

Guidebook of IP/Technology Transfer

Track 4

Technology Transfer Directors & Managers

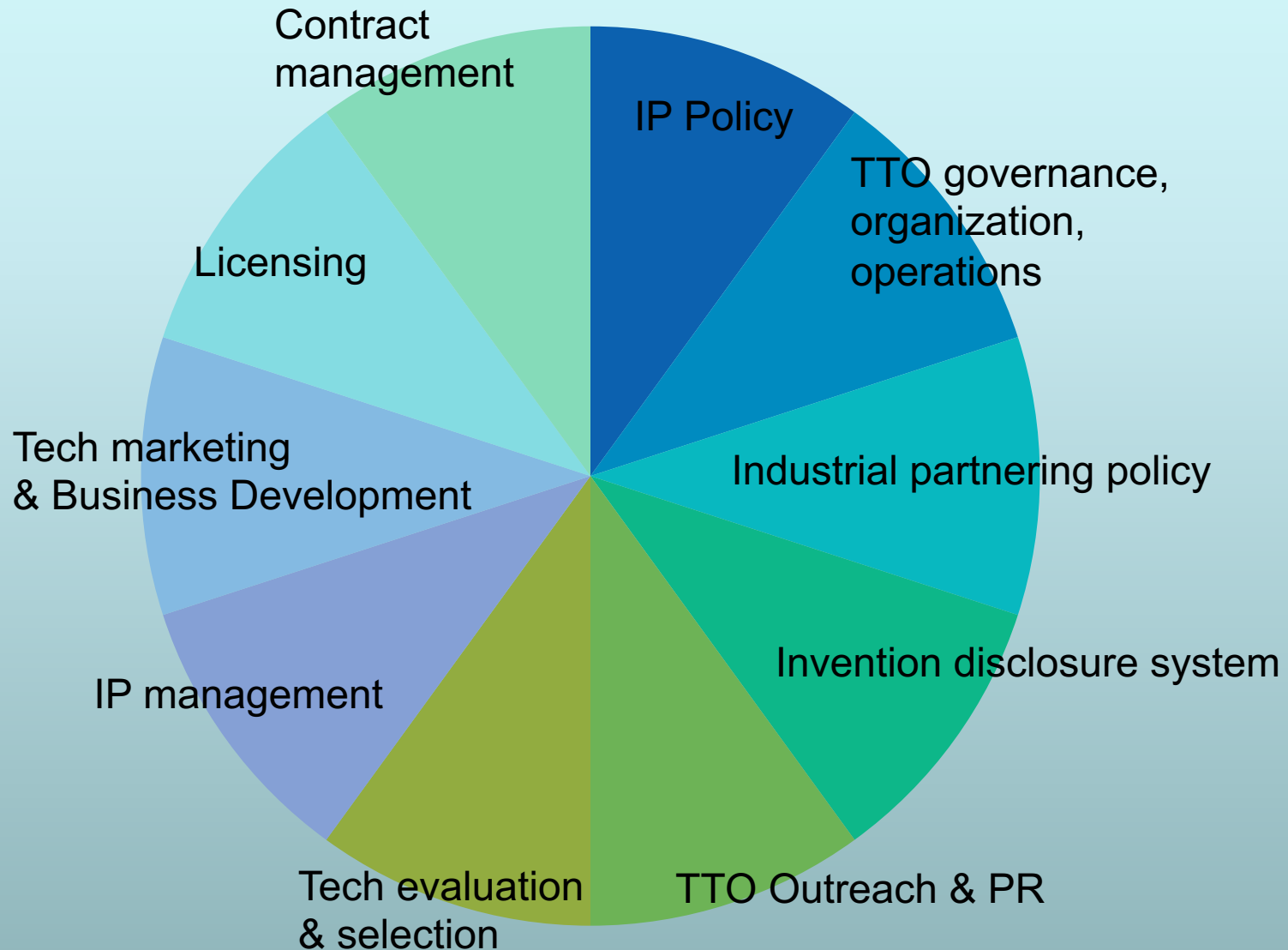
Topic 4.2.1

Elements of the TTO Structure & Function

Technology Transfer system



Technology Transfer system



Technology Transfer Office responsible for:

- All IP Policy implementation
- Manage Invention Disclosure process
- Relationship management with inventors
- Invention evaluation & triage
- Patent filing, prosecution, maintenance
- Other IP management
- Technology Marketing, proactive “partnering”
- License negotiation, drafting, signing
- Contract monitoring and management
- Revenue collection and distribution
- IP Policy “troubleshooting”

TTO Organization

Is there a Director?

Full-time?

Is there sufficient administrative staff support?
(should be linked to IP/TT activity)

What is the number and skill-level of staff?
(#Tech Mgrs linked to # disclosures)

“Rule of Thumb”:

no more than 24 new cases/Tech Mgr/year

Sufficient business infrastructure

(communications, records, IP management,
accounting, contract management, etc.)

TTO Organization

In-house legal?

Authority to retain and manage outside lawyers?

What is focus of Tech Mgrs time?

- tech analysis

- commercialization/business development,

- tech marketing,

- inventor relationships,

- entrepreneurship, etc

Are professionals paid sufficiently?

- (what about “commission” from IP deal?)

What is the funding mechanism for TTO?

