

# The FH JOANNEUM Electric Snowmobile Initiative

Presentation at the  
2012 Clean Snowmobile Challenge  
Michigan Technological University,  
Houghton Michigan

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FH JOANNEUM University of Applied Sciences  
College of Information, Design and Technologies (IDT)  
Department of Production Engineering

# Why did we start this Initiative?

1. We want our students and faculty to learn from experience, from and with each other and across department boundaries and oceans.
2. We were looking for a topic to unite interest of all departments in our college (IT, Design, Engineering): We gave e-Mobility highest priority.
3. We looked for „playing grounds“ outside traditional and already occupied fields to address critical issues and
4. involve new and attractive partners for funding, cooperation and realization.

# Where do we come from?

FH

JOANNEUM



# What Institution do we represent?

- Austria's top University of Applied Sciences in
  - Variety of Programs
  - R&D in Engineering
  - Experiential and Cooperative Education
- Start 1995; 3 locations, main campus in Graz
- 2012: > 40 programmes (Bachelor/Master),
- ~4000 students, >300 full-time faculty



## Colleges and Degree Programs

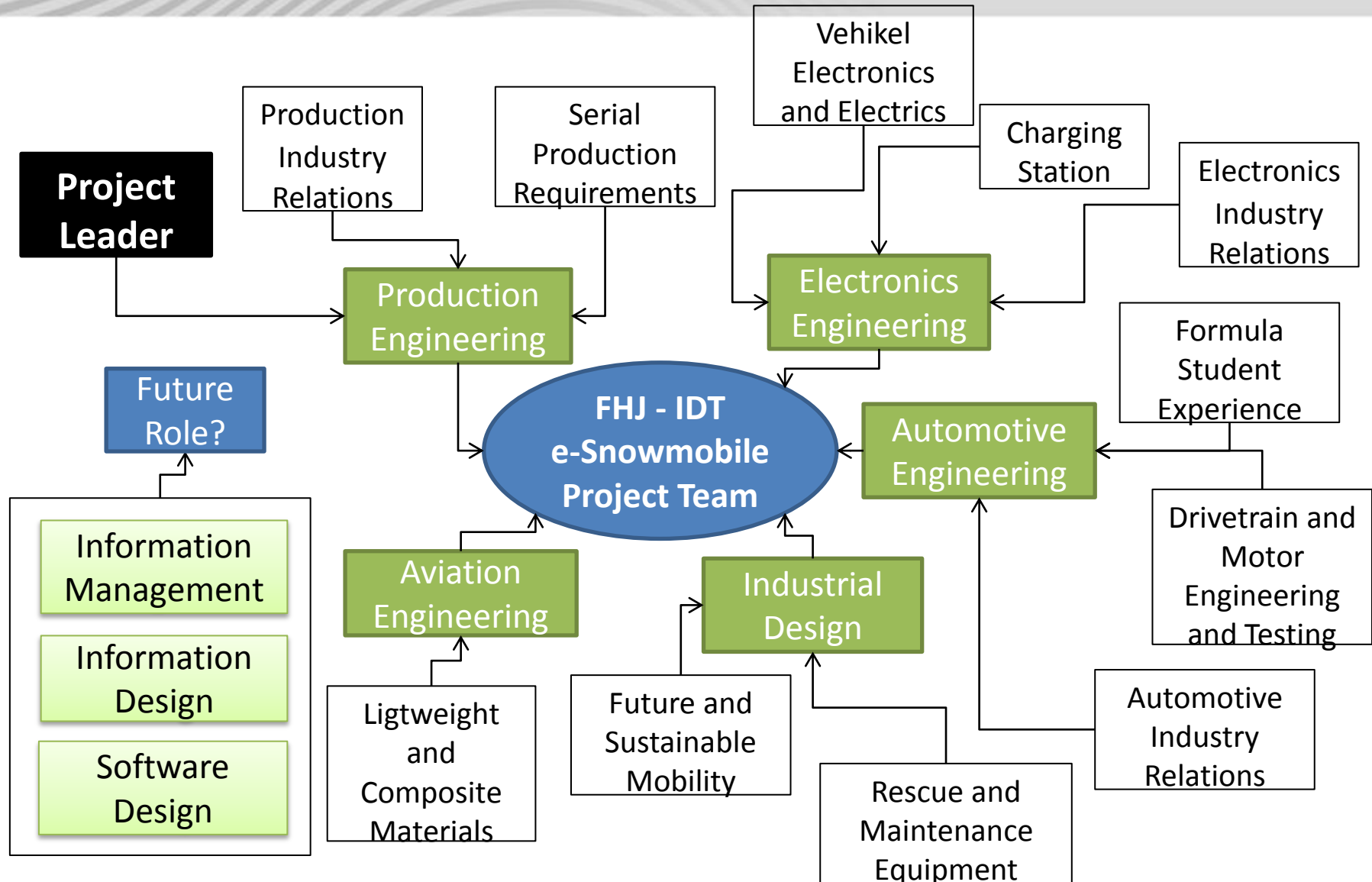
**College of  
Information , Design and  
Technologies**

