WIPO Regional Seminar on Technology Transfer by Universities and Public Research Institutions through the Strategic Use of the Patent System

Organized by the World Intellectual Property Organization (WIPO)
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Topic4:
IP Management Units and Technology Management Offices (TMOs)

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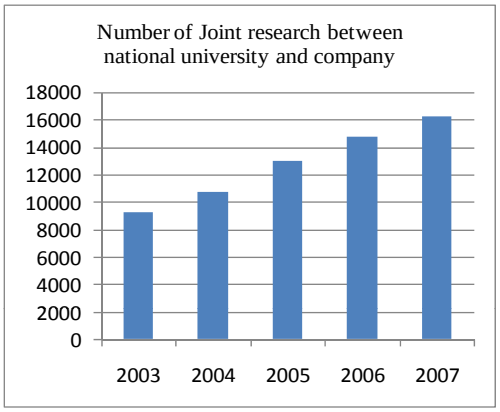
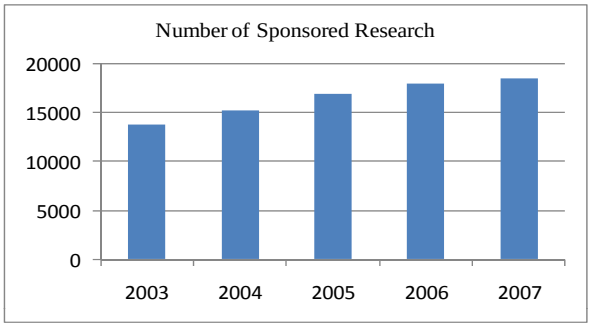
Topic 4

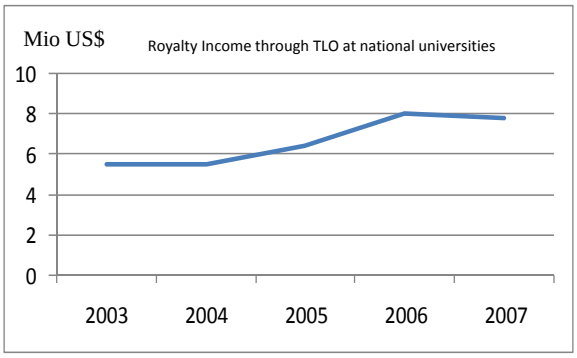
I. Functions of IP Management Units and TMOs
II. Organizational options for IP Management and Technology Transfer in Universities/Public Research Institutions (PRIs)
III. Skills required to Manage IP and Technology in Universities and PRIs

Current Situation of University-Industry Collaboration in Japan





There are 47 TLOs (2008) nationwide, 161 universities for IP management (2008)