TTO Organization

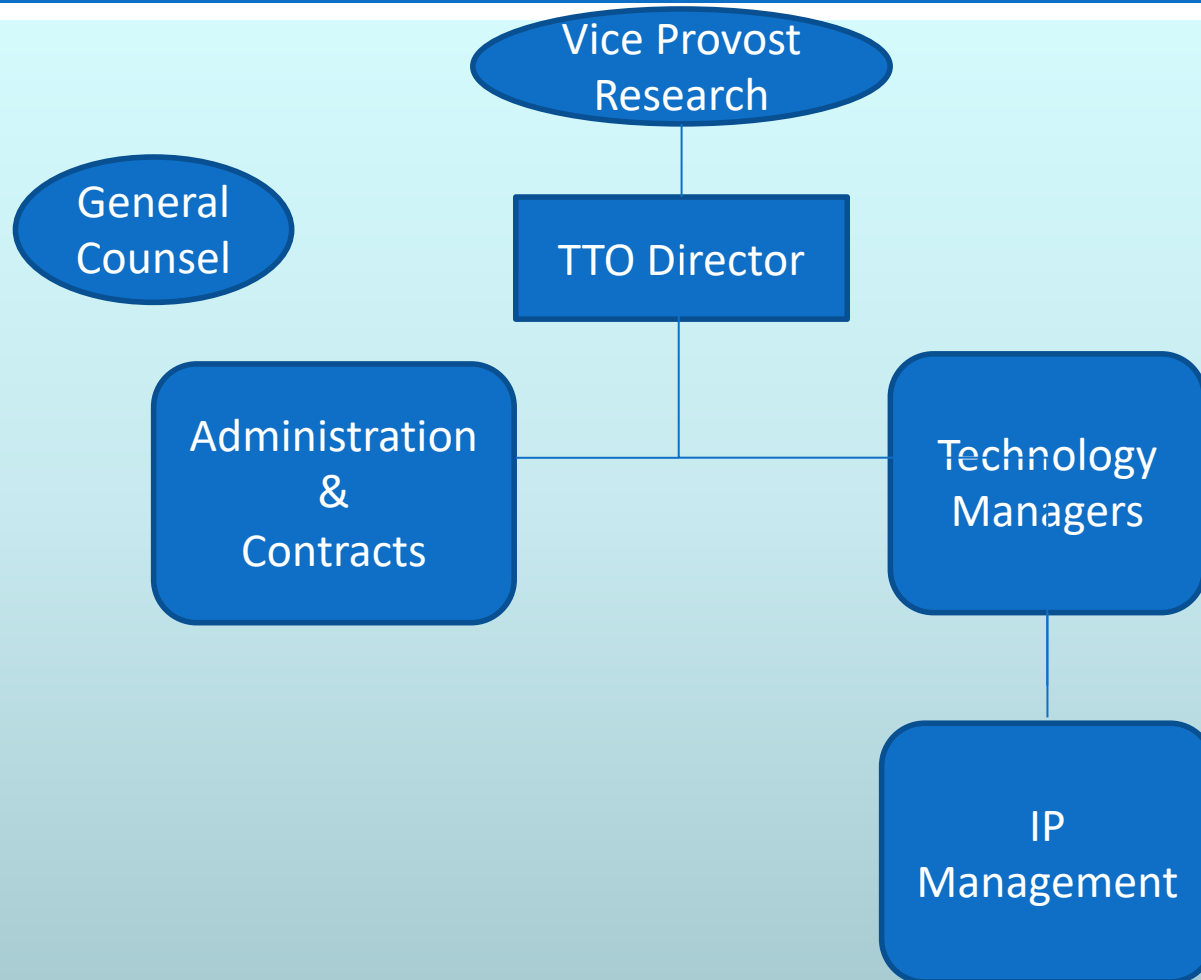
TTO funding mechanism

- Budget from Vice Chancellor, President, VP
- Fully self-funded by IP deal transactions
- Blend of budget and share of IP deals
- Consider sustainability of TT function
- Be careful about financial focus
(distorts public good mission)
- What is the appropriate TTO share of IP revenue?
(in U.S. = 33.3%)
- Owning stock in start-ups?

TTO Organization: funding mechanism

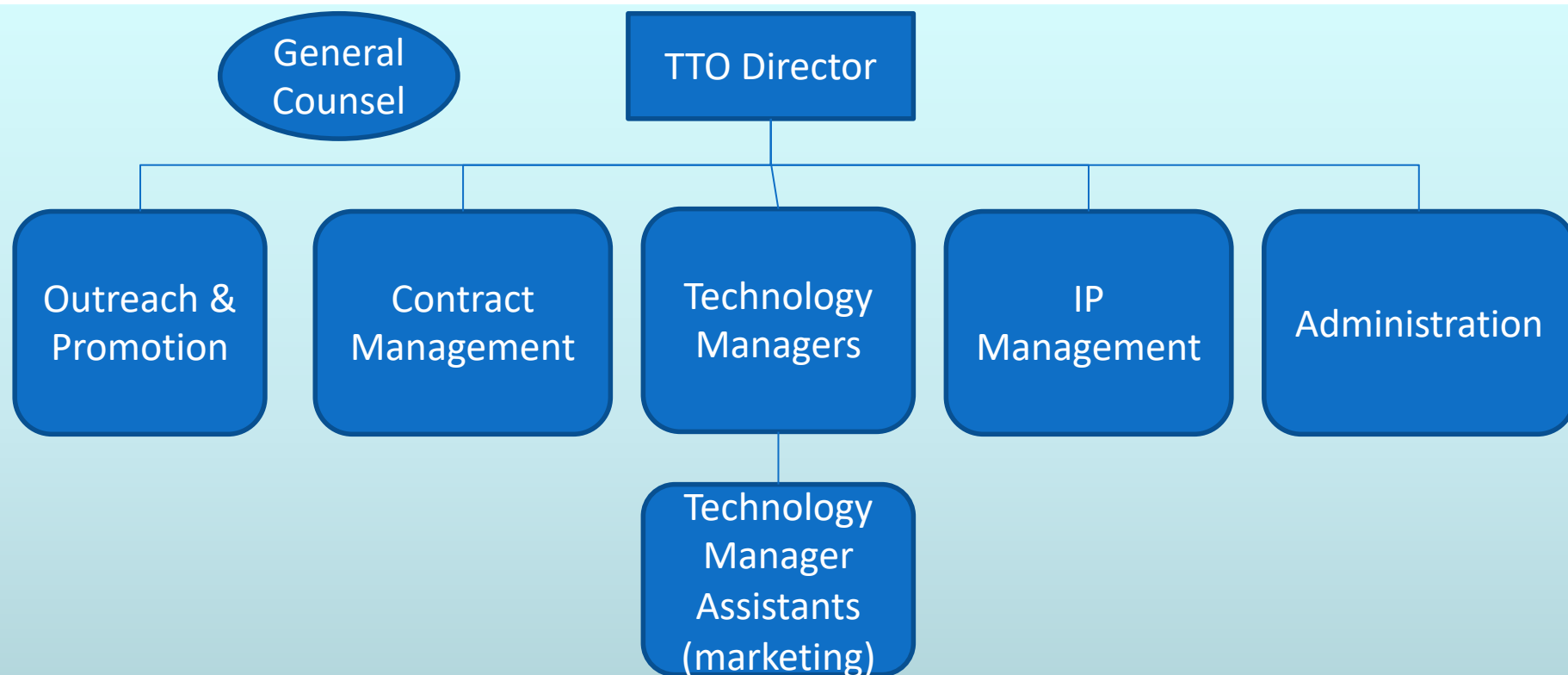
Issues to consider:

- Start-up and early stages vs. maturity
- Sustainability vs. variability
- Salaries and stability
- Sufficient funding for IP protection



Cornell University 1990

Technology Transfer Office, Functions/Departments



Cornell University 2010

Technology Transfer Office, Functions/Departments

Cornell 1980 (20 disclosures/yr)

- 1 Part-time (20%) Director (Dir also a Tech Mgr)
- 1 Part-time (30%) Tech Manager
- 1 Part-time (25%) Admin Mgr/Secretary

Cornell 1990 (90 disclosures/yr)

- 1 Full-time Director (also a Tech Mgr)
- 2 Technology Managers
- 1 Admin Mgr
- 1 Contract and Account Mgr
- 2 Secretaries

Rules of thumb:

max 24 new disclosures/year per Tech Manager
there's never enough staff!

TTO Organization: the Evolution

Cornell 2010 (385 disclosures/yr)

1 FT Director

10 Technology Mgrs/4 TM Assistants

1 Admin Mgr, 2 Outreach Coordinators

5 Contract and Account Mgrs

2 Secretaries

TTO evolution: invention disclosures

1980 (20 disclosures/2700 researchers/year)

.007 disclosures/researcher/year

1990 (90 disclosures/2700 researchers/year)

.033 disclosures/researcher/year

2010 (385 disclosures/2700 researchers/year)

.14 disclosures/researcher/year

Inventions/researcher/year increases:

increasing visibility of TTO and TTPs

TTO successes and word of mouth

hiring more inventor-type researchers

other?