**College of  
Urban Life Sciences**

**College of  
International Management and Media**

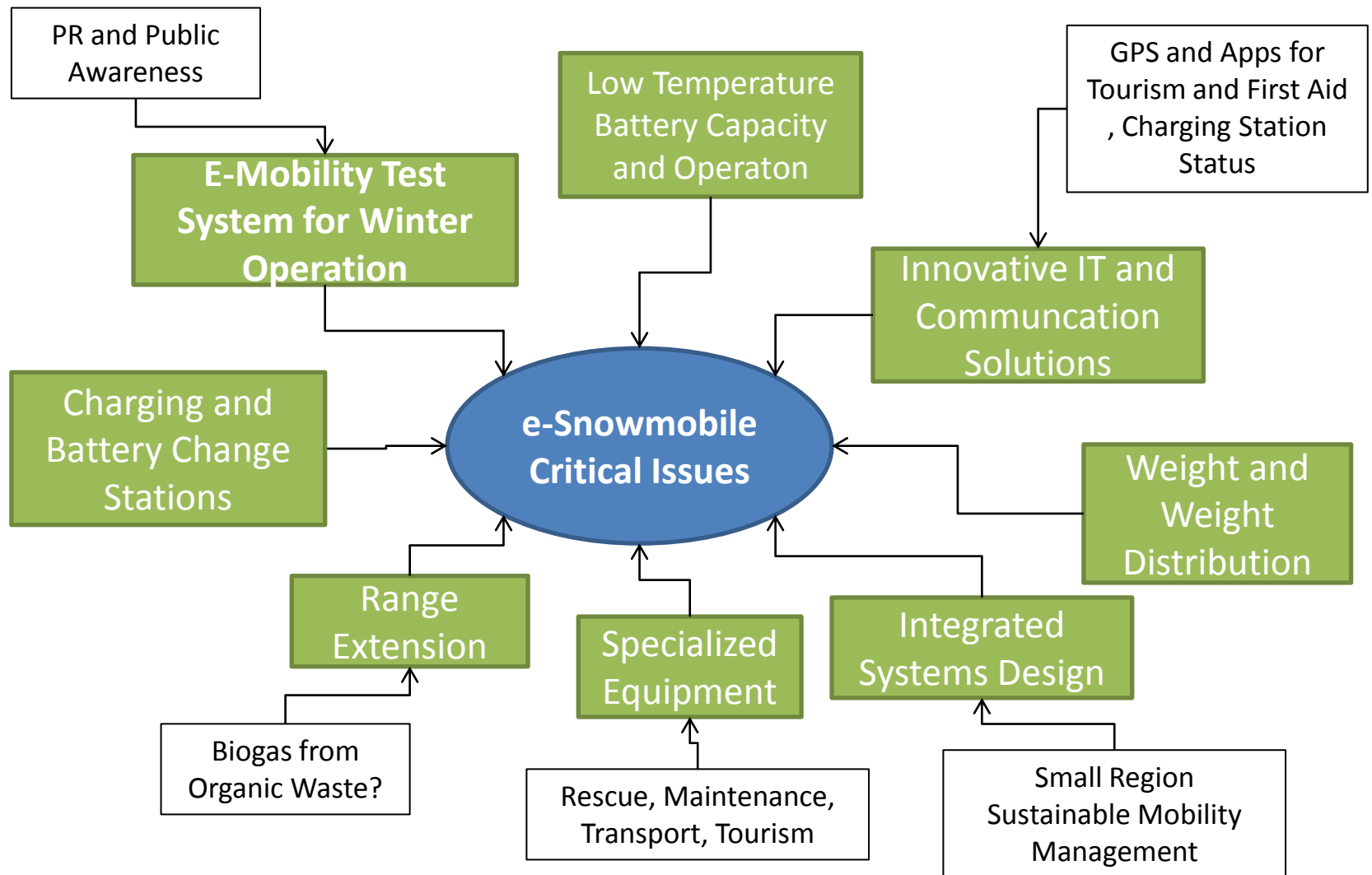
