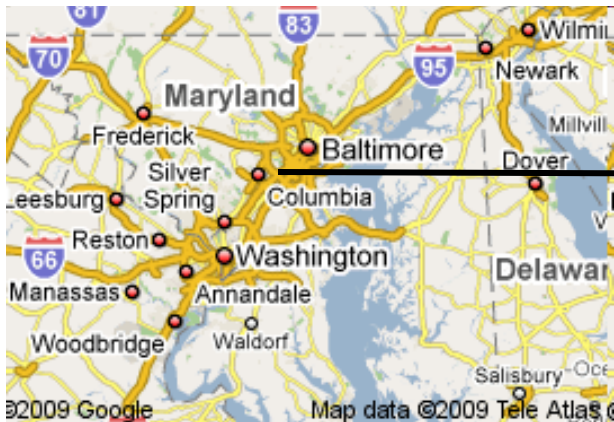


# Building and Managing IP Portfolio

**Surya Raghu**  
**Advanced Fluidics LLC &**  
**ET Cube International**

WIPO EIE Project  
Kuala Lumpur, Malaysia  
April 16-20, 2018



# OUTLINE

Some action items for TTO to build and manage IP portfolio?

Creating Exploitable IP

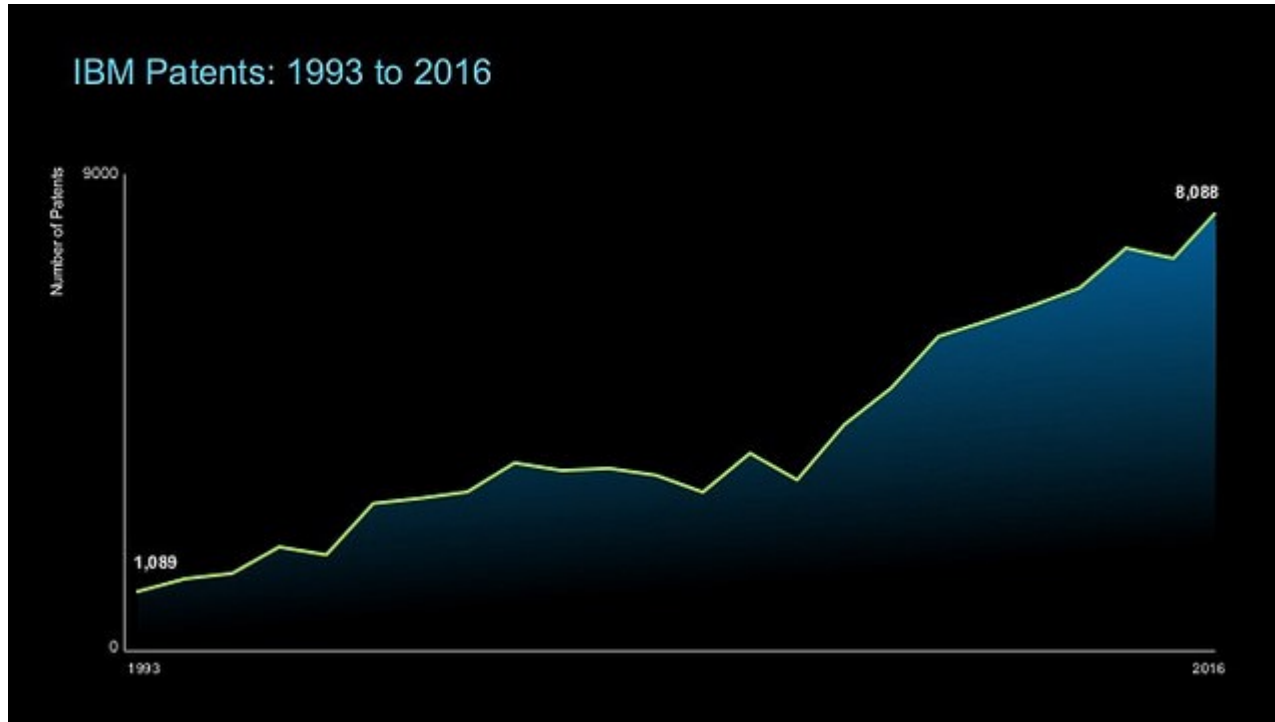
PatentScape and TechScape

IP donations

Managing Risks

Discussion and Conclusion

# Yearly Patents for Large Industry



<https://medium.com/@IBMResearch/why-we-patent-66ce5a986331>

# Creating Exploitable IP

## Industry Patent strategies: Offensive and Defensive

Offensive	Defensive
Block competitors from gaining entry into your technology and business sector	Only defend your business area
File patents for all reasonable inventions in that field of technology	File for patents only necessary for your business
Create aggregated patent portfolio for licensing or sale	Not interested in selling patents
Patent trolls??	

# University Strategy

## **Exploitable IP**

We cannot afford industry-style offensive or defensive strategies

**Develop a strategy for marketing highest value-added technology**

# University Strategy

**Develop a strategy for marketing highest value-added technology**

Invention should have near-term application (in sight)