TTO Organization

There's never enough staff

The Cornell example:

TTO requests for more staff resulted in senior
management expectations for ROI
projections (\$ expectations)

This proved to be a major mistake

Focus on service not revenue return

Hire, train, retain good people

Focus on optimizing the process:

more “good” deals not
fewer “perfect” deals

TTO Organization

Since there's never enough staff:

- Requires careful thinking about where time is invested

(invention analysis vs. marketing)

- Work towards efficiency
- Never forget key relationships
(inventors, potential/existing licensees
– make them feel most valued)
- Evolve to task differentiation

Typical TTO Organization:

Key role of “Tech Manager” (TM)

In a typical model, the TM:

- Has “turn-key” responsibility for each assigned invention disclosure
- Responsible for shepherding invention through entire process
- Primary relationship with inventor(s)
- Actively markets technology
- Primary contact with potential licensees
- Negotiates and drafts license contract
- Remains “ombudsman” for relationship and contract

The TM should understand how best to allocate¹⁸ their time on a weekly, monthly basis

Some important tasks:

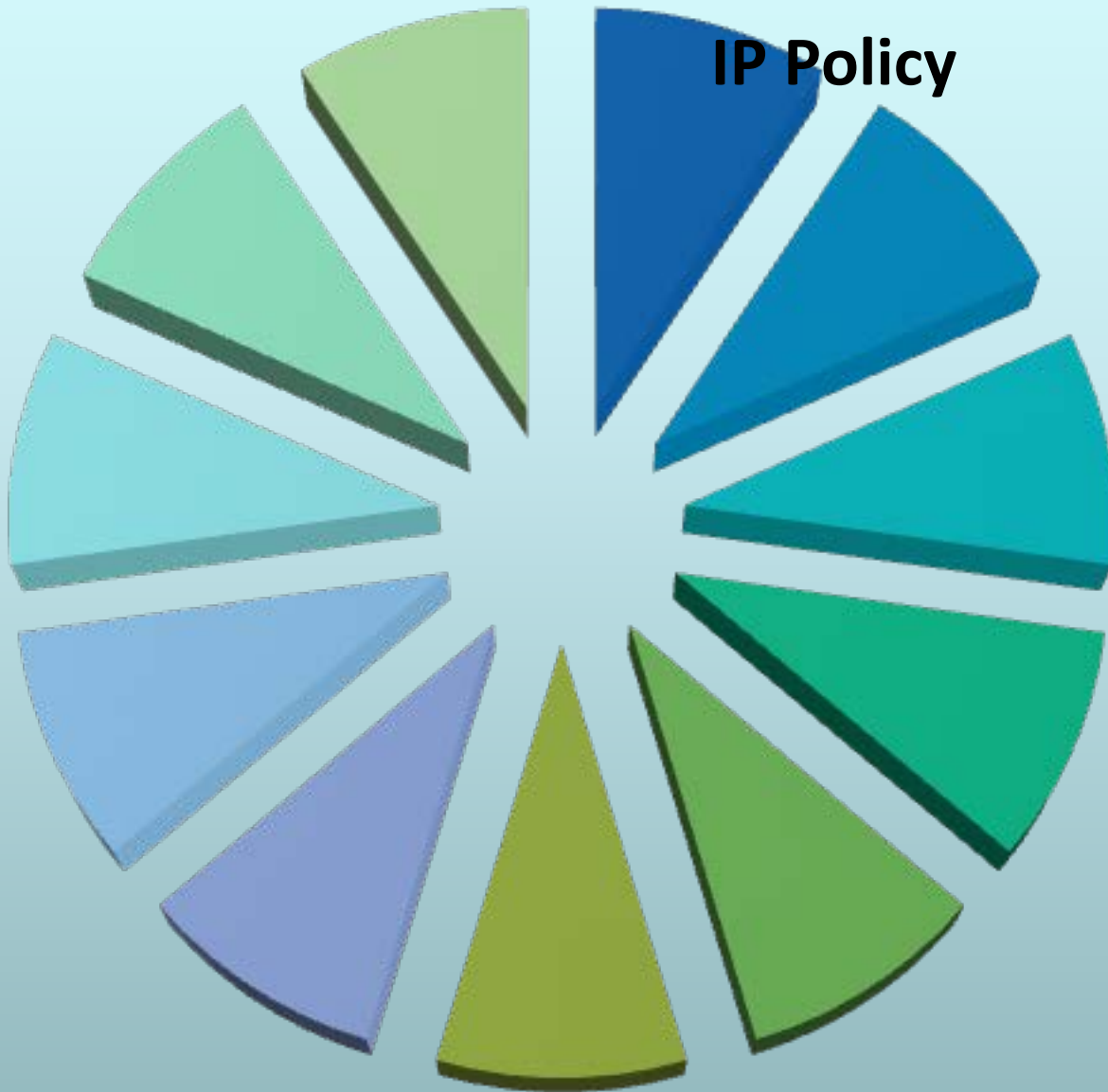
- technology analysis, triage, selection
- outreach to internal and external constituents
- commercialization/business development
- technology marketing & business development
- inventor relationships
- license and other contract negotiation
- relationship management with licensees, joint owners
- entrepreneurship recruitment and support
- etc

TM Responsibilities

- Requires careful thinking about where time is invested
(invention analysis vs. marketing)
- Work towards efficiency
- Never forget key relationships
(inventors, potential/existing licensees
– make them feel most valued)

- Careful attention to any Invention Disclosure
- Relationship between the TTO and inventors
- Technology evaluation and selection
- No accidental loss of any IP rights
- Managing the IP of assigned inventions
- Pre-negotiation valuation
- Developing a vision for invention commercialization
- Finding quality licensees
- Drafting Term Sheets, negotiating licenses
- Drafting license agreements
- Maintaining relationship with licensees
- Managing relationships with joint IP owners and research sponsors

Technology Transfer System



TTO Responsibilities: IP Policy

The TTO Director should act in a key-advisor role to the IP Policy authorities

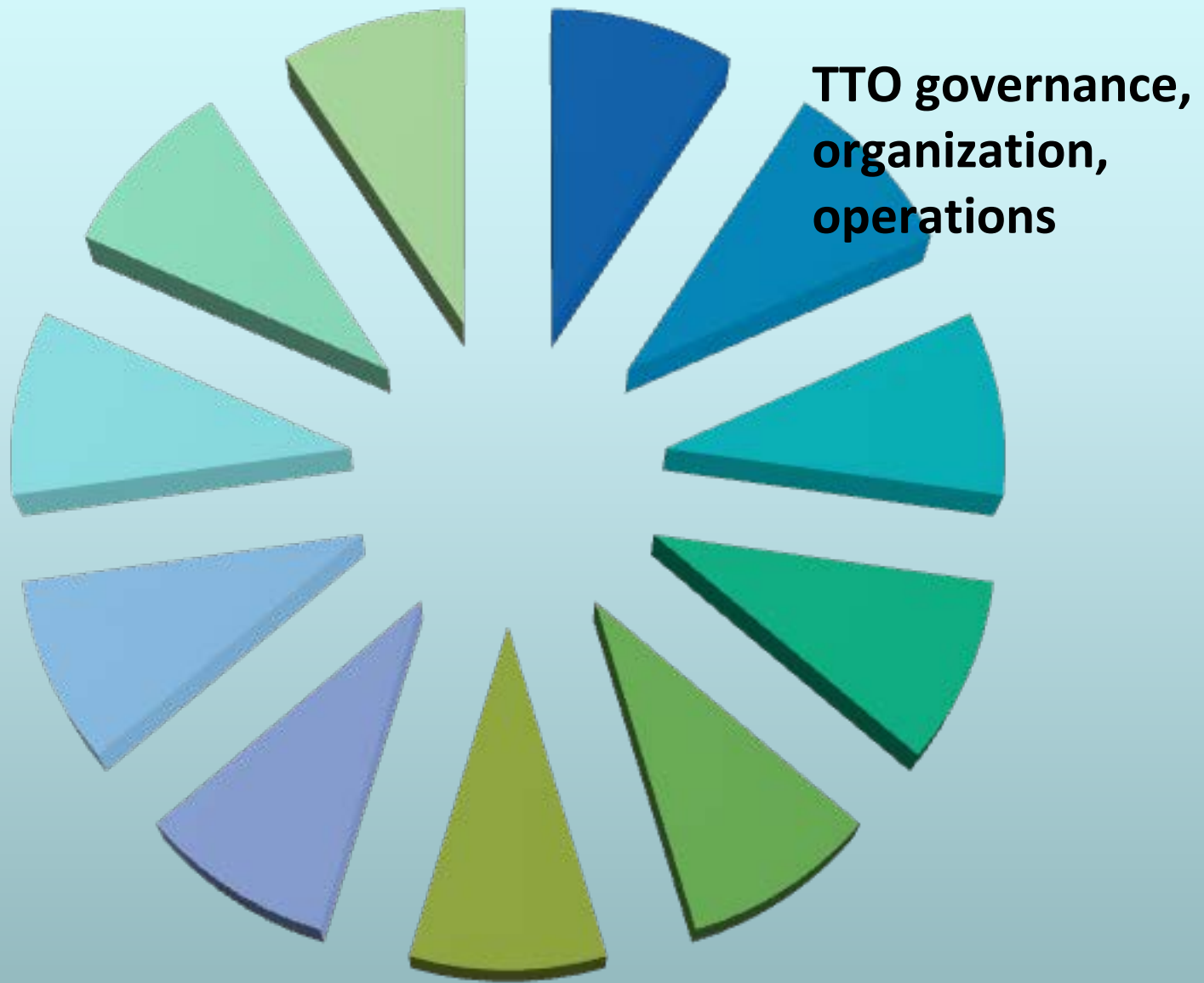
TTO is the primary implementer of the Policy

