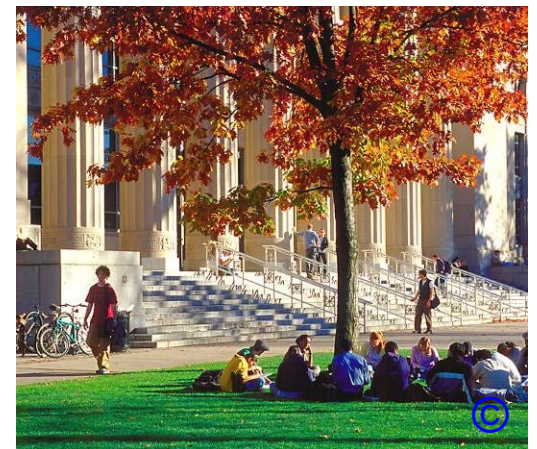




Premarital Mentoring - Building a Successful Company-University Alliance Sept. 27, 2017



**Ed Krause
Global Manager,
External Alliances
Ford Motor Co.**



Topics

- Background
- Dispelling romantic myths
- Picking the right partner
- The pre-nuptial agreement
- Marriage - Trust vs. Transaction
- Being a good partner
- Dealing with problems

Ed Krause Background

- Son of a Math Professor
- BSE, MSE in Materials Science and Engineering
- R&D Manager
 - Hired academic consultants
 - Advisory committees since ~1990
 - A lot of experience going from idea to profitable production
- University Research Program (URP), program manager
 - Global program, >850 awards to >120 universities worldwide
- Alliance Manager
 - Developed, launched and managed company-university alliances
- Global Manager, External Alliances
 - 1500 projects and counting
 - 11 large and 12 small alliances



Ford Motor Company Today: A Global Presence

- 201,000 Employees
- 200 Markets
- 65 Plants
 - 23 Countries
 - 6 Continents
- 2 Major Brands
 - Ford
 - Lincoln



Interacting with Universities

- Recruiting
- Continuing Education
- Philanthropy
- Collaborative R&D

Ford's University Collaborations

- 60+ years
- Strong CEO & CTO support
- Version 1.0 Alliance with MIT launched in 1998
- Version 2.0 Alliance with Michigan launched in 2006
- Version 3.0 Alliance model broadly adopted 2016
- Rapidly growing activities
 - 11 large Alliances
 - 12 smaller Alliances
 - URP



Why does Ford do Collaborative R&D with Universities?

- No company has sufficient internal resources to secure technical leadership in all areas of interest
- Companies the most effectively leverage world-class external partners will gain a competitive advantage

Working with Universities

- Engineer
- MBA
- Negotiator
- Diplomat
- Translator
- Strategist
- Marriage broker
- Marriage mentor
- 60-90% soft skills

Challenging to Organize...

- Distilling and curating 17+ years of experience
- Strategic vs. tactical
- Project management vs. relationship management
- Co. – U interaction is messy
 - Universities turn money into knowledge
 - Companies turn knowledge into money
 - Universities publish, companies produce
 - Academia is collaborative, businesses competitive
 - Incentives and rewards are vastly different
- But we both want to make the world a better place, though our priorities may differ in some respects
- Win-win greatly benefits both academia and industry
- Right partner versus right behavior

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Myth 1

"My university is exceptionally industry friendly"

"My university is exceptionally good at interdisciplinary work"

Myth 2

"There is a major conflict between theoretical work and applied work"

Myth 3

"The university is going to get rich from royalties or start-ups"

Myth 4

"Better terms for company means worse terms for the university"

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Picking the Right University Partner

- President, VP of Research, and relevant deans
 - Pro-business or anti-business?
 - Aligned?
- Corporate relations
 - Friendly?
 - Competent?
 - Valued by university?
- Faculty culture
 - Cooperative?
 - Reward system?
- Technology Licensing Office
 - Partner or predator?



Picking the Right University Partner II

- Industry money valued as much as government money?
- Understand the terms and conditions is not a zero-sum game – win-win?
- Understand that the Corporate Relations function is a cost of doing business, not a profit center?
- Predisposition to view industry partners as collaborators and joint inventors or simply funders?

Picking the Right University Partner III

- TLO focus on bringing in research \$ or royalties and startups?
- Understand broad middle ground where theoretical and applied work overlap?
- Universities are not businesses and businesses are not universities?
 - Vive la difference!

