



TWT



TWT

Experiences from an SME participating in Clean Sky

TWT Science & Innovation

Leonid Lichtenstein

ILA Business Sessions, June 2nd, 2016

Confidential

**TWT GmbH
Science & Innovation**

**Millerntorplatz 1
20359 Hamburg
Telefon: +49.40.80 90 92.2 51
info@twt-gmbh.de
www.twt-gmbh.de**

Sources: Clean Sky, InAIPS, iSSE, EBird



TWT

TWT.Insights Management Summary

Technisch-Wissenschaftlicher Transfer

Founded in 1986

250 Employees

16 Research Projects

Management

Dr. Dimitris Vartziotis

Joachim Laicher

Frank Beutenmüller

Dr. Victor Fäßler



DAIMLER



AIRBUS
GROUP



BOSCH

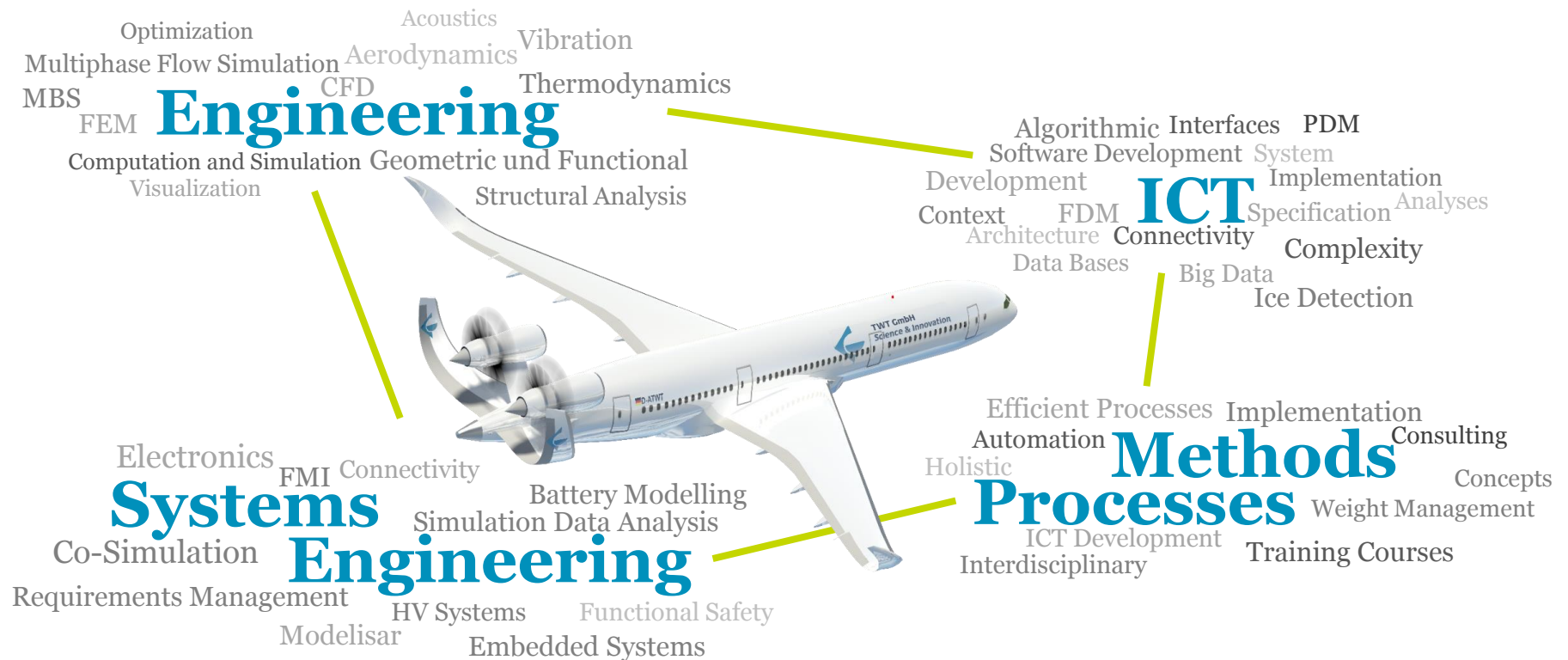




TWT

TWT.Company Profile

Business Activities





TWT

TWT.Research

Extract of current and previous activities

Supported by
Federal Ministry
for Economic Affairs
and Energy

on the basis of a decision
by the German Bundestag

izeus
SePIA Pro
Shared-e Fleet
PASS

ITEA 3

AMALTHEA
ACOSAR

ENTOC

ITEA 2
INFORMATION TECHNOLOGY FOR EUROPEAN ADVANCEMENT

BaaS
openETCS
MACH
modelisar
avanti

Horizon 2020
European Commission

OPTI
INTO-CPS
ENABLE-S3
SEO-DWARF

ARTEMIS
eniac
VeTess
HoliDes

SPONSORED BY THE
Federal Ministry
of Education
and Research

WEMUCS
e-mobil
OFP
BiE
TRACE
enhance

ZIM
für Wachstum
Deutschens Innovationsprogramm
Mittelstand

PanoramaCam
Connect
EDH-TARG
Finess

Clean Sky

eBird
InAIPs
AISSE

esa

LISA
Impress

LISA
Impress

This project was
supported by the
German Research
Foundation
for Research and
Technology

SIMARIS
WIZ
iSIM
BONUS
VELOS

SEVENTH FRAMEWORK
PROGRAMME

ON-WINGS
Integ-µ

EUREKA

i-way
facebo
autosim
victory



TWT

Clean Sky

Our motivation to apply for CS projects

Expand **aerospace network** focusing on new customers

Innovative topics matching TWT's expertise

Transfer existing technologies to **new markets**



Strengthen **knowledge** and portfolio for aerospace

Develop **new technologies** and products



Clean Sky