TTO is NOT the ultimate decision-maker of the Policy

As implementer, TTO Director should advocate for necessary changes to Policy

Director and all Tech Transfer Professionals should know the details of the Policy, its interpretation, and explanations

Technology Transfer System



Critical links between TTO Governance, Organization, & Operations:

- TTO funding mechanism
(independence, sustainable?)
- IP Policy appeal process
- Conflict of Interest Policy
- License Negotiations and Signature Authority
- License income sharing

TTO Governance, Organization, Operations

IP Policy appeal process: a critical connection

IP Policy should have explicit appeal process

The process independent of TTO

(at Cornell, VP for Research decision final)

TTO Governance, Organization, Operations

Conflict of Interest Policy

TTO does not write or enforce
(but is very supportive)

TTO Governance, Organization, Operations

License Negotiations: a critical nexus

The TTO should be independent in its
negotiation and signing of license and
related agreements

NO interference by
upper Chain-of-Command

TTO Responsibilities: Invention Disclosure system

Where the IP/TT process really begins

Structured form, and process

Adequate information capture

title, inventors, sponsors, description, etc.

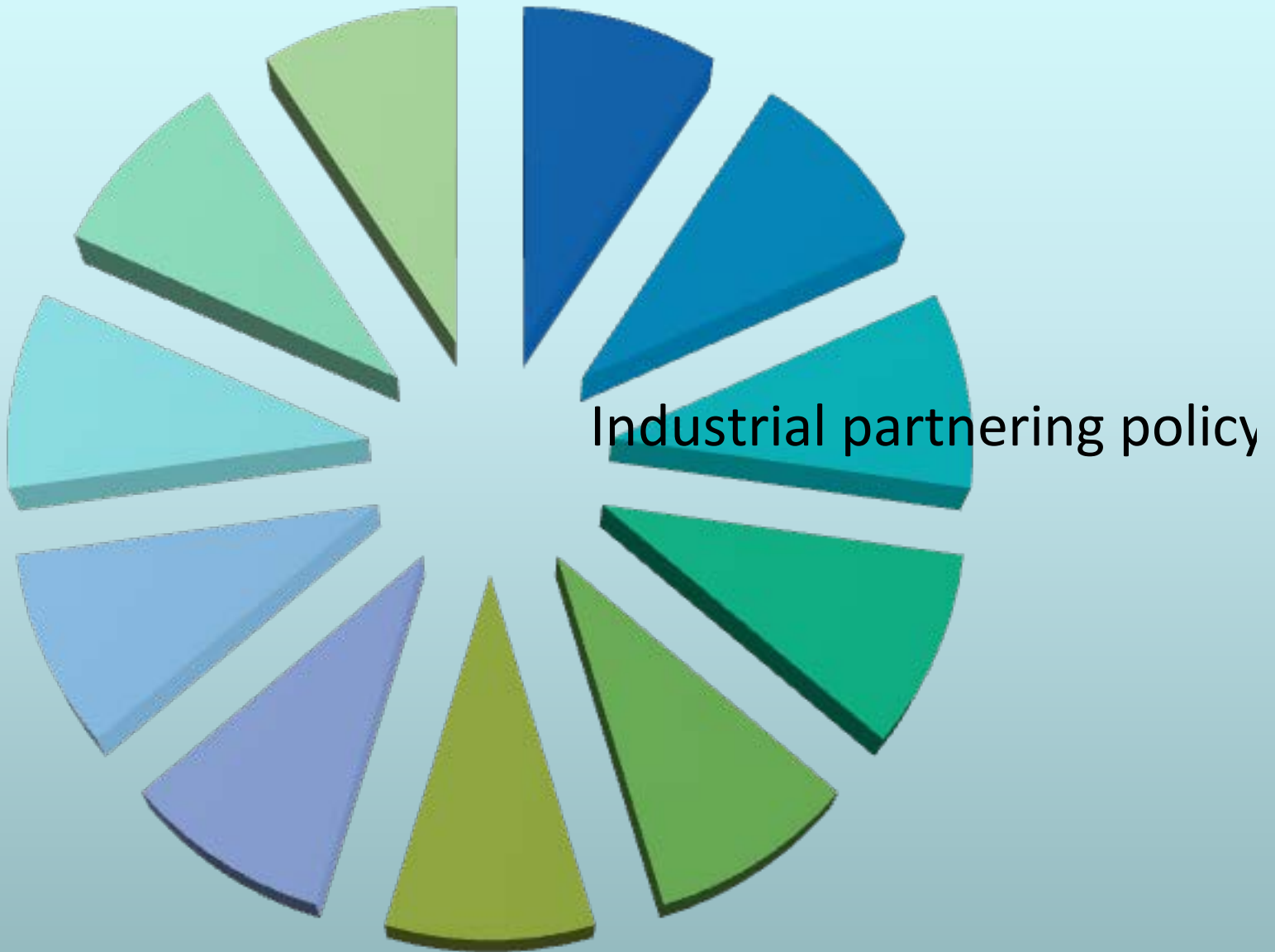
Consider the burden on the inventor

On-line system

Systematic and error-free submission, safe-keeping, and tracking

Effective archiving

Technology Transfer System



TTO Responsibilities: Invention Disclosure system

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Technology Transfer System



TTO Responsibilities: Outreach, in-reach, promotion

Communicate value of TTO to faculty, staff, and administrators

Reaching out to faculty, staff, and students to increase awareness of IP/tech transfer

Increasing awareness of TT by potential industrial partners, govt partners, local government, alumni

Look for and promote good PR for TTO and university for tech transfer activities and successes