Higher TRL for a strong patent

Market size

Potential licensing path – contacts and relationships with the right industry

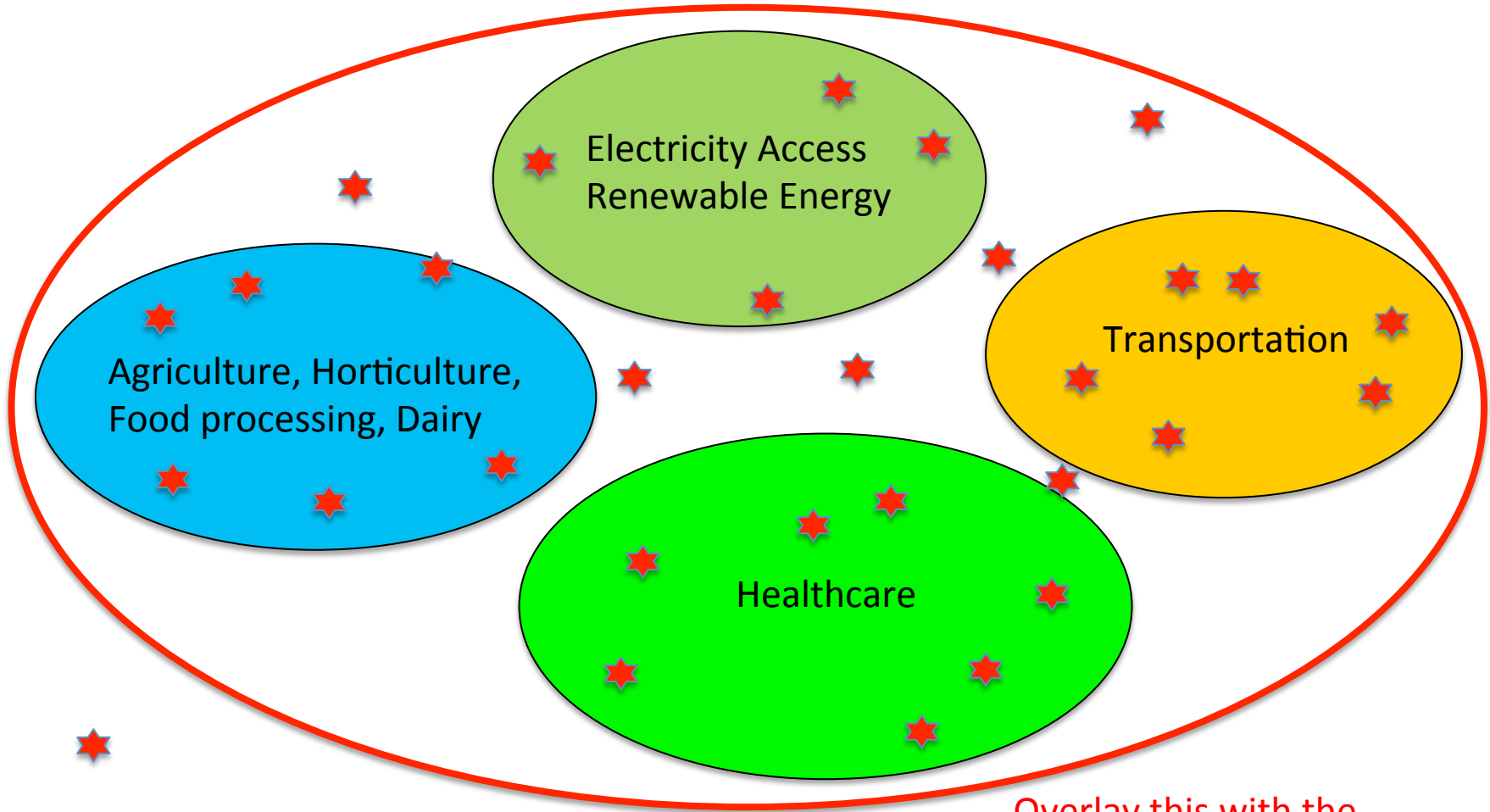
# Creating a **Patent** Portfolio

Creating a **portfolio of related patents** will provide a better package for marketing

Example: Chemical compound + method of extraction + optimized processing technology + process control methods + possible reactions + catalysts + applications + software algorithms (?)