**College of  
Health Sciences**

# Objective 1: Interest and Participation of all Departments

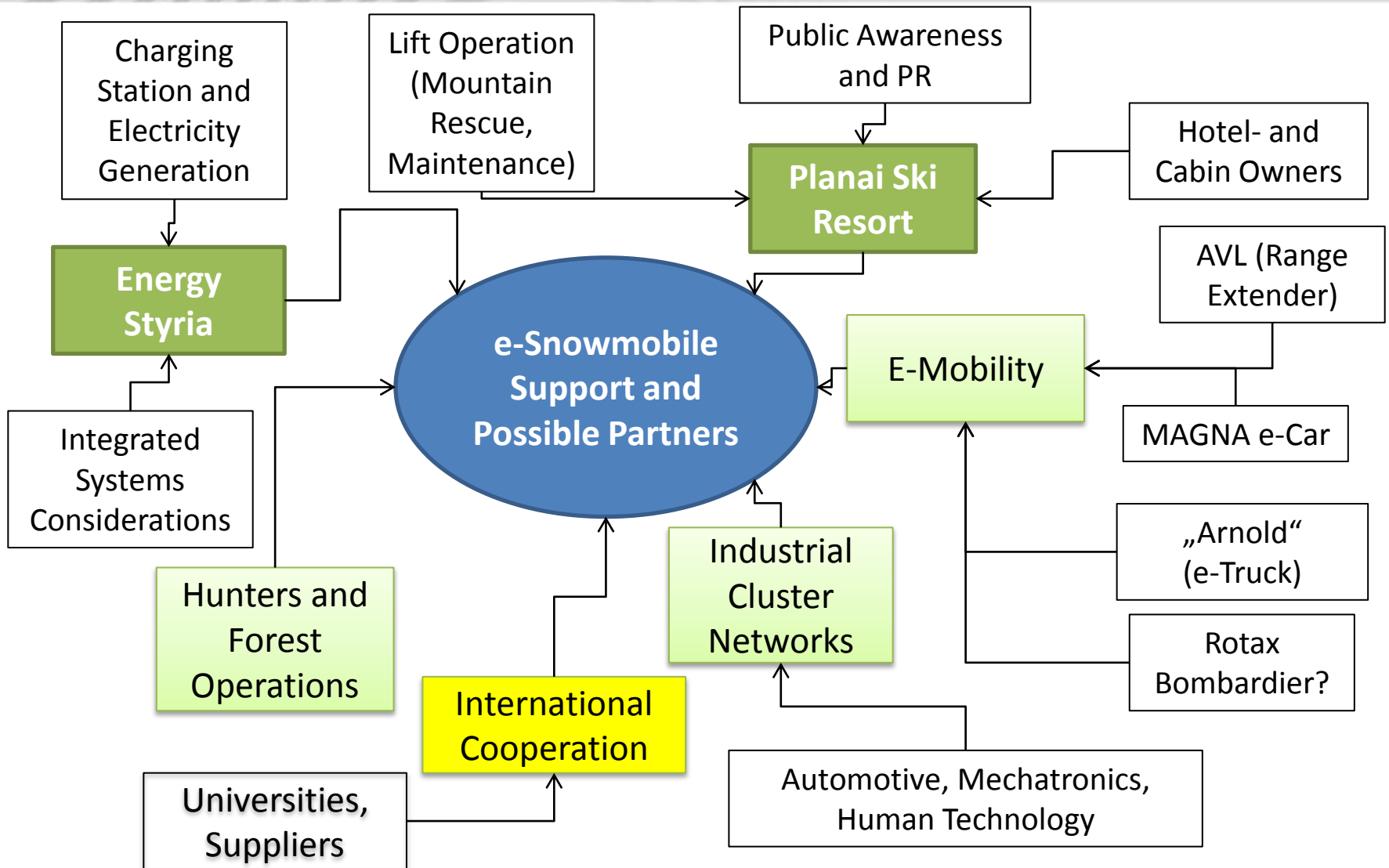




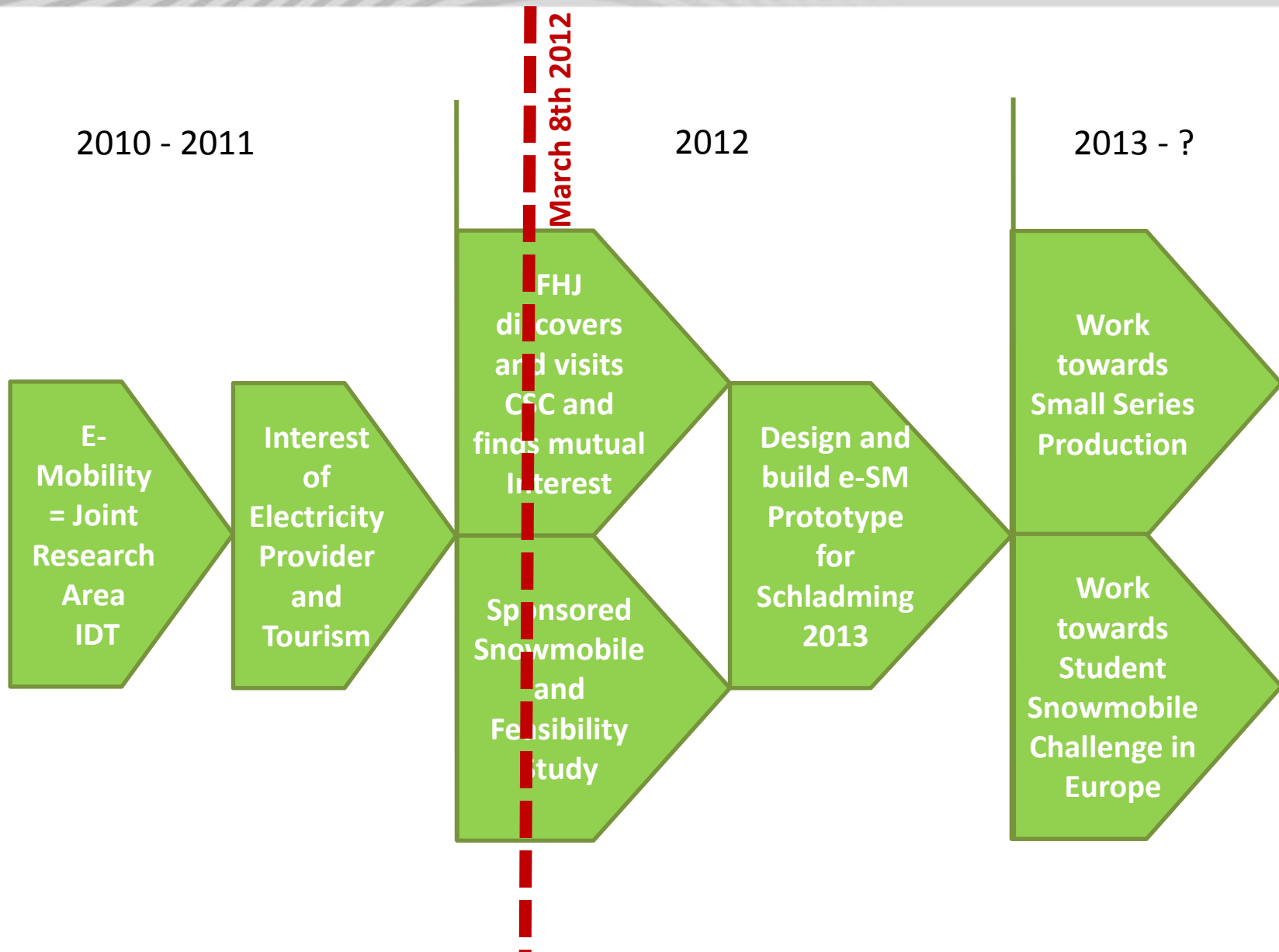
## Objective 2: Address E-Mobility critical Issues