Technology Transfer System



**Tech Evaluation & Triage,
Pre-negotiation valuation**

TTO Responsibilities

Technology assessment & characterization

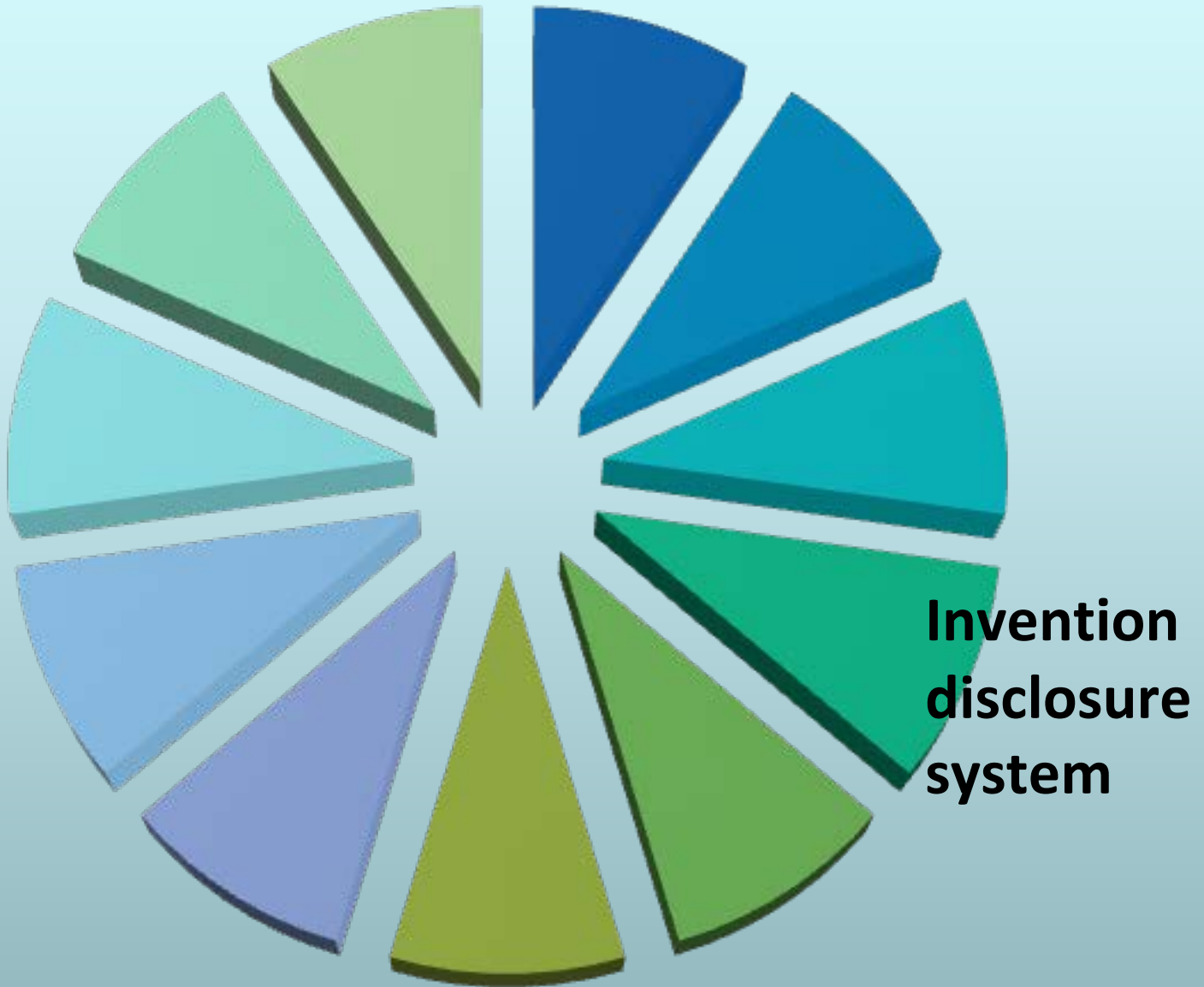
Market applications and potential competitive advantages

Effective patentability (other IP/bioproperty)

The key decision: file or not to file?

Preliminary valuation as basis for negotiating position

Technology Transfer System



TTO Responsibilities: Invention Disclosure system

Where the IP/TT process really begins

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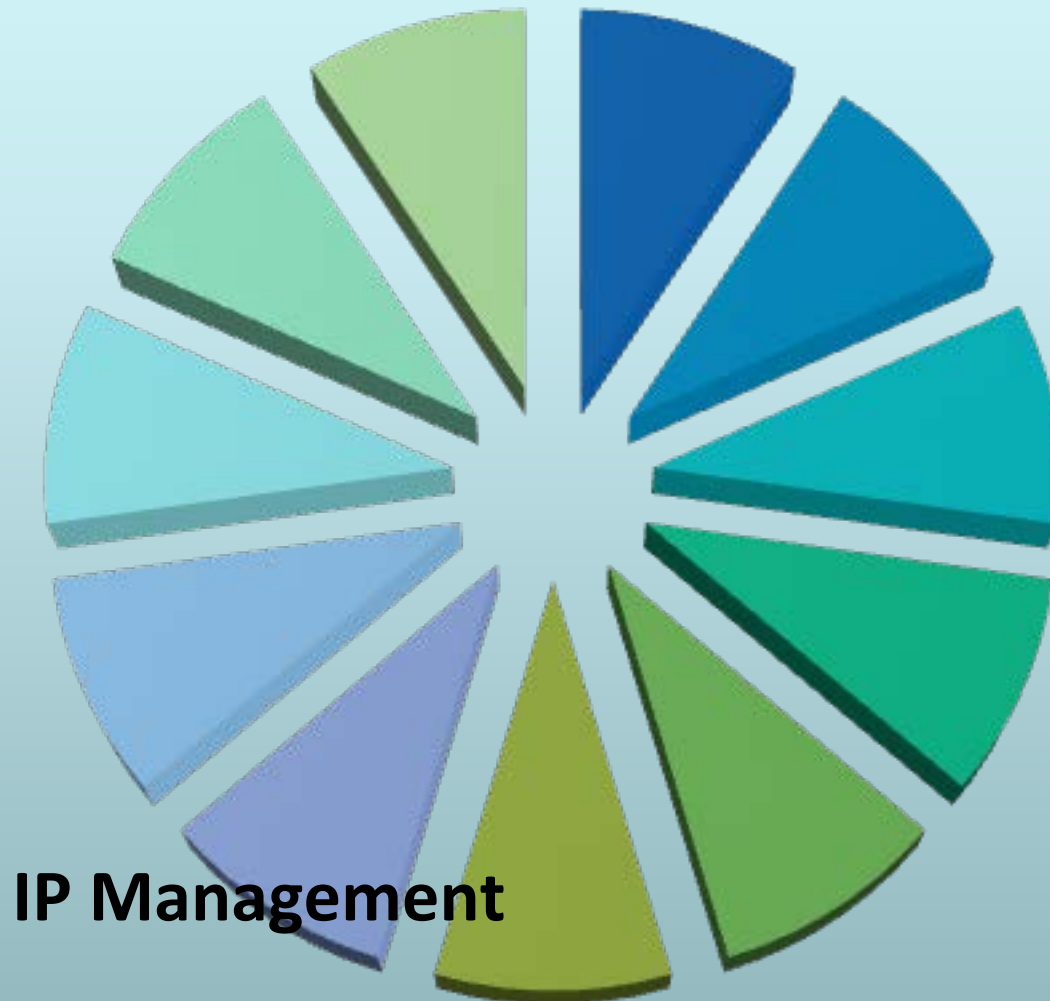
Consider the burden on the inventor

On-line system

Systematic and error-free submission, safe-keeping, and tracking

Effective archiving

Technology Transfer System



TTO Responsibilities: IP Management

NEVER lose IP rights by accident – only by choice!

Non-disclosure procedures

Property control position assessment

patentability, copyright, PBR, bioproperty, tradesecret(?)