May need lot of interdisciplinary work

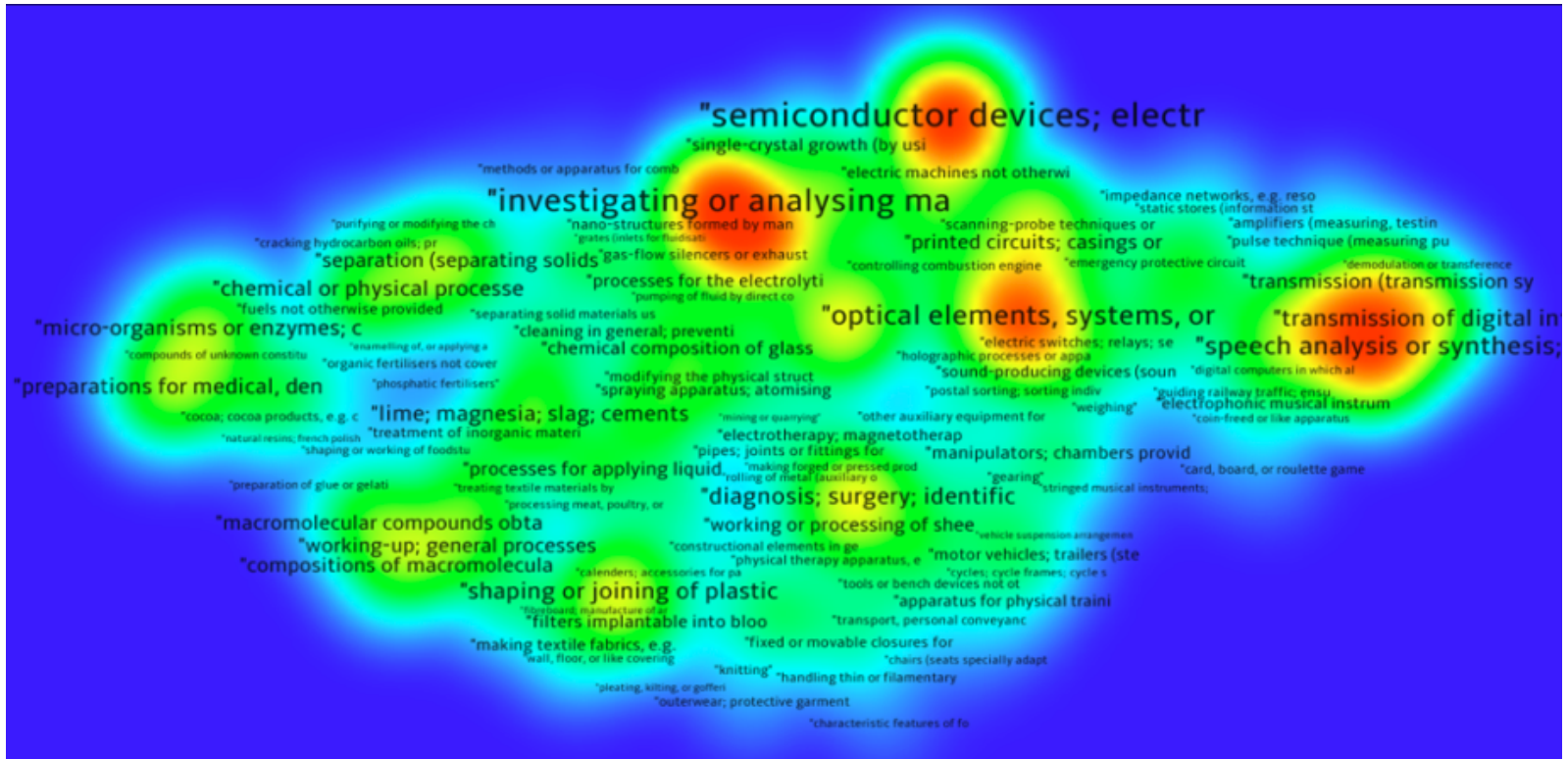
# Technology-need mapping



Overlay this with the University IP Map