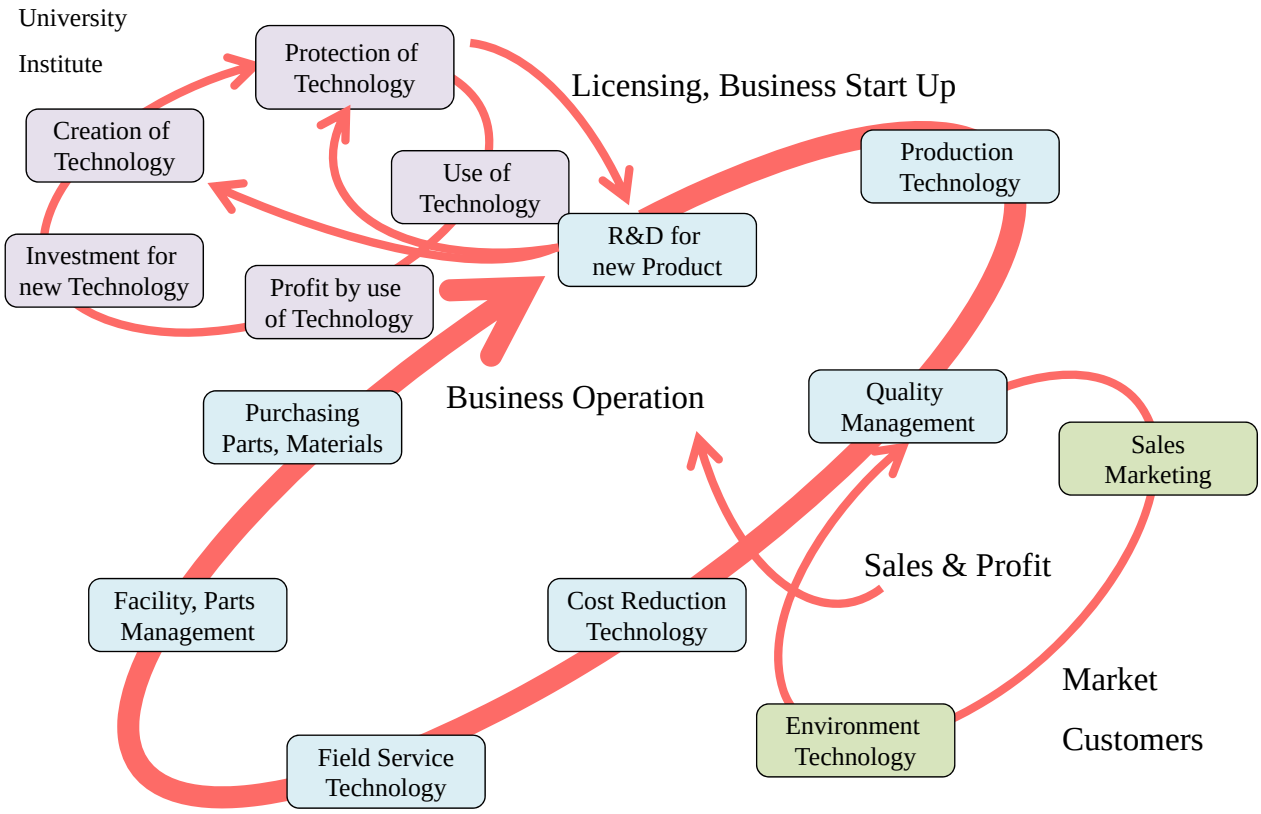


Japan-US Comparison of TLO activities

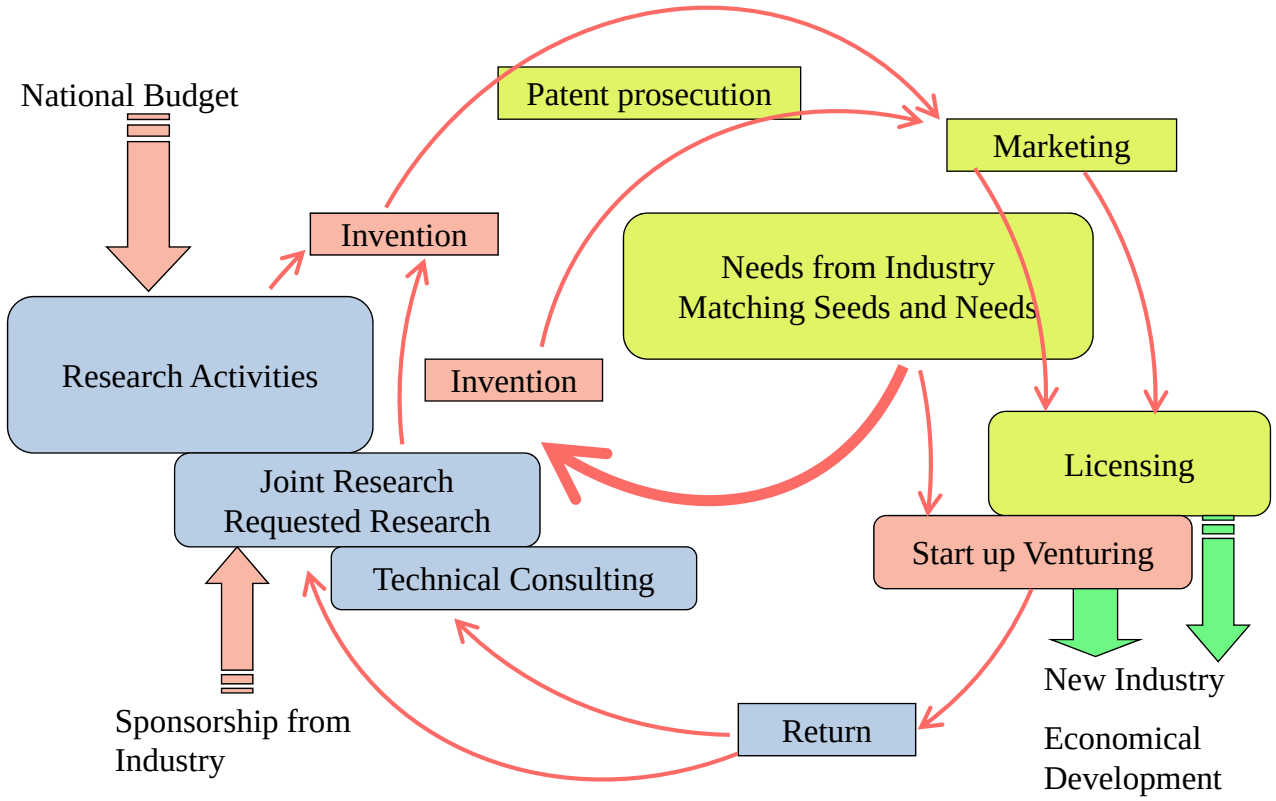
	Japan	US
TLO	47(2008)	155 (2007)
Patents	744 (2007)	2,792(2006)
Licensing	3,027 (2006)	4,038 (2006)
Royalty income	12.6 Mio US$ (2006)	1250 Mio US$ (2006)
University Researchers	178,000 (1999)	186,000 (1999)

A remarkable result has not come out although the introduction of legal systems has been completed.

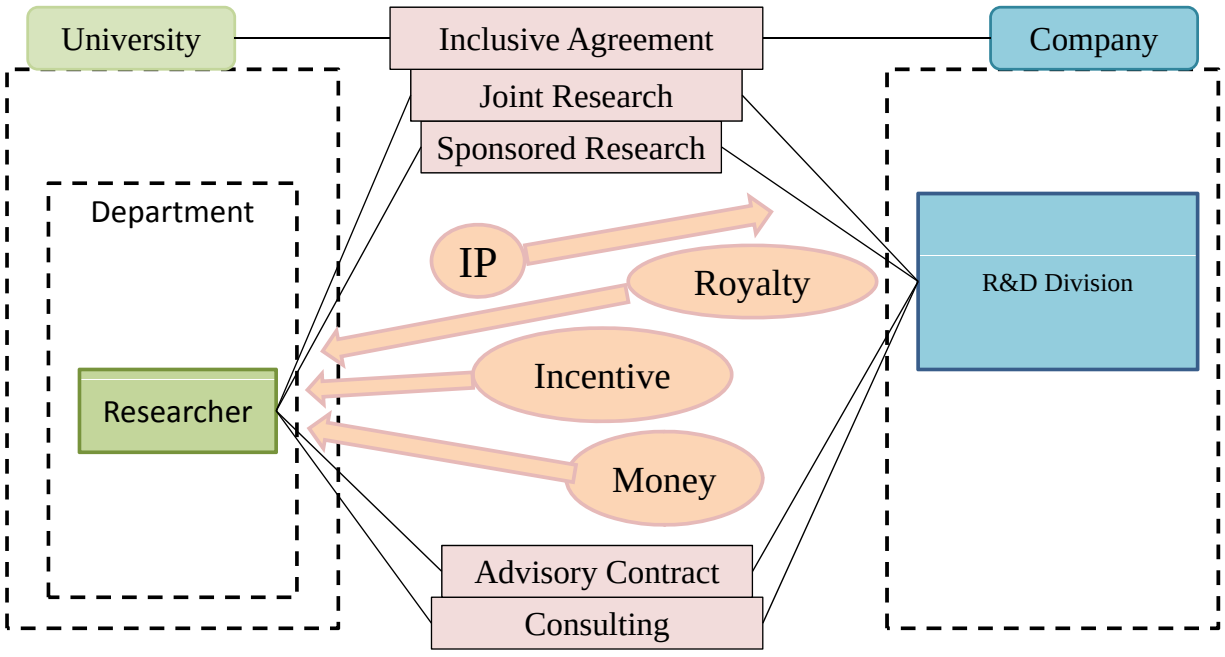
Role of Technology Management Offices



Importance on joint R&D from the start



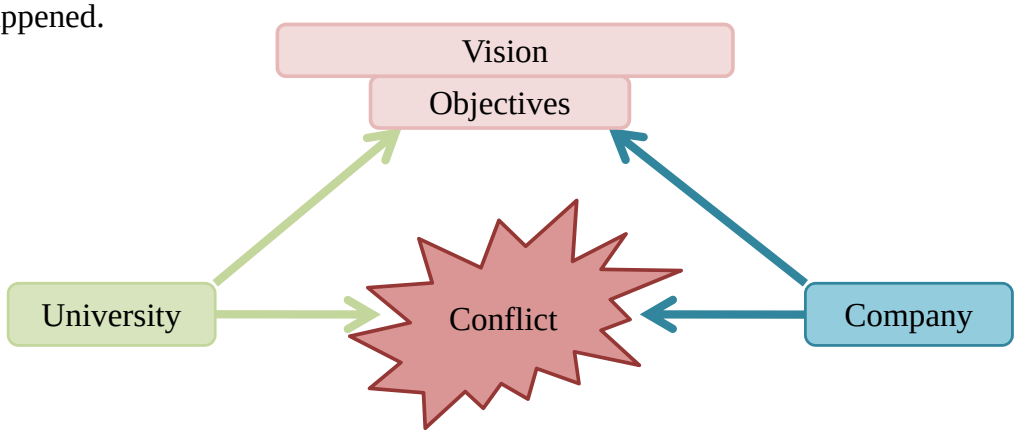
Positioning of Contracts: Contract of Variation, Multiple Contract



It is important to keep contact daily basis and long-term basis.
Daily collaboration and long-term Contract base collaboration.