Prior art search and patentability decisions

Patent filing and prosecution

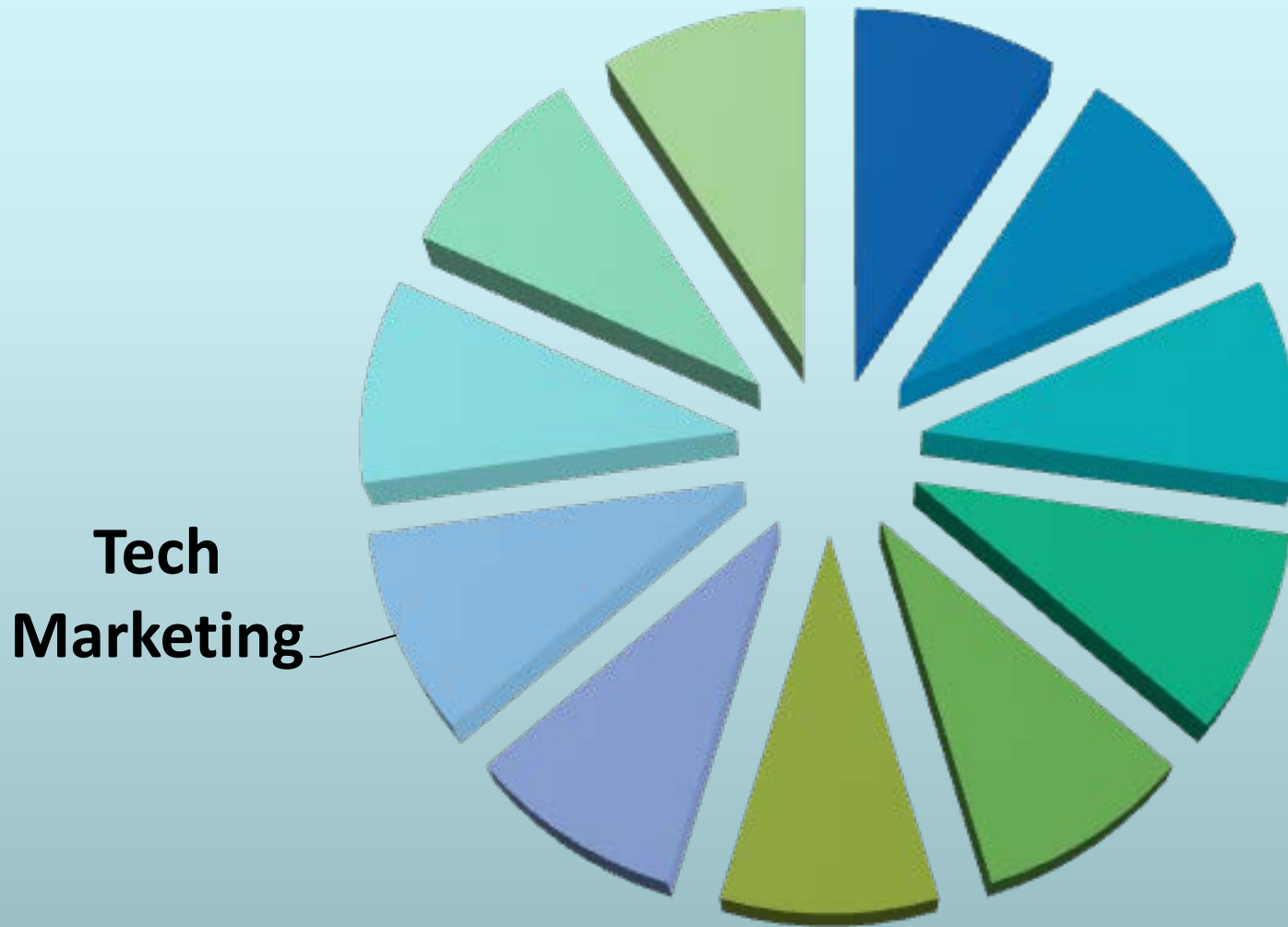
PCT and foreign filing decisions

Enforcement

Cost/benefit of filing decisions

Relationships with law firms

Technology Transfer System



TTO Responsibilities: Tech Marketing

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- Finding commercial partners
- Market application(s)
- Research into companies in industry
- Identification of potentially suitable partners
- Marketing tools: passive & active
- Contacts and follow-ups
- Web-based tech marketing
- Professional networking
- Showcasing events

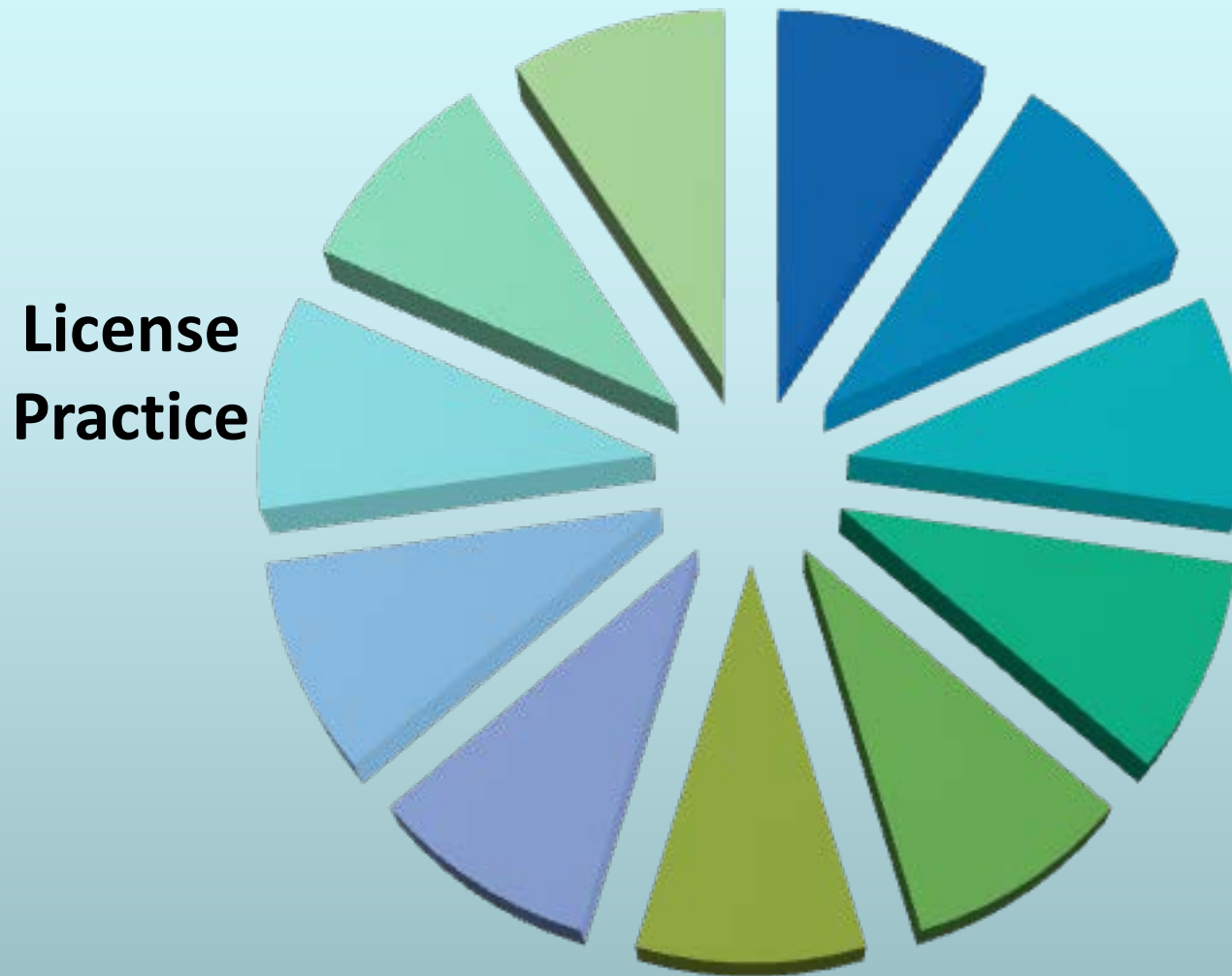
TTO Responsibilities: Technology Marketing

Without marketing.....
technology is rarely transferred

Always be marketing your technologies!