# Patent Portfolio Mapping



Patent portfolio map of Franhauffer Institute (<https://heronscientific.com>)

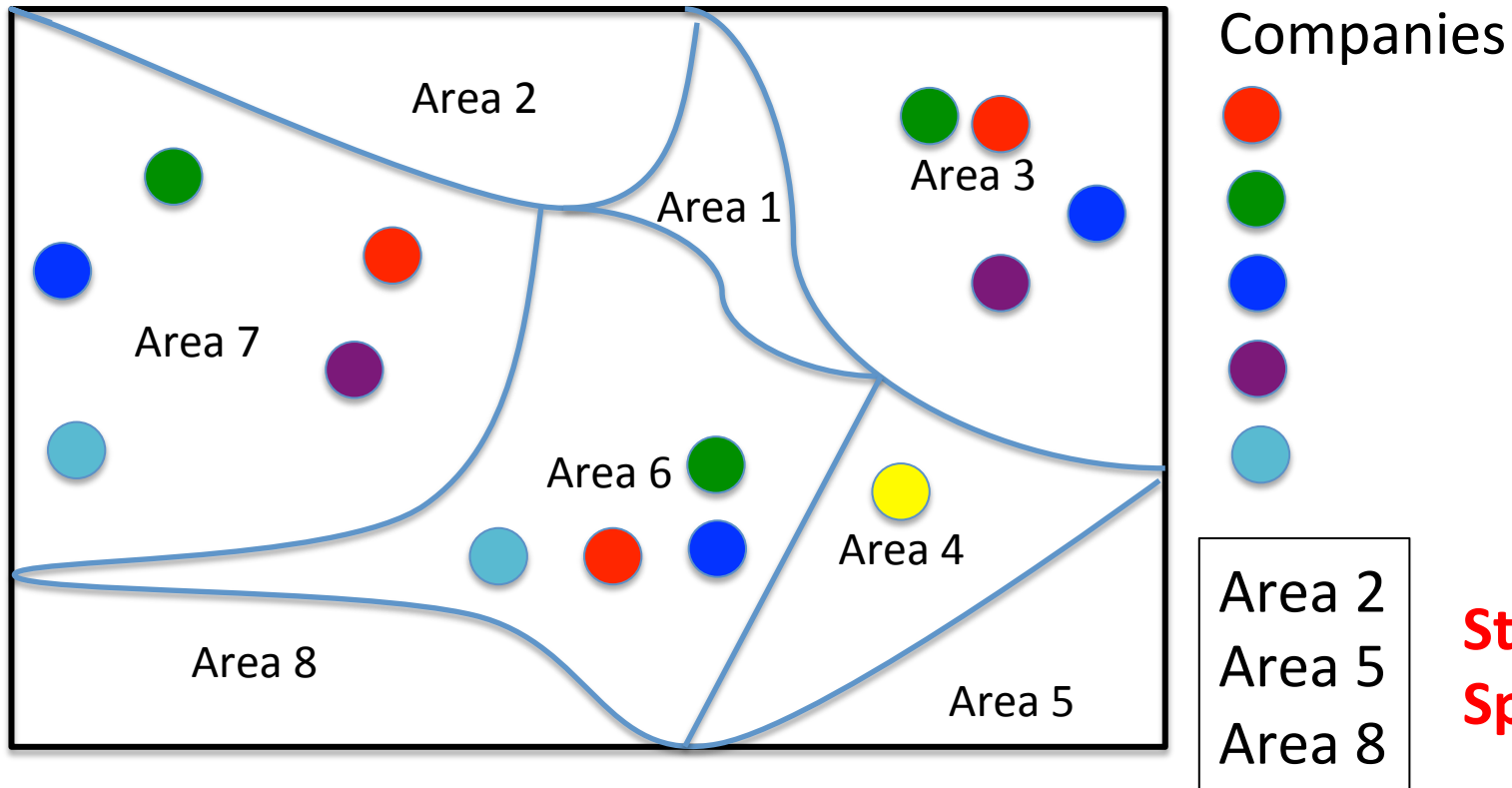
# Creating a “PatentScape”