Difficulty for collaboration

It is not easy to minimize the gap of culture, sense of value, behavior, etc. Not necessary to confront both parties, but take them toward the same direction. If both parties stick on protecting their own area, naturally a strong conflict will be happened.

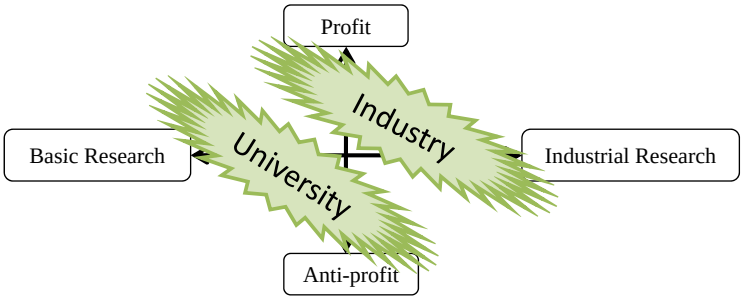


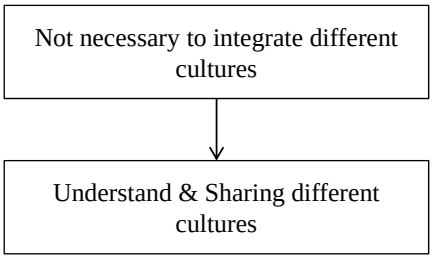
Someone who knows the different culture of both parties, has to make a certain role to take them towards the same vision /Objectives.

Technology Management Office
Intellectual Property Coordinators

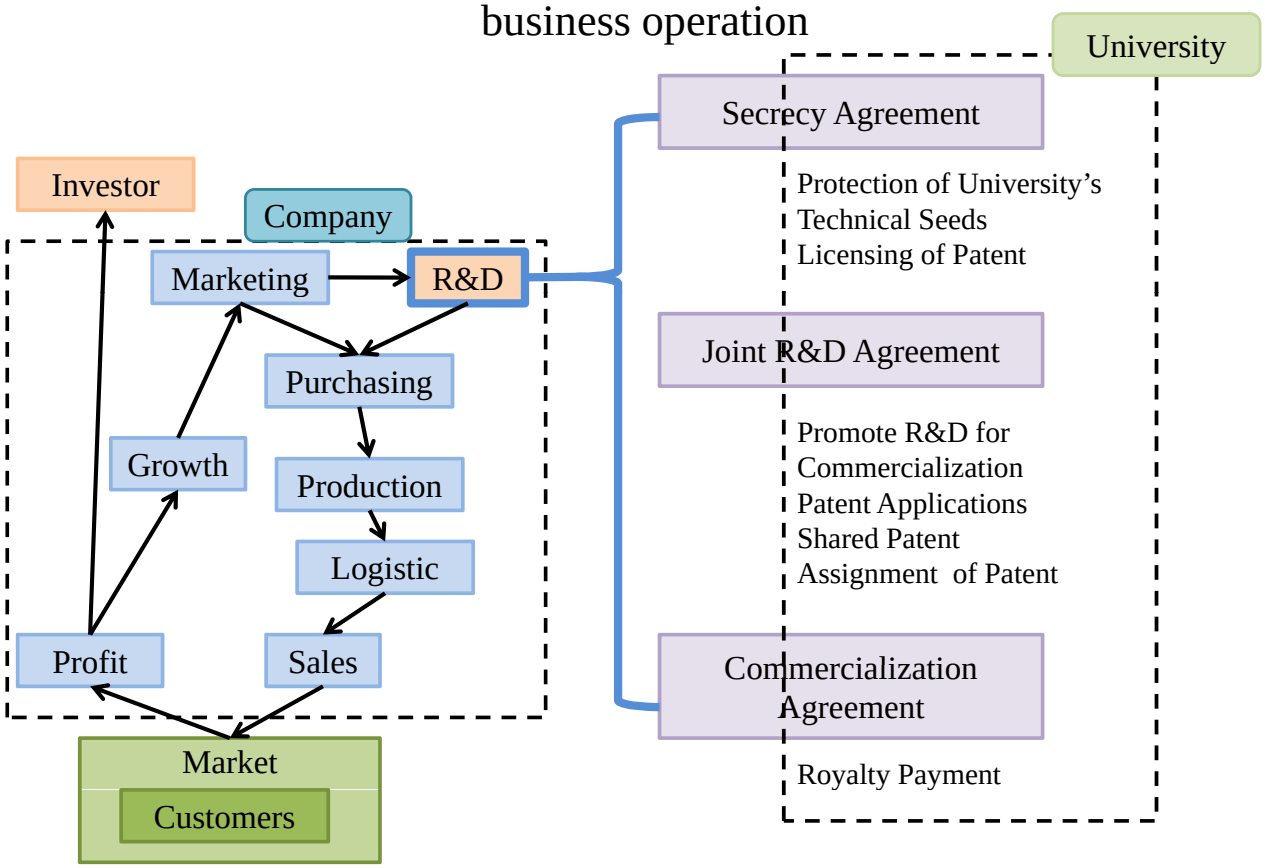
Existence of different culture, mission between university and industry

	University	Industry
Mission	Education & Research	Commercialization
Culture	Bottom Up	Top Down
Sense of Value	Systematization of Knowledge	Creating Profit & Growth
Time span	No limitation	Depend on Market
Subject for research	Basic Research	Industrial Research