## Objective 3: Involve new Partners and Stakeholders



# Timeline of FHJ Electric Snowmobile Initiative





# Electric Snowmobile Team

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Johannes Haas  
Gerhard Walenta  
David Schneider  
Helge Hochrinner  
Karl Heinz Reisinger  
Gernot Knoll

Production Engineering  
Production Engineering  
Production Engineering  
Production Engineering  
Automotive Engineering  
Electronic Engineering

Head of Department  
Project Manager

## Requirements:

**Maximum speed:**                      **30 kmph (18.6 mph)**

• **Climbing power**                      **finish slope of Schladming downhill race**  
   **≈ 100% (45°) (min. 2 persons)**

• **Exchangeable batteries**

• **Clients**

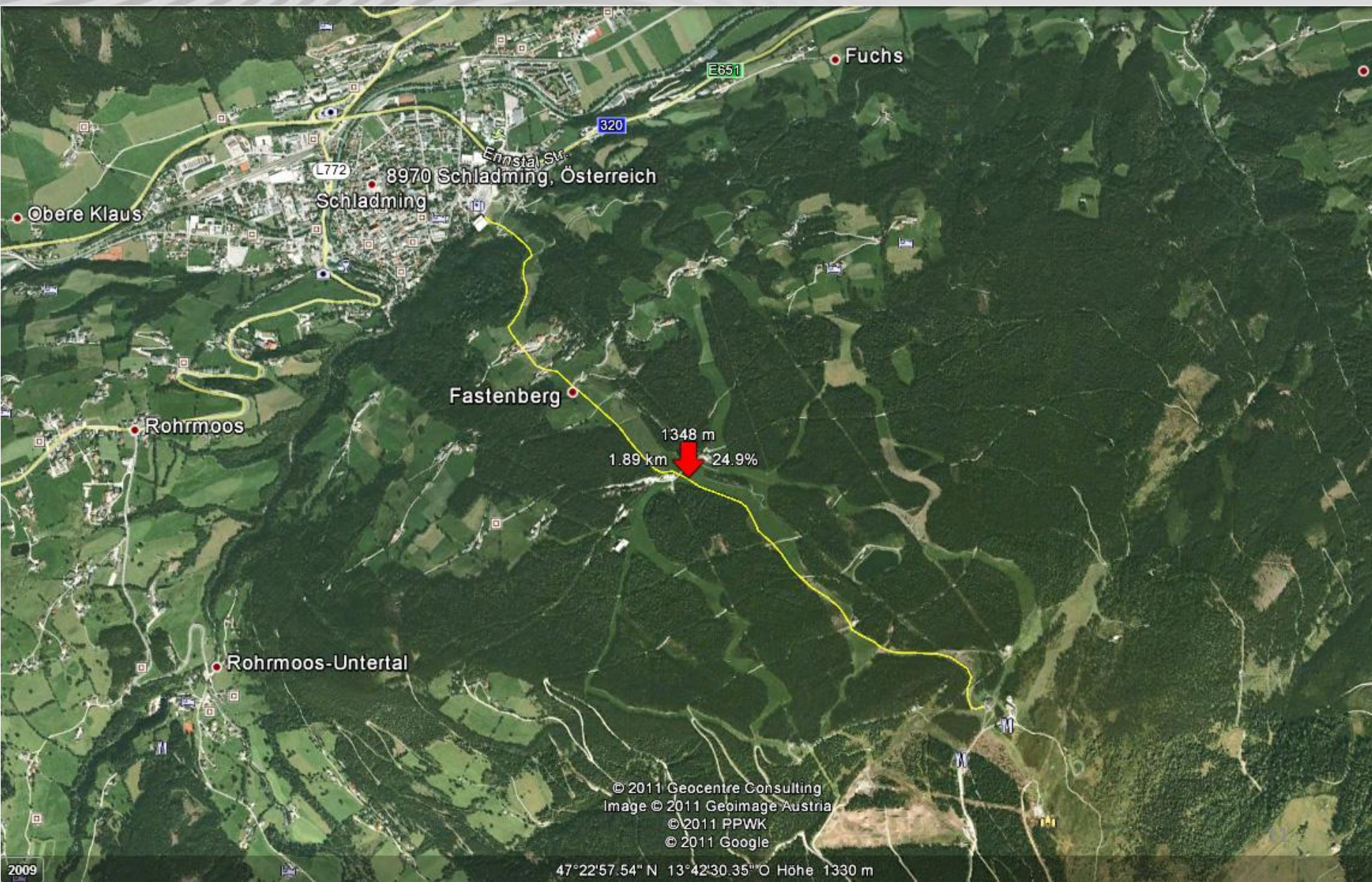
- **Mountain rescue**
- **Maintenance of ski lifts and snow production equipment**
- **Material supply of alpine cabins and tourism facilities**
- **Hunters**