Beware the Academic/Government Complex

- 80-90% of university research funding comes from the federal government
- Research universities are designed around getting government funding
 - Industry is the poor stepsister
 - Nobody likes to be treated like a second-class citizen
 - With good partners you never see this
- European, Australian and Asian universities are much more industry focused



Picking the Right Company Partner

- Good track record?
- No experience but teachable?
- Be wary of companies with a bad track record
- Has dedicated University Program Manager?
- University Program Manager has dedicated budget, not merely an internal consultant?
- Institutionalized not personality driven commitment to university work?
- CTO support and direct involvement?



Picking the Right Company Partner cont'd

- Understand and is clear about their goals for university collaboration?
- Have metrics to justify university spending?
- Patience...?
- Companies vary far more widely than U's in relationship competence

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Alliance Agreement

- Unlike a real marriage, you do need an agreement
- Agree in principle before involving the lawyers
- Should be designed to fast-track implementation
- Pre-negotiate as much as possible
- Safeguard key priorities for both partners
- Understand the limitations – the best agreement cannot protect you against an unethical, incompetent or angry partner and a flawed agreement will work with a good partner
- The better the relationship is working, the less you refer to the agreement

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Trust vs. Transaction

- Transaction based relationships are not exceptional or durable
- Like a real marriage it isn't 50-50, it is 100-100
- You must actively look out for the other partner's best interest
- You must always seek win-win
- Compromise is a poor substitute for win-win – compromises weaken a relationship
- Win-lose behavior leads quickly to divorce

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Three's a Crowd - Beware Consortia

Multiple companies, with (usually) or without government involvement (\$\$) working with university(ies) pooling funding to execute a collaborative research portfolio

- Universities like these
 - A lot of money
 - Ongoing and predictable
 - A lot of connections
 - Limited accountability
 - What's not to like?

Consortia – The Good



- Significant government funding
- Leveraged industry funding
- Shared expertise
- Precompetitive
- Cooperative
- And they all lived happily ever after...

Consortia – The Bad

- Government funding
 - Strings attached
 - K-12 education etc.
 - Small business set-aside
 - Solve world hunger while you're at it...
- Designed by committee
- Creative faculty work repackaging
- Significant time and effort on committee work
- Real value of government \$ is heavily discounted



Consortia – and the Ugly

- Competitors
 - Guarded expertise
 - Tug-of-war
- Too many cooks in the kitchen
- "When you have more than one boss, you don't really have a boss."
- Better for followers than for leaders
- The bigger the (not) better
 - Moon shot
 - Silver bullet



Consortia – Lessons Learned

- More work than expected
- Staying precompetitive is a challenge
- Avoid competitors when possible
- Faculty are typically soloists rather than team players
- IP terms are at best marginal – watch the fine print
- Typically more monitoring than collaboration
- Sometimes they make sense – standards
- We typically do this more as a favor to a good university partner
- Any successful "marriage" needs to be based on bilateral projects not consortia

Corporate Relations

- A big difference maker – force for good
- Top-tier universities differ more widely here than in research excellence
- Non-PhD's tend to make better CR relationship managers
- No "pay to play" model
- This is a cost center, not a profit center



University Relations

- This is a job for professionals
 - It has to be someone's day job
 - Not an executive swan song assignment
 - Not a rotational assignment
 - Not a committee of part-timers
- Companies also differ widely here, more so than universities
- Companies must be patient

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When Problems Arise

- Each institution needs an alliance manager who “owns” the relationship as a whole
- Have regularly scheduled "operating committee" meetings
- Discuss potential problems beforehand or as early as possible
- Corporate Relations and University Relations need to do respective preventive damage control within their respective organizations
- If at all possible, don't fall from a trust into a transaction-based relationship
- Admit mistakes, apologize
- Forgiveness is absolutely essential

Final Thoughts

Nature or Nurture?

Are good partners born or are they developed?

- Back to the marriage analogy – Do you have a good marriage because you picked the right spouse, or because you both work very hard at making the relationship great?
- There are certainly a lot of behaviors that can be taught and learned
- But there is no substitute for picking a compatible partner
- Even then, it takes a lot of work
- And it takes commitment, “for better or for worse” not to break up at the first sign of difficulty
- It is worth the effort!

Good Luck!





Questions?