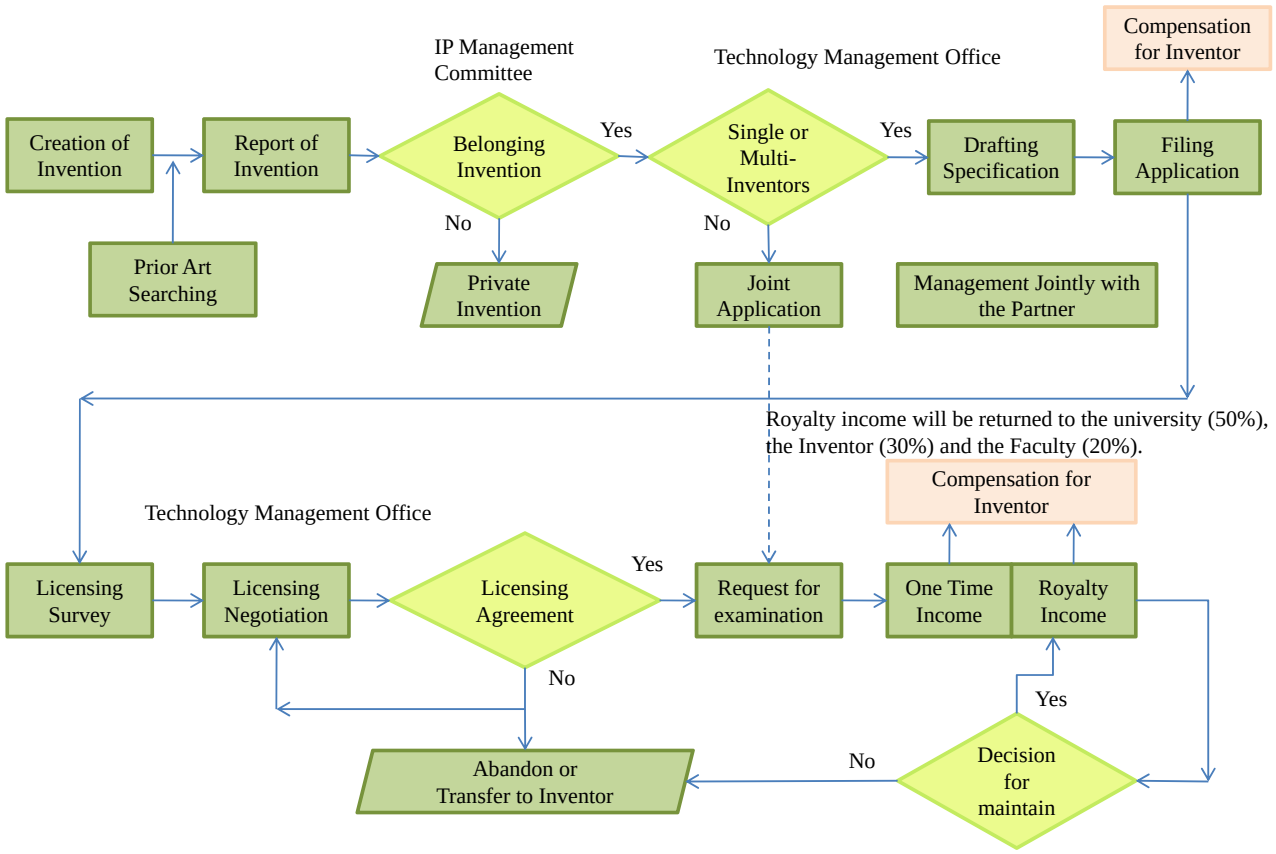




Industry's purpose is to get Profit, R&D is one of the processes of business operation



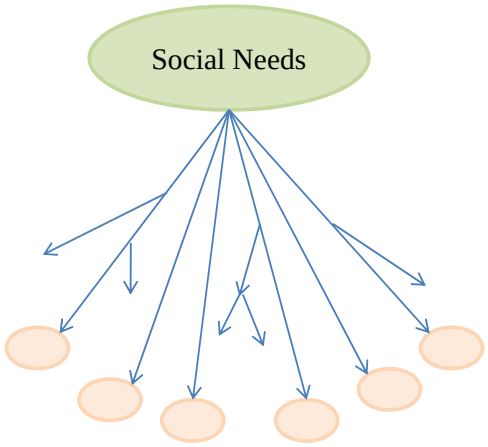
IP Management Flow in University

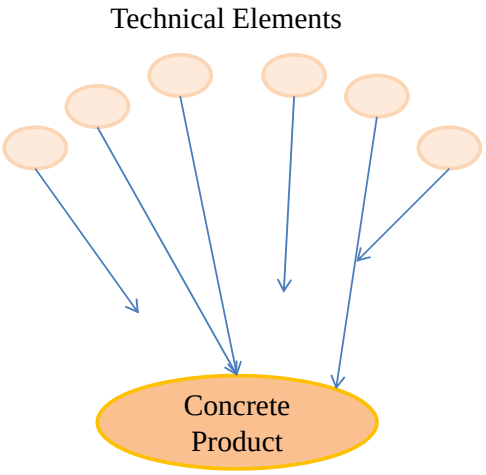


Difference Between “Research” and “Development”

“Research” means “The Process to create valuable technical element”.

“Development” means “The Process to select valuable technical element and reduction to a product”.

