Developing and Supporting Associations of Technology Transfer Professionals & Quantitative Assessment

Regional High-Level Summit for University Presidents and Senior Policy Makers on EIE

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Dr. Ashley J. Stevens
President
Agenda

- Why do you need an Association
- The AUTM Experience
- Models
- The Roles of an Association
- Corporate Structures
- Running the Association
- Membership models
- What we need from Senior Leadership
Why Do You Need an Association?

- To talk to each other
  - Mutual support
  - Problem sharing
    - Solution sharing
  - Professional development
- To talk to Government
  - Demonstrate success
  - Ask for support
  - Ask for legal / policy changes
- To talk to Industry
  - Address systemic / legal issues
Why Do You Need an Association?

- To talk to Society
  - Journalists
  - Local communities
- To talk to the international community
  - Intergovernmental agencies
  - NGO’s
  - The tech transfer community
    - To be a member of ATTP
The AUTM Experience

- AUTM was founded in 1974
  - 6 years before Bayh-Dole
- Called Society of University Patent Administrators (SUPA)
- Seven founders
  - Individuals at pioneer universities active in tech transfer
  - Decided tech transfer needed a different organization than NCURA / SRA
- Initial purpose
  - Lobby for a uniform government patent policy across all agencies
    - Led to Bayh-Dole Act in 1980
- First Annual Meeting
  - 1975 in Chicago
  - Then held in Washington, DC
AUTM Milestones

- 1975  First Annual Meeting
- 1978  First draft of Bayh-Dole Act
- 1978  Affiliate Members added
- 1980  Bayh-Dole Act passed
- 1981  Newsletter started
- 1984  First educational meeting
- 1989  Name changed to AUTM
- 1993  Rapid growth in membership and meeting attendance
- 1993  Regional meetings started
- 1993  AUTM Annual Survey launched
- 1994  Tech Transfer Practice Manual published
- 1995  Website launched
AUTM Milestones

- 2010  Global Technology Portal launched
- 2013  TransACT Database launched
Conclusion

- Rome wasn’t built in a day
  - You don’t have to everything at once
- Get started and grow organically
The Roles of an Association

- Networking between institutions
- A point of contact with stakeholders
- Professional development
  - Training courses
    - Arrange for international training
      - For community leaders
    - Develop local curricula
      - For entry level personnel
- Help with marketing technologies
  - Portal
    - Example later
The Roles of an Association

- **Metrics**
  - More later

- **Credentials**
  - Membership in ATTP
    - Allows your courses to award CLE’s towards RTTP qualification
Corporate Structure

- Eventually will want to be incorporated
  - Can’t have a bank account till incorporated
  - Non-profit
    - AUTM is a non-profit corporation
  - Will need to write by-laws and Articles of Incorporation
    - Models exist and can be borrowed and adapted to local needs
- But you can start more simply
Unincorporated – MATTO

- MATTO
  - Massachusetts Association of Technology Transfer Offices
  - Founded at a meeting of the Massachusetts Life Sciences Cluster
    - 2001
    - Organized by Michael Porter
      - Harvard Business School
  - EVERYONE was there
    - Five TTO Directors were there
    - First Porter said: “One of the strengths of the cluster is the efficiency of knowledge transfer.”
      - We felt good!
    - Then he said “One of the things the Cluster could do better was to improve the efficiency of TECHNOLOGY transfer.”
  - We said “WHAT DID HE JUST SAY?”
    - “In front of our bosses?”
MATTO

- At next coffee break the five of us said: “We have to organize, find out why he said that and respond.”
  - Founded MATTO
  - Took four months, but we determined that Porter had been lying through his teeth
    - When we eventually got our hands on the raw comparative data it showed we did tech transfer BETTER than the four clusters he was comparing Massachusetts with!
  - Kept MATTO going
  - Initially, forum for Directors
    - Met at one of our offices
    - Host provided coffee and cookies
MATTO

- Today:
  - Now 18 years old
  - 28 major research institutions in Massachusetts
  - All with TTO’s
    - Employment >300
There was a parallel state organization
- The Massachusetts Technology Transfer Center
  - Provided administrative support
- Together we created the Massachusetts Technology Portal
  - Cost $15,000
  - MTTC put up half
  - MATTO members contributed the balance
    - Six offered $1,000
    - Three offered $500
- Still operational
  - Updates automatically, daily
- The model for AUTM’s GTP
MATTO

- Another MATTO project
  - A Joint Invention Agreement (JIA)
  - Paid Joyce Brinton to do it
    - Retired Director of Harvard for 25 years
  - Very good
- Today:
  - Still unincorporated
  - Still operates the Massachusetts Technology Portal
  - Still organizes educational seminars every two months
  - Still a forum for Directors to connect
Membership Models