Be proactive
and creative!

Technology Transfer System



TTO Responsibilities: License Practice

Thoroughly understand the institutions agreement templates

non-disclosure, material transfer, inter-institutional, option, non-exclusive license, exclusive license,

Know the limits of negotiable terms and conditions

Know the standard provisions, and non-negotiable terms

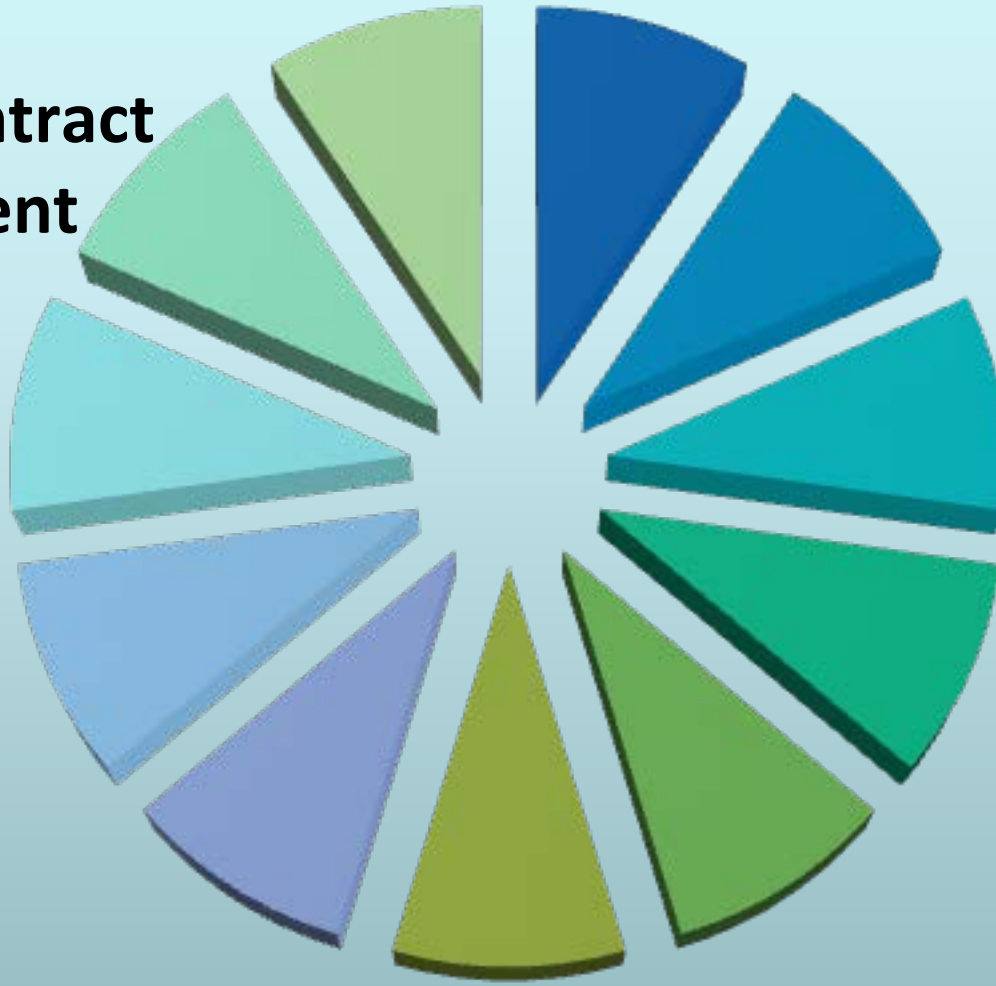
Understand the acceptable forms of financial mechanisms

Signature authority; get decision-maker commitment before negotiations

Know institutional policy on exclusive licenses vs. non-exclusive

Technology Transfer System

**License Contract
Management**



TTO Responsibilities: License Management

Post-signing management, proper hand-off to contract management

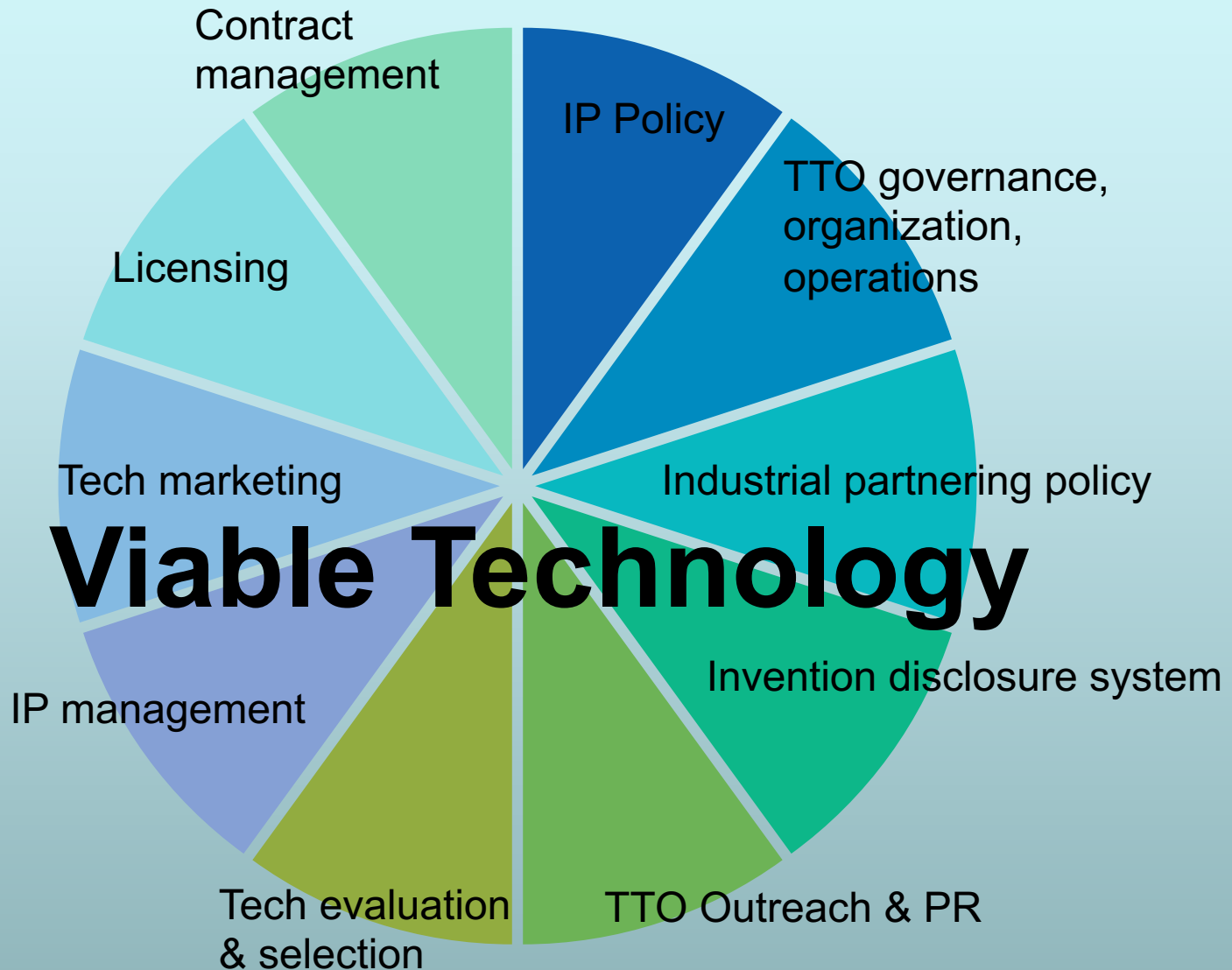
Aware of on-going monitoring of compliance

Managing problem contracts

Aware of accounts receivable relevant to negotiated contracts

What are we forgetting?