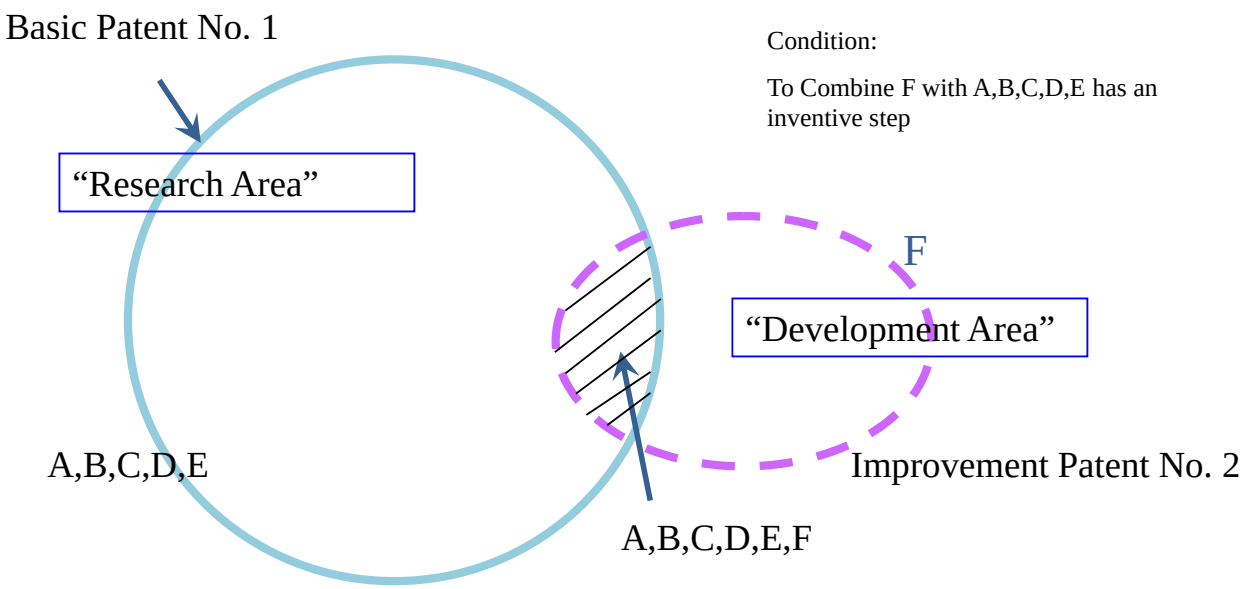




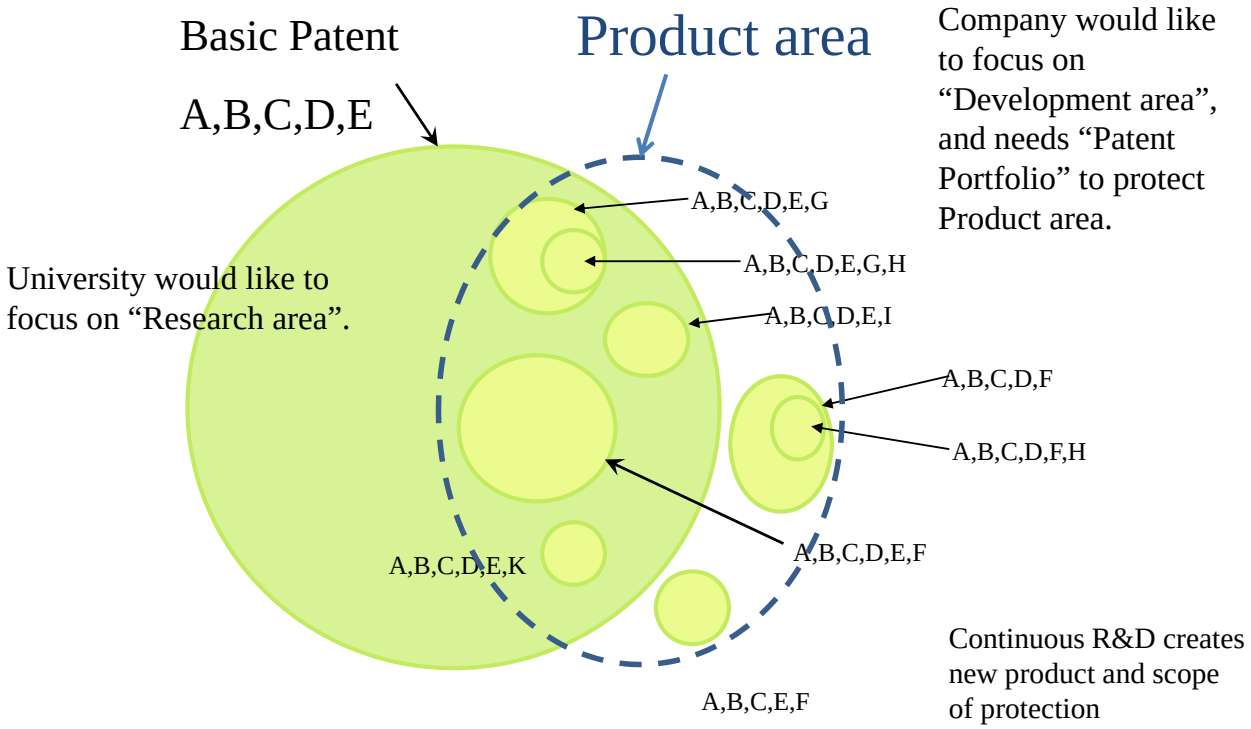
Patents under Mutual Utilization Relations

Basic Patent: No.1
【the Claims】
A comprising B, C, D, E

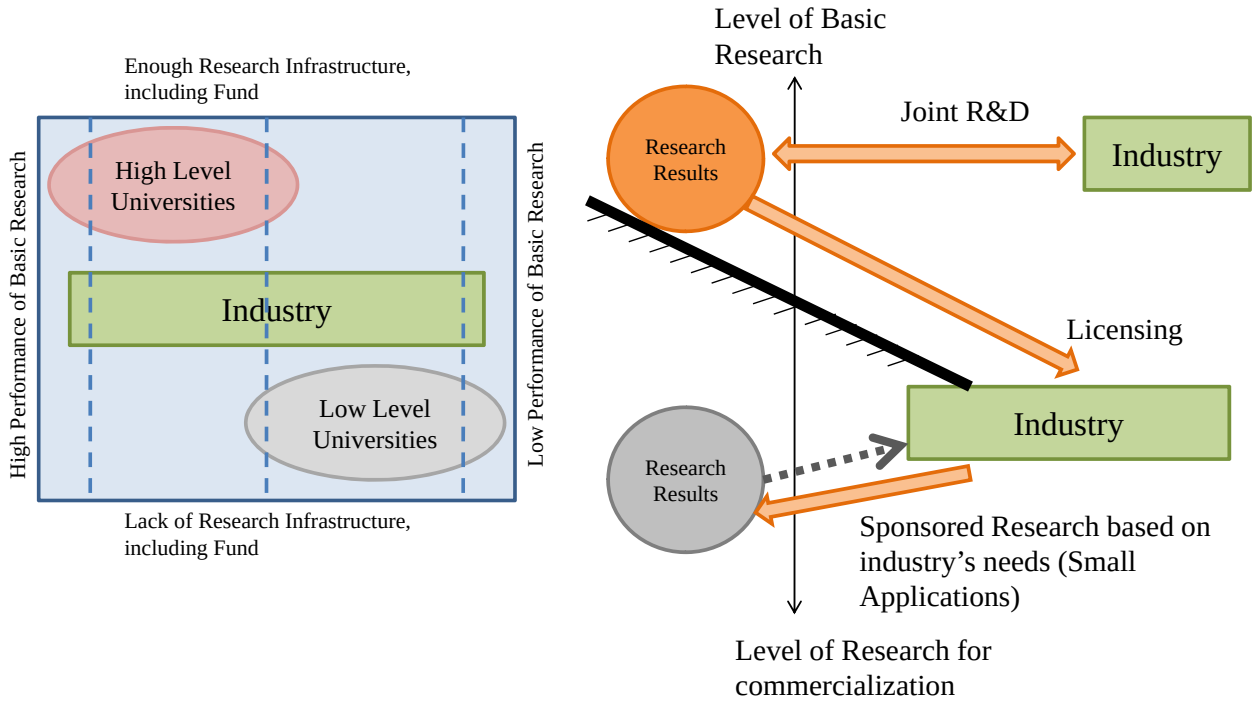
Improvement patent: No.2
【the Claims】
A comprising B, C, D, E, F