- Institutional Membership
  - Individual academic institutions are the members
    - Each institution can have as many staff members participate as it desires
- Individual Membership
  - Each individual pays a membership fee
    - Generally reimbursed by their institution
- Institutional membership likely to be preferable in emerging economies
  - Allow full participation
Financing

- Initial costs are modest
- First Annual Meetings can be low cost
  - Host at a university
  - Host provides catering
    - Requires management buy-in
- Finance next stage through modest annual dues
  - Annual Meeting can generate a modest profit
Running the Association

- **Phase 1 – Volunteer**
  - President and Board divide up responsibilities

- **Phase 2 – Paid Volunteer**
  - President makes a formal time commitment and is paid for his / her time
  - E.g., KCA – President and their Administrative Assistant each 1/3rd time for KCA
  - AUTM shared Penny Dalziel with LES

- **Phase 3 – Full time individual**
  - Paid by Association
    - E.g., LES outgrew Penny
    - AUTM used her full time from 1988-2001

- **Phase 4 – Association Management Company**
  - E.g., AUTM has used Sherwood Group since 2002
  - Now Kellen Group
Success Factors

- Must be practitioner-driven
- Takes a leader and a committee of committed volunteers
- Initial funding needs modest
- Start small
  - Just one or two meetings a year
  - Strategic plan to grow
    - Add new functions incrementally
- Engage with government
  - Invite to be keynote speakers
- Claim every success, no matter how small
What Do We Need from Senior Leadership?

- Understand and support the concept of a tech transfer association
- Pay dues to support it
  - Either for an institutional membership
  - Or reimburse dues for individual TTO employees
- Encourage your Director to take a leadership role
  - Reimburse travel costs
  - Allow modest time allocation
- Speak at Meetings when asked
  - Mary Sue Colman came to AUTM Annual Meeting
    - Said:
      - It’s not about the money (though we do expect to be fairly compensated
      - Go back to your colleges and campuses and tell your Presidents and Provosts I said: “You’re doing God’s work”
Metrics
Agenda

- Why do we need to collect Metrics?
- What do we mean by Metrics?
- AUTM and Metrics
- Some success stories of Metrics
  - Denmark
  - UK
- WIPO’s upcoming Metrics Initiative
Why do we Need to Collect Metrics?

- Individually
  - For internal use
- Collectively
  - Contributing internal data to Surveys
Why do we Need to Collect Metrics?

- Every manager should collect data on their operations
  - Inputs
    - Resources
      - Financial
      - Human
  - Outputs
    - Results
    - Impacts
- Senior Leadership will demand data
  - You will want presentations on your TTO’s operations
  - Particularly at budget time!
Why do we Need to Collect Metrics?

- Tech transfer is no exception
  - When I got to both Dana-Farber and Boston University, found my predecessors had done a poor job of documenting and presenting their results
  - Improved presentation of results led to improved budgets
    - And increased visibility within the institution
Why do we Need to Collect Metrics Collectively?

- For internal use
  - How do we compare with peer-group institutions?
  - Where do we need to improve?
- To communicate with stake-holders
  - Senior Leadership
  - Trustees
  - The Press
  - Government
  - Critics
What do we Mean by “Metrics”

- Metrics isn’t just about numbers
  - Stories are important too
    - The plural of “anecdote” is “data”
      - Ray Wolfinger, political scientist
  - Case studies are an important way to capture impact
- AUTM’s early surveys were purely quantitative
  - The Press just focused on income
    - Led to negative public viewpoints
  - Started introducing stories
    - Improved public comment
The AUTM Licensing Activity Survey

- AUTM Survey launched in 1993
  - Collected data for 1991 and 1992
    - Could immediately see trends
  - Has evolved over time
- Royalty income was a very sensitive issue
  - AAU concerned that NIH funding would be reduced if royalty income was seen to be high
  - High level politics
    - AUTM President threatened with loosing his job if AUTM went ahead
- AUTM went ahead anyway
  - He kept his job!
- 120 Respondents
  - 34 (28%) requested confidential treatment in 1993
  - 2 requested confidential treatment in 1994
The AUTM Licensing Activity Survey

- Has become one of AUTM’s flagship activities
  - AUTM data so good, government doesn’t collect data
    - Uses AUTM data
  - Now have 27 years of relatively consistent data

- Over time, AUTM has:
  - Refined data set
    - Better data on royalty income
    - Start-up data
  - Eliminated irrelevant questions
  - Experimented with and rejected dead-ends
    - Equity valuation
    - Division by type of technology
What the AUTM Survey Is and What it Isn’t

It is:

- A long term set of relatively consistent data on technology transfer:
  - Inputs
  - Outputs
  - Results
- Macroeconomic -- aggregated at the institutional level

It isn’t:

- Microeconomic -- no data on individual transactions
  - Licensing terms
  - Financial terms
- Have addressed this through the TransACT database launched in 2013

It does:

- Provide information and long term trends in collective licensing practices
  - Low hanging fruit of the data on individual OTT operations
- Provide the basis for future further analyses; particularly when combined with additional data
Data Collected

- Characteristic of Institution
- Inputs
  - Personnel
  - Research funding
  - Legal fees
- Outputs
  - Invention disclosures
  - Patent applications and issuances
  - Licenses and options
- Impact
  - Income
  - Start-ups
  - Products launched
  - Success stories
Lessons Learned

- **KISS**
  - “Keep it Simple, Stupid”  
    
    *Kelly Johnson, Lockheed Skunk Works*

- You can over-complicate things
- You can ask too detailed questions
  - Respondents will balk if things get too bulky
    - And not reply
    - Survey fatigue

- Once people have set up systems to respond to a survey, there’s an inertia to add new systems to answer additional surveys
- There are websites available for conducting surveys now that weren’t available in 2003
  - SurveyMonkey
Lessons Learned

- It’s more than about the numbers
  - Press frequently focused on royalty income
    - A very poor metric
      - Lags all the other outputs
        - Licensees take time to develop technologies
  - But it was out there and we couldn’t stop them
- Started adding stories
- In 2006, AUTM launched the “Better World Report”
  - Collection of stories
    - The very name sets the tone of the conversation
      - Tech transfer improves the world
    - Initially published annually
    - Now an on-line resource
      - [https://autm.net/about-tech-transfer/better-world-project](https://autm.net/about-tech-transfer/better-world-project)
    - Over 450 stories
The Impact of the AUTM Survey

- Has shaped the surveys of many other organizations
  - PraxisUnico
  - ASTP
  - KCA
- It collects the key metrics people want
  - Would like more data on Impact
- Is U.S.-centric
  - Needs some additions for non-U.S.:
    - E.g.:
      - Assigning patents
        - We rarely do that in the U.S. because of Bayh-Dole
        - Outside of U.S., considerable pressure to assign
      - International research funding important outside U.S.
        - E.U., NGO’s, World Bank, etc.
Case Study – Denmark

- Denmark used to have the Professor’s Privilege model
  - Common in Europe
- Transitioned to an Institutional Ownership model in 2000
- Government acknowledged that this would impose significant cost demands on universities
  - Agreed to fund technology transfer activities for 5 years
- Collected data from outset
  - 2000-2003
    - Inside Consulting, funded by Ministry of Science, Technology and Innovation
  - 2004 and on
    - National Network for Technology Transfer (“techtrans dk”)
- Metrics based on the AUTM Survey
Case Study – Denmark

- Initial performance of Danish universities was relatively poor
  - Understandable
    - A new activity
    - New organizations
    - New people
- Data showed a steady improvement year-by-year
- After five years, government funding was due to end
  - Income was still well below expenditures
    - Trends were very positive
  - Government agreed to continue funding for another five years
- Denmark now has a robust, stable tech transfer ecosystem
Case Study – Denmark

**Learnings:**
- Politicians respond to data
- Collect data from the very outset
  - Initial results will be bad
  - Show positive trends from Year 1
    - AUTM collected 2 years worth of data in the 1993 Survey
      - Immediately got trends
Case Study – U.K.

- In wake of the 2008 GFC, U.K. government ordered 25% across the board spending cuts in 2010
  - Including university research
- Tony Raven, then at U. of Southampton, and Tom Hockaday, then Isis Innovations (Oxford), had data on their spin-out history
  - Approached me for data on longevity and stickiness of university spin-outs
    - Questions in the AUTM Survey
  - Combined the two
    - Made the case to the government that university research translated to substantial economic development very quickly
- Academic research was explicitly exempted from the 25% cuts
Case Study – U.K.

Learnings:
- PraxisUnico has outstanding relations with U.K. government
  - Key officials attend every meeting
  - Could gain access to decision makers
  - Data had credibility

Subsequent Events:
- Beware of what you wish for, for you may get it!
  - U.K. government started to say to universities:
    “You’ve been telling us that if we funded your research, you would positively impact society. We believed you and funded you. Now show us that you have positively impacted society.”
- Research impact is now a major component of 5-yearly research assessment that determines research funding
  - Australia following suit
WIPO’s EIE Metrics Initiative

- In planning stages for a year
- Launching in 2019
- Led by John Fraser
  - Assisted by me
- Fits logically within the framework of another WIPO EIE 2019 initiative
  - The Association Initiative
    - Led by me
    - Assisted by John Fraser!
  - The Metrics Initiative
    - Led by John Fraser
    - Assisted by me!
WIPO’s EIE Metrics Initiative

- Plan is for EIE to conduct the Survey
  - Association tells us which institutions to include
    - Provides email addresses for respondents
  - EIE turns over the compiled data to the Association to write the analysis and publish the Survey
What Do We Need from Senior Leadership?

- Require your office to participate in the EIE Metrics Survey
Thank you for listening

Questions?

astevens@bu.edu