Our experience with CS projects

STRENGTHS

- Easy initiation of proposals and leading role for SMEs
- Consortium building comparably easy
- Fast evaluation
- Competitive funding rates
- Close connection to industry

POTENTIAL FOR IMPROVEMENT

- More guidance by topic manager desirable
- Call formulation limits room for creativity and own ideas
- „Indicative funding value“ in many cases easily exceeded with > 3 partners



TWT

Clean Sky

Our success stories initiated by CS

- 3 (completed) CS projects:
 - Ebird
 - iSSE (Follow-up of Ebird)
 - InAIPS
- Business activity as follow up from InAIPS
- New proposals in preparation for CS2
- Promising new business network





TWT

Success Story

iSSE: Speeding-up complex simulations

- Validation of an energy management algorithm
- Model based simulation of electrical aircraft systems
- Development of a co-simulation environment
- Integration of heterogeneous simulators and testing



Energy Management



reduced effort for
the optimisation
cycle



estimated
reduction of
HW tests



reduced time
effort to set up
co-simulation

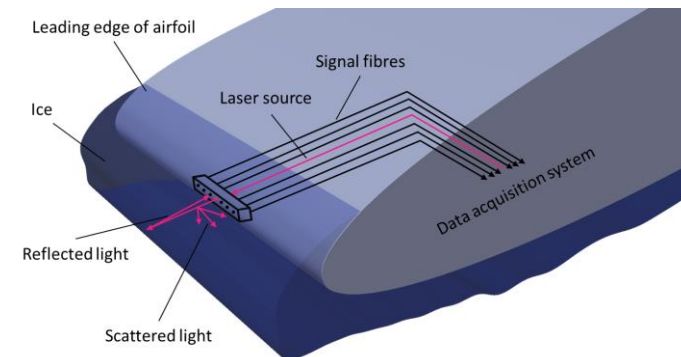


TWT

Success Story

InAIPS: Detecting Ice on Aerofoils

- Development of an innovative optical ice detector
- Implementation of a Kalman-Filter based estimation of the current ice thickness
- System test and validation in an ice research tunnel
- Strong cooperation partners: GKN Aerospace, University of Athens, University of Ioannina
- Project directly followed up by a business project



Optical Ice Detector



energy reduction of
de-icing compared to
conventional
scheme



detection limit of
sensor system



estimated de-icing
market by
2020



TWT

Clean Sky for SMEs

Summary

- Great opportunity for funding and networking
- Driving technological innovations within SMEs
- SMEs would profit from an extension in the creativity contest and more involvement by topic manager





TWT