Basic Patent and Improvement Patents – Patent Portfolio



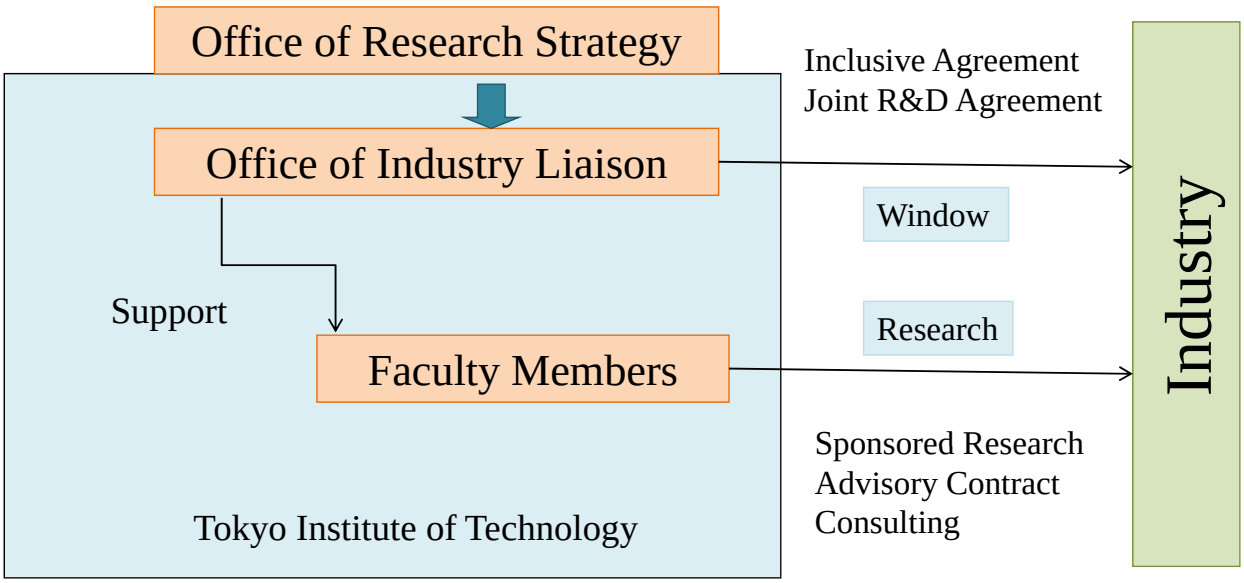
Balance between university and industry



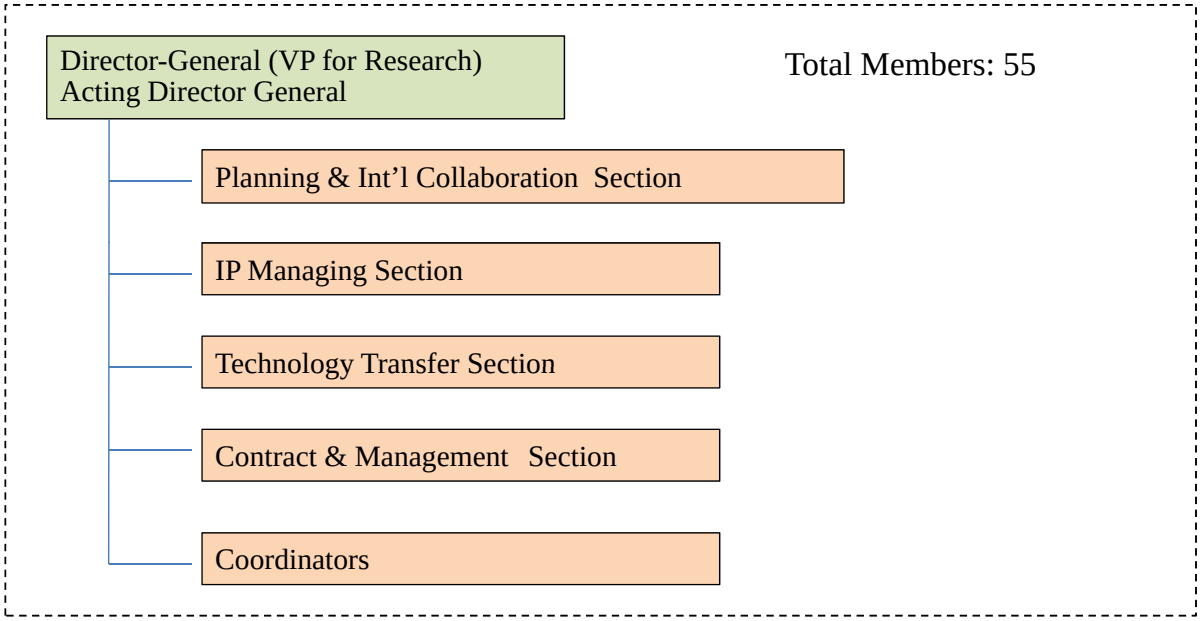
Situation of Tokyo Institute of Technology
TMO's Policy for University-Industry Collaboration

- To attain patent rights and license them
- To promote various forms of collaboration (joint research, contract research, technical consulting etc.) through liaison activity
- To contribute to new industry creation and innovation
- To aim at the creation of further IP at Tokyo Institute of Technology

