

Growing Technology Transfer/Commercialization Opportunities in the Mountain State:

Technology Transfer at West Virginia University

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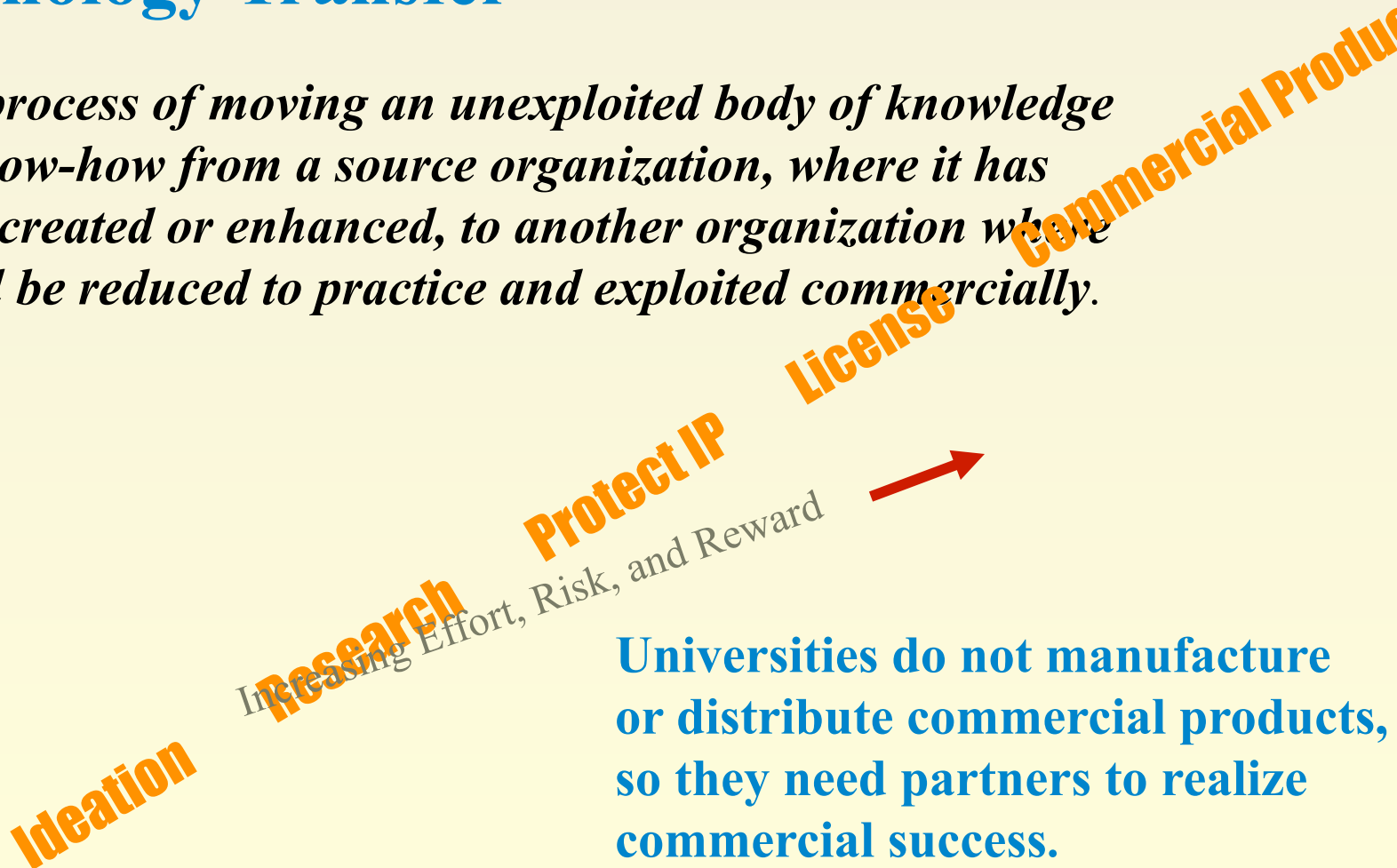
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Technology Transfer at Universities

➤ Technology Transfer -

The process of moving an unexploited body of knowledge or know-how from a source organization, where it has been created or enhanced, to another organization where it will be reduced to practice and exploited commercially.



Universities do not manufacture or distribute commercial products, so they need partners to realize commercial success.

