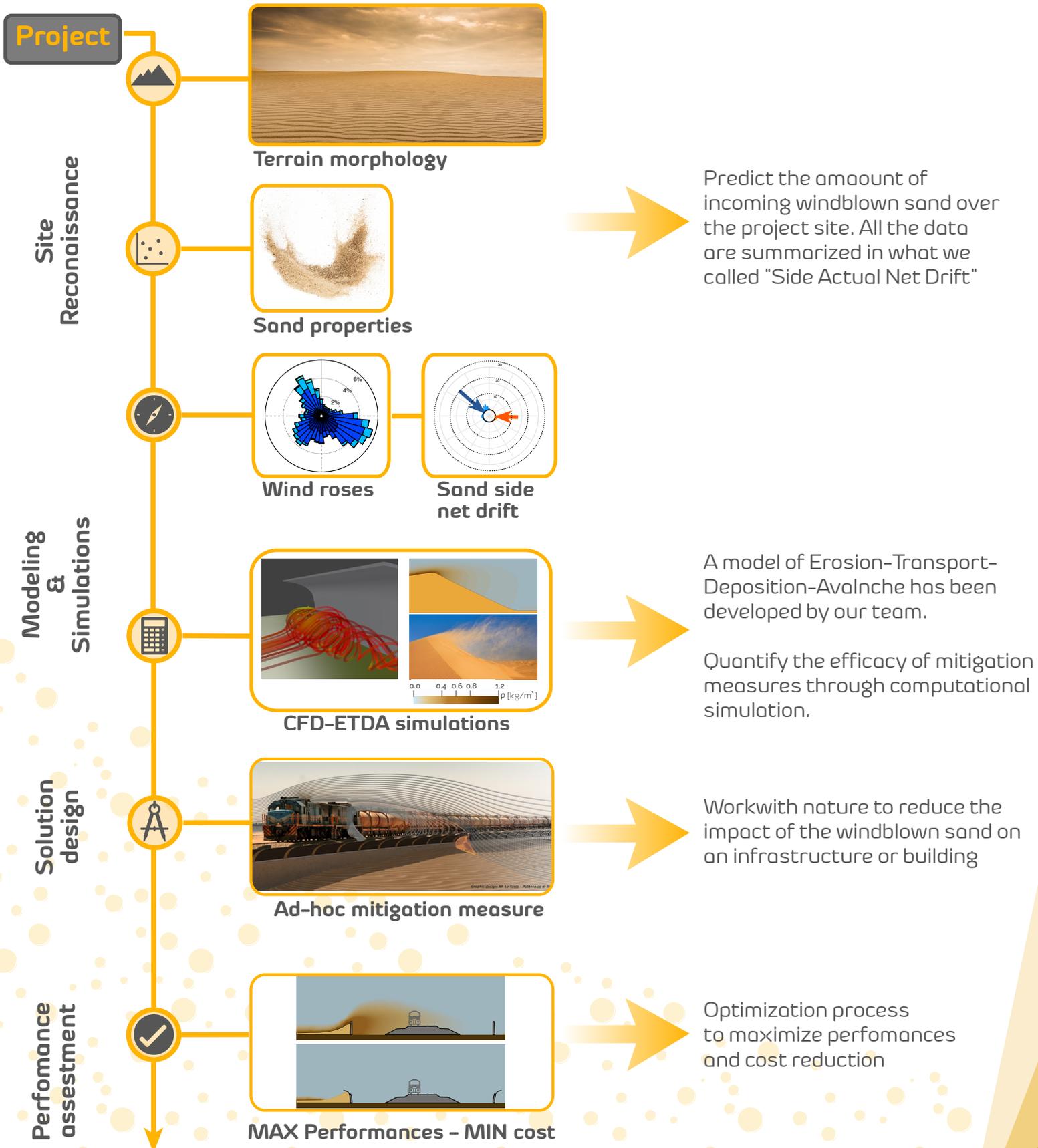
It can lead to dramatic dangers such as frequent service interruptions, safety of humans, tremendous maintenance cost, and it happens in a number of different ways and on different time scales.

Each of them requires special attention during project design and can only be faced with proper knowledge, prediction tools and simulation models.



Tailored Solutions

The *joint Windblown Sand Modeling and Mitigation Group* has developed modeling and design competences to carry on sound and complete **sand mitigation studies for every kind of infrastructural projects.**



References

WSMM group has been and currently is involved in sand mitigation consultancy services for major railway projects in Gulf Cooperation Council countries:



WSMM group actively promotes Research and Development activities on the subject, in collaboration with a number of industrial partners.



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Politecnico di Torino is a "Research University" acknowledged as a centre of excellence in all over the world for the qualifying research areas of Architecture and Engineering. The development of the fields of excellence, the investment on frontier subjects, and also the support to the curiosity driven research allow a virtuous mix of basic and applied research. The University aims at networking with the socio-economical context and at opening new partnerships with companies and multinationals.



OPTIFLOW



Optiflow is a Computational Fluid Dynamics (CFD) French consulting company, with more than 15 years of experience in the field of Computational Wind Engineering. Optiflow consulting activities helped architects and engineers improve wind and ventilation performances on more than 100 major architectural projects worldwide. Optiflow has a strong record in Research and Development activities and cultivates technology transfer relationships with a number of public and private research institutions.

Contacts



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