Relationship between Organizations for Industry-Academia Collaboration

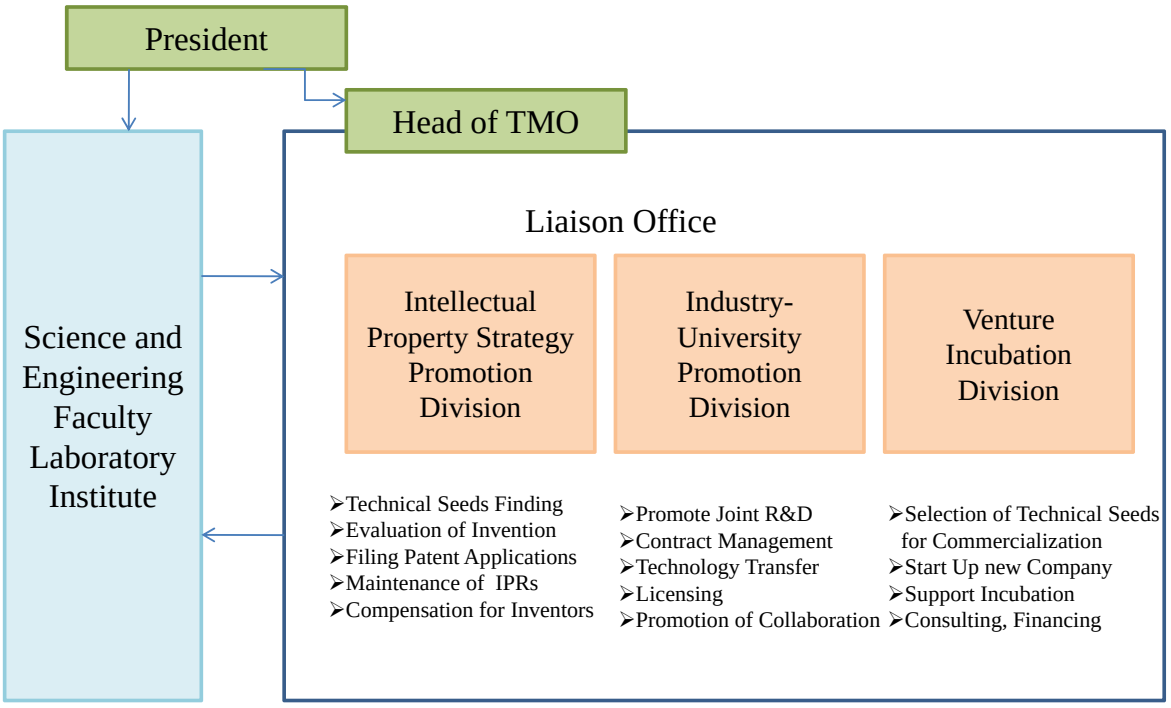


Organization of TLO "Office of Industry Liaison"



Profile of Tokyo Institute of Technology
Number of Researchers including professors and lectures, etc.: about 1,300
Research staff: about 300
Visiting Researchers: about 200
Number of Student of Graduate School: about 5,100
Number of Students of Under-Graduate School: about 5,000

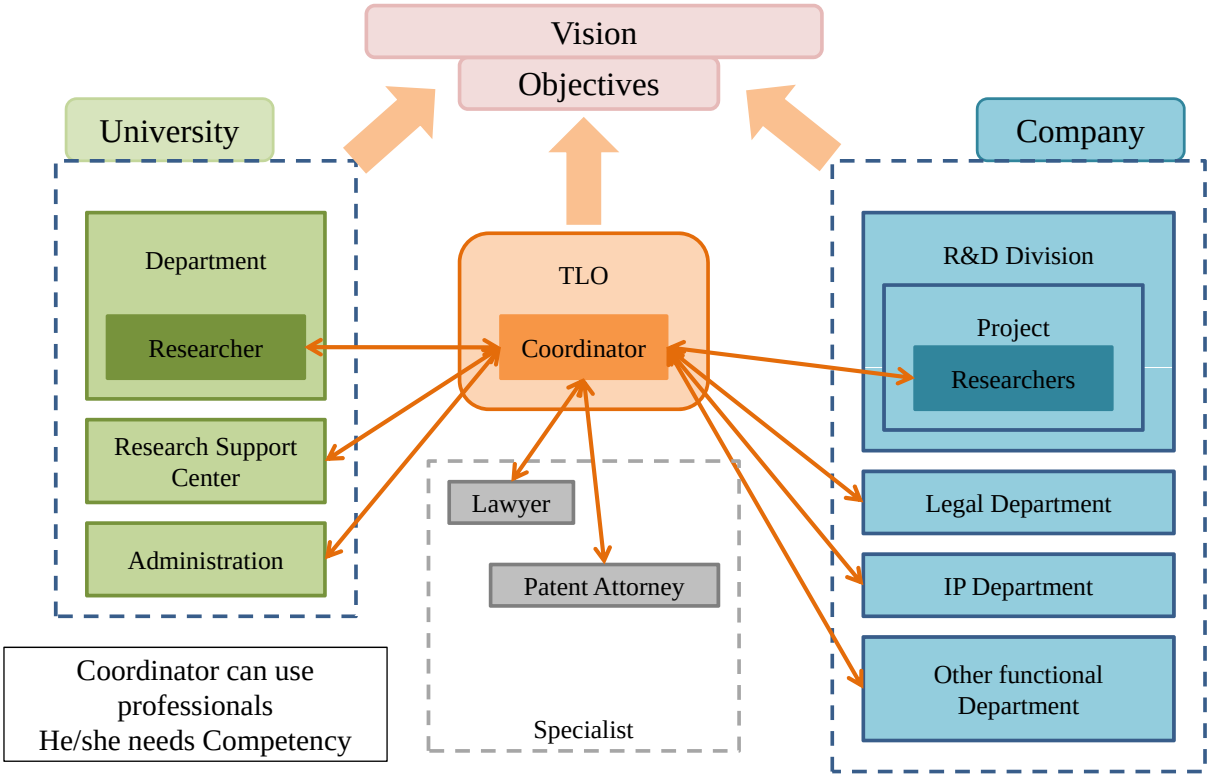
Typical Organization of Technology Management Office