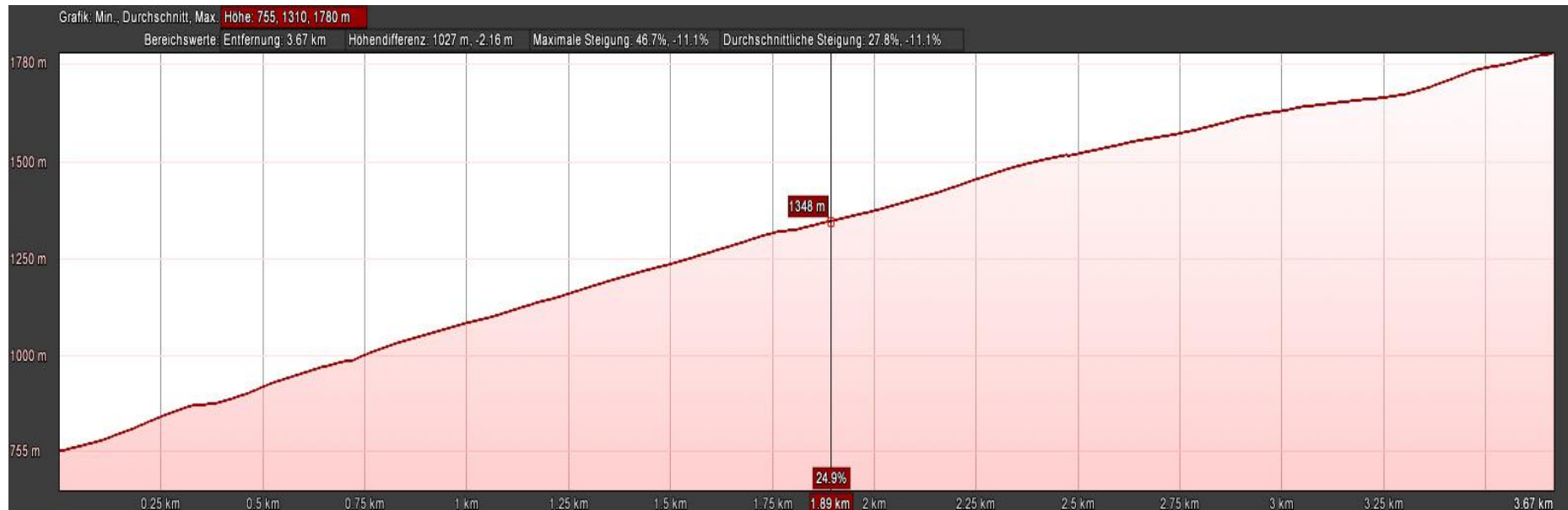
# Schladming Downhill Race Slope

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# Inclination Profile



Average inclination:

27.8 %

Length of slope:

3.67 km (2.28 mi)

Height:

1,020 m (3,347 ft)









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racing graz

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H. HOCHWURZEN

Kat 1317

# done !



# ..but let's not forget our mission!

## We want

1. .... students and faculty to learn from experience, from and with each other and across department boundaries and oceans.
2. .... to facilitate cooperation of all departments in our college (IT, Design, Engineering) through R&D on E-Mobility .
3. .... to use winter tourism as an attractive „playing ground“ outside traditional and already occupied fields to address critical issues.
4. .... to involve new and attractive partners for brain storming, problem solving, realization and funding.