Technology Transfer system



Always looking for Viable Technology

Novel, unique, and inventive (not obvious)

Commercially relevant, economically significant
(don't forget philanthropic applications)

Significant advantage over alternatives

Protectable with effective property right mechanisms

Be on lookout for technologies with local/regional impact

Technology Transfer: keys to success

A mindset that tech transfer is valuable

Support for tech transfer from top to bottom

Sufficient resources

Viable technologies

Effective policy framework and good IP management

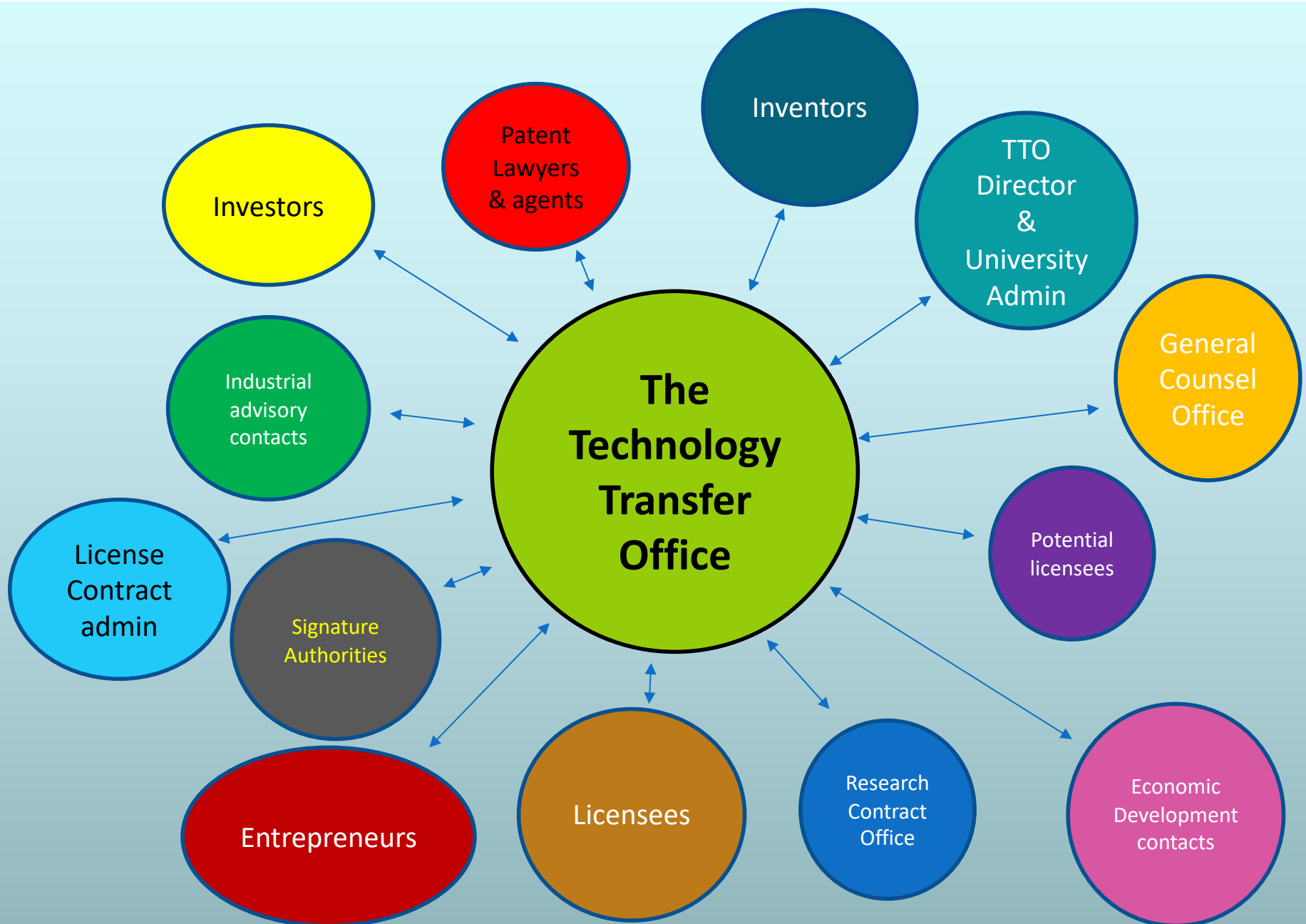
Treat inventors well (like clients)

Understand for-profit sector needs

Marketing, marketing, marketing

TTO Responsibilities: Relationship management

Creation, building, and maintenance of good working relationships with many different constituents:



Technology Transfer: keys to success

Well constructed contract templates; flexibility for adapting contracts to situation, licensee needs

Professional staff with right skill-set and attitude

More “good” deals, not few “great” deals

Sufficient back-office infrastructure (IP records, contract management, accounting)

Reasonable incentives for stakeholders

Timely and responsive, diligent follow-through, passion to get a mutually-satisfactory, sustainable deal done

TTO Operations: staffing

- Sufficient Tech Managers to manage maximum of 24 new invention disclosures per year
- Best if Tech Managers have technical background
R&D, technical services, inventor, etc. experience
- Also best if Tech Managers have business development experience; experience with start-ups a plus
- Tech Mgrs should have good interpersonal skills
- Tech Mgrs should have analytical capability, creativity, curiosity, enthusiasm, optimism
- In-depth technical expertise can be useful, but not essential; quick-learning capacity is a must

TTO Operations: staffing

- In small TTOs, the Director will also be a Tech Manager
- The TTO needs sufficient administrative support to:
 - create and manage communications
 - do meeting scheduling
 - manage all files and communication records
- Tech marketing requires admin support
- IP Management is essential; managing all communication with outside IP professionals, inventors, Tech Managers
- License contract management is essential
- Accounting also essential (including license revenue collection and distribution of shares)

TTO Operations: Budgeting

The TTO Director should develop an annual budget for:

- Salary for Tech Managers, administrative staff
- IP (primarily patent) management
- Software systems for record management
- Technology marketing
- Travel

TTO Operations: Planning

The TTO Director should develop a development plan:

- Analyzes the status of current IP metrics and projects future metrics; growth rate of metrics
- Assesses and establishes the staffing levels needed for current and future IP throughput
- Designs a staffing plan for projected IP metrics
- Assesses and establishes the IP budget levels needed for current and future IP throughput
- Designs an IP budget plan for projected IP metrics
- Provides strategic thinking as to how the TTO will meet its current and future responsibilities within staff and budget plan

TTO Operations: Funding

The TTO Director should develop a funding plan:

- Long-term sustainability requires that the TTO receive a share of license revenue
- Initial start-up likely to utilize funding from senior management's budget – this is necessary, but fraught with uncertainties
- Four decades of US experience has produced a funding rule: TTO sustainability requires $\frac{1}{3}$ of Net license revenue (Net = after recovery of patent expense)
- If TTO can take shares in start-ups, large one-time “windfalls” can occur – TTO should have a plan for these large and irregular income events

Track 4

Technology Transfer Directors & Managers

Topic 4.2.1

Elements of the TTO Structure & Function

Thank you