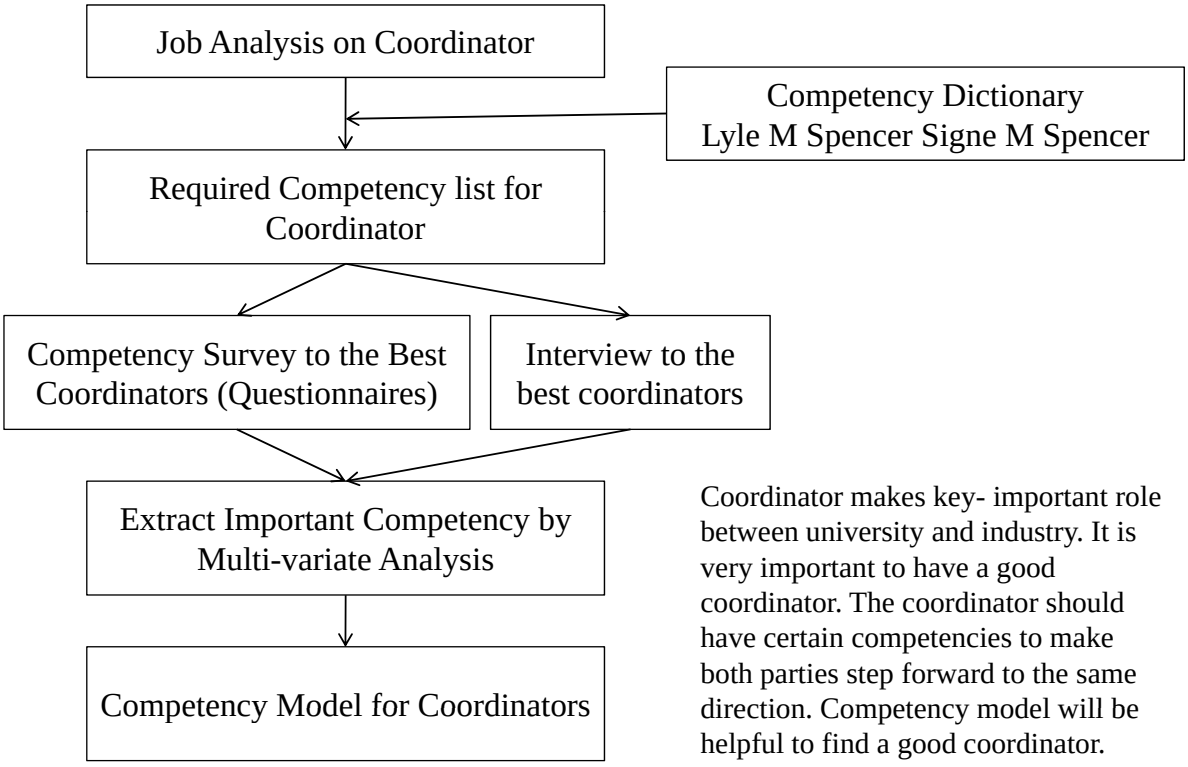
Track Record of University-Industry Collaboration

FY	2000	2001	2002	2003	2004	2005	2006
Joint Research (Number)	114	149	207	264	344	381	365
Joint Research (Million US$)	4.8	5.5	8.8	8.6	11.8	13.1	15.1
Sponsored Research (Number)	214	175	204	242	244	260	294
Sponsored Research (Million US$)	26.3	14.1	12.8	25.1	29.9	38.4	47.4
Invention Proposals (Number)	286	249	274	465	481	464	436
Patent Applications Filed (Number)	117	115	164	200	294	338	271
Venture Corporations (Number)	4	2	7	3	8	4	2

Positioning of TLO, Role of Coordinator



Research on Competency Model required for Patent Licensing Coordinators



Coordinator makes key- important role between university and industry. It is very important to have a good coordinator. The coordinator should have certain competencies to make both parties step forward to the same direction. Competency model will be helpful to find a good coordinator.

Job Analysis of IP Coordinators

	Job Category	Concrete Jobs
Arrangement of Matching	Research and evaluation of Technical Seeds	Find technical seeds, Technical evaluation, Mapping, Hearing, etc.
	Research and evaluation of Market Needs	Consumer Survey, Seeds finding based on Market Needs, Business partners, Value chain, etc.
	Other research and evaluation	Information retrieval, IPDL/NRI/other DB, Industrial associations, etc.
Negotiation	Consulting and Supporting	Preparation for licensing agreement, Contract conditions, Check & notices for contract, etc.
	Introducing	Preparation for introducing parties, Process evaluation, Create business partnership, etc.
Support Commercialization	Contract	Contract conditions, Business plan, Patent evaluation, Royalty, etc.
	Follow up after contract	Maintenance and improvement of contract, new issues after contract, etc.
Others	Others	Reporting, Budget and expense, Staff training, etc.

Required Competency list for IP Coordinators

Taking a leading action	Presentation	Leadership	Speed of work
Customer oriented	Ability to create human relationship	Instruction and demanding	Insight power
Result oriented	Problem solving	Supporting and training	Technical knowledge
Respect for diversity	Service oriented	Team work	Specialized skills
Sincerity	Business sense	Communication	Writing ability
Ability to get information	Organization sense	Acknowledgment power	Secrecy management
Analytic thinking	Planning and organizing	Self management power	Legal interpretation
Conceptualization	Process control	Continuous learning	
Decision making	Monitoring and checking	Creative self-expression	
Financial sense	Well versed of business	Toughness of mind and body	

Score of Principle Component Analysis (Results of Questionnaires)

Competency	1st Prin Comp	2nd Prin Comp
Result oriented	2.67	0.37
Self management power	2.03	-1.00
Communication	1.98	0.80
Toughness of mind and body	1.94	0.74
Taking a leading action	1.87	1.01
Instruction and demanding	1.84	-0.04
Leadership	1.83	0.33
Secrecy management	1.62	0.06
Continuous learning	1.58	1.18
Process control	1.54	-1.57
Creative self-expression	1.50	0.33
Speed of work	1.50	-0.65
Writing ability	1.31	-0.09
Customer oriented	1.31	5.34
Team work	1.21	0.51
Insight power	1.13	0.13
Acknowledgment power	1.01	1.61
Analytic thinking	0.97	-1.54
Organization sense	0.81	0.33

Competency	1st Prin Comp	2nd Prin Comp
Decision making	0.81	-2.00
Sincerity	0.62	-0.55
Ability to get information	0.41	2.25
Monitoring and checking	0.16	1.36
Conceptualization	-0.06	-1.84
Respect for diversity	-0.47	0.06
Well versed of business	-0.85	0.30
Planning and organizing	-0.97	-0.70
Problem solving	-1.25	-1.15
Supporting and training	-1.27	-1.64
Financial sense	-1.36	-4.59
Ability to create human relationship	-1.76	1.00
Business sense	-2.15	0.07
Service oriented	-3.09	2.15
Presentation	-3.30	0.56
Specialized skills	-3.57	0.04
Technical knowledge	-3.90	2.23
Legal interpretation	-7.66	-0.60

Competency Model required for IP Coordinators (Results of Interview)

Priority Level	Competency required for Patent Licensing Coordinators
Very Important and requested	➢ Ability to create human relationship ➢ Communication ➢ Secrecy Management
Important and requested	➢ Ability to get information ➢ Well versed of business ➢ Insight Power ➢ Technical Knowledge ➢ Speed of work ➢ Customer oriented ➢ Service oriented ➢ Sincerity ➢ Respect for diversity ➢ Self Management
Requested	➢ Business sense ➢ Analytic thinking ➢ Financial sense ➢ Problem solving ➢ Taking a leading action ➢ Process control ➢ Writing ability

Summery

- Current Situation of University-Industry Collaboration in Japan
- Role of Technology Management Offices
- Existence of different culture, mission between university and industry
- IP Management Flow in University
- Difference Between “Research” and “Development”
- Basic Patent and Improvement Patents
- Balance between university and industry
- Organization of Technology Management Office
- Competency Model required for Patent Licensing Coordinators