(Innography.com)



<https://www.innography.com/>

# “PatentScapes” or “TechScapes” for Health/Agricultural Sciences?



# Managing IP Costs

Cannot patent all inventions received

Pre-patent marketing of inventions - technology briefs

(Should you publish rest of the inventions so that others cannot patent? – this may help increase the University reputation and draw attention from Industry in the future)

# Moving up the Technology Level

Invest seed funding to advance the technology to a stage where it can be marketed – industry “needs solutions not technologies”

Encourage start-ups from University – they can act as technology developers from external funding and be bought out by large companies down the road.

# IP Donations

## **Solicit and manage IP donations**

Companies get tax benefits by patent donation

Companies donate patents or do free-licensing

(Patent maintenance fees may also be donated)

# IP Donation by Companies

Company	What was donated	Received by	Year
Dupont	257 Patents	DEDO	2007
Dupont	Patents for a new papermaking technology	University of Maine	2001
Dupont	\$64 Million worth of patents	Penn State U. of Iowa VPI	1999
Boeing	Patents for Medical applications	U. Penn	2001
Proctor and Gamble	196 patents	Vanderbilt	2000
Shell	> \$83.5 Million	U. Texas	

# Donation by Free-Licensing

Company	What was licensed	Received by
Syngenta	technology to produce vitamin A enriched rice	Golden Rice Patent Pool
Boehringer Ingelheim	Granted free-licenses of patents covering a HIV drug for a period of 5 years to Aspen Pharmacare	Aspen (SA Company)
Novartis, Roche	Do not file or enforce patents in least developed countries	



# Watch your own IP use

Universities should also be aware of IP use and infringement

Get permission whenever it is necessary – this establishes trust and good reputation and may prevent punitive damages!

# Managing Risks

**What are the risks involved in IP management?**

Premature disclosures

Licensing to the wrong company

Under-valuation of technology

Non-profitable and/or unworkable deals

Exclusive license deals with no returns

# Summary

**Some action items for TTO to build and manage IP portfolio**

“PatentScapes” and “TechScapes”

Greater Risk taking – get University approval for this

Develop seed-funds for further development of technology  
– helps broader claims in patents

Encourage University Start-ups

Solicit and manage IP donations

# Thank You!