Functions of WVU Office of Technology Transfer (OTT)

➤ **Manage Intellectual Property Portfolio**

- Review invention disclosures~(40-50 per year)
- Perform prior art searches
- File and prosecute patent applications
- Manage external law firms

➤ **Commercialize WVU Technologies**

- Assess commercialization potential
- Market technology to external parties
- Draft license agreements

➤ **Develop New Business Opportunities**

- License technologies to external partners
- License technologies back to researchers to spin-off new companies

➤ **Educate the University Community about Tech**



Marketing WVU Technologies

➤ Passive Marketing

- OTT Web Page - Patented and patent pending technologies are described to attract potential licensees.
- Wellspring Flintbox Web Page - Technologies available for license are described where companies can browse.

➤ Active Marketing

- Tremonti Consulting - WVU OTT has recently expanded its marketing efforts by contracting Tremonti to perform independent commercialization assessments and engage in active marketing of WVU technologies.
 - Tremonti assesses technologies based on market space, technical relevance, and state of development.

Linking Innovation, Industry and Commercialization (LIINC)

- Multi-year grant managed by Ms. Lindsay Emery
- Funded by the Claude Worthington Benedum Foundation

Goals of the LIINC Program

- Enhance entrepreneurial activities between students, faculty, and industry
- Expand the research enterprise
- Expand economic development
 - Increase intellectual property related activity
 - Increase licensing of WVU technologies
 - Increase jobs and opportunities for graduates, current students,

LIINC: It's About Growing the Innovative Culture...

➤ Identify Best Practices

- Visit technology transfer offices at other universities
- Interact with consultants in the field to learn trends

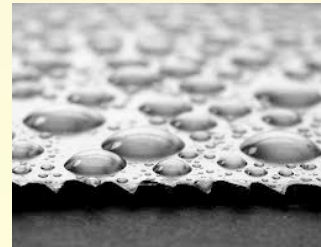
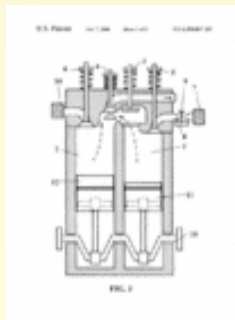
➤ Disseminate Technology Transfer Information

➤ Facilitate Faculty/Researchers/Student Interaction with Industry Representatives

- Organize on-campus dinner/mixers
- Host receptions with poster sessions and industry speakers
- Adjoin existing events/speakers
- Visit industrial facilities to engage in technology exchange

Some Recently Licensed WVU Technologies

- **Conjunctival Biometrics** -Univ. of Missouri Start-up
- **Biometric Liveness Detection** -NexID Biometrics
- **Air Injection Engine** -Iron Bay Modeling Co.
- **Hydrophobic/Oleophobic Coatings** -Europtec
- **Coal to Crude Oil** -Quantex Energy



WVU-Quantex Energy License

- Quantex Energy is a well-funded start-up
- Technology focused on the liquefaction of coal (coal to crude oil and other carbon products).
- Quantex is committed to further research and building commercial operating units based on WVU technology.
- Initial laboratory was on the WVU campus, but now have a separate pilot plant building in Morgantown with approximately 20 employees.
- If pilot trials are successful, can begin licensing the process in other countries.



Some Up and Coming WVU Technologies

➤ Improved Battery Technologies



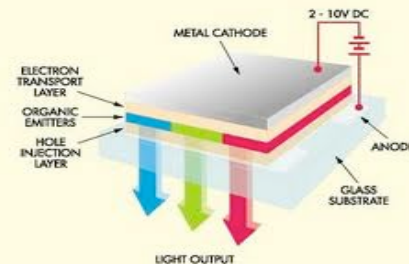
➤ Synthetic Diamonds



➤ Layered Solid Sorbents for CO2 Capture

➤ 3-Dimensional Ultrasonic Diagnosis of Gingivitis

➤ Improved Organic LED's



Additional Related Initiatives at WVU

- **WVU President Clements is a member of the US Dept. of Commerce Innovation Advisory Board**
- **WVU 2020 Strategic Plan**
Goal 2: Excel in research, creative activity and innovation, in all disciplines.
- **Research Round Table** — senior WVU administrators
Charge 3: Ensure that the research mission is appropriately engaged with graduate and professional education, undergraduate research, global endeavors, and economic development.
- **Innovation Task Force** — WVU STEM fields, medicine, and business administrators
 - Identifies and articulates strategic recommendations to improve WVU's economic impact on the state through research, innovation and commercialization.

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