

**“Global/Local Innovations for Next Generation Automobiles”
General Lecture**

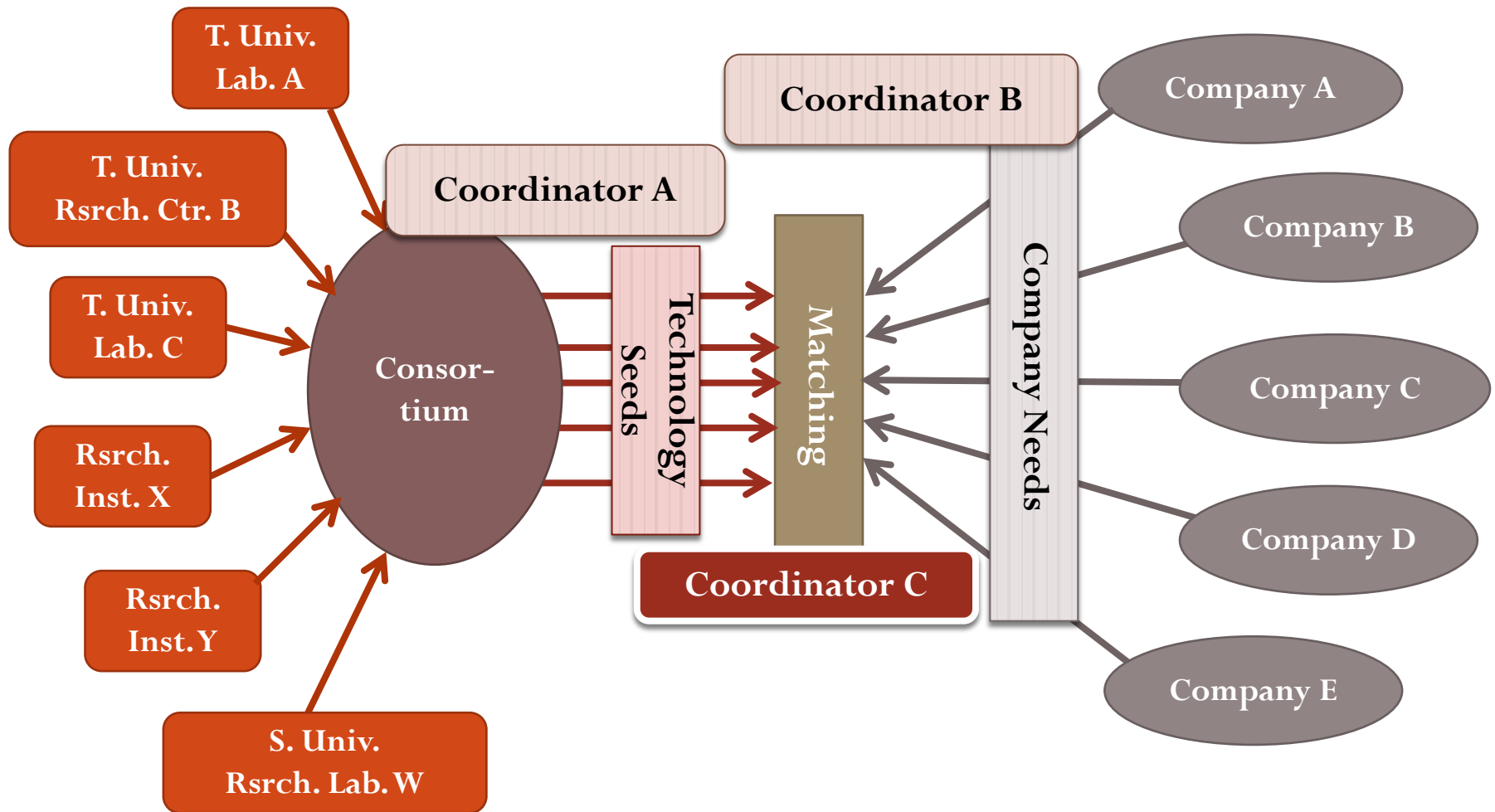
Industry-Academia Collaboration

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One of 3 Primary Projects under Next Generation Automobiles-Miyagi Prefecture “Building-up Network of Knowledge”



Things preventing effective collaborations between Regional Companies and Univ. Labs.

For “Local Innovation,” collaborations between Regional Companies and Univ. Labs. are of essence.

In Miyagi pref.,

T.U. is one of Japan’s most leading Univs.

- Highly advanced, leading-edge “science & technology”



Many of Regional Companies are small-mid sized.

- Have no research function
- Facing with day-to-day technological problems
- Need easy-to-practice, feasible techniques

Big gap between them

Things preventing effective collaborations between Regional Companies and Univ. Labs.

Lack of communication

- Regional Companies do not know how to communicate with Univ. Labs.
- Regional Companies do not know much about what Univ. Labs. are doing.
- Regional Companies are hesitant about knocking on Univ. Lab.'s doors.

Profs. are too busy.

- Univ. Lab.'s doors are always open but....
- Profs. are ready to welcome Regional Companies' visits but....
- Profs. are prepared to help Regional Companies but....

Present Outcome of Coordination

- Reduction drive system having magnetic planetary-gear mechanism
 - Electro-magnetic brake
 - Electro-magnetic clutch
 - All solid Li-battery
 - Hot-chamber die-casting machine
 - Fine processing of die and mold
 - Tools for CFRP processing
 - Burr-less processing
- etc.

For better collaboration for Local Innovation

Thus,

- **Regional Companies do not need to hesitate to knock on Univ. Lab.'s doors.**
- **Because Profs. are busy, Regional Companies should:**
 - **clearly identify their technical needs and what kind of help they need,**
 - **think of sending their employees to Univ. Labs. to develop necessary technology with help of Profs.**

Further,

- **Regional Companies should appeal their unique technology to Univ. Labs.**
- **Jointly find-out areas for possible collaborative works**