

Role of Intellectual Property in Enhancing the Competitiveness of SMEs in the Textiles and Clothing Industries

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SME Competitiveness

- **Profitably** produce goods or provide services to maintain or gain market share in a dynamic and competitive business environment.
- **Factors of Production:** Land, Labor, Capital, Technical Change/Knowledge/Public Good
- **Successful Competitive Strategy:**
 - (a) Consumer's wants and needs
 - (b) Competitive advantage in a complex competitive environment
- **Image, Quality and Price**

SME Competitiveness

Regardless of type of product or service, and whether business is domestic or international, the rules of competition are embodied in five competitive forces (Michael Porter):

- Entry of new competitors
- Threat of substitutes
- Bargaining power of buyers
- Bargaining power of suppliers
- Rivalry among existing competitors

SME Competitiveness

- In a knowledge-based economy, competitiveness of enterprises, including SMEs, is increasingly based on ability to provide **value-added products at a competitive price**
- Globalization and trade liberalization have made it crucial for most enterprises, including SMEs, to become **internationally competitive** even when operating wholly in the domestic market of a particular country

SME Competitiveness

- To become and remain competitive, SMEs need a coherent business strategy to constantly improve their efficiency, reduce production costs and enhance the reputation of their products by:
 - Investing in research and development
 - Acquiring new technology
 - Improving management practices
 - Developing creative and appealing designs
 - Effectively marketing their products

SME Competitiveness

- For this, SMEs have to make significant investments of time and resources
- Without **intellectual property protection** there is a strong risk that investments in R&D, product differentiation and marketing may be lost
- Intellectual property rights enable SMEs to have exclusivity over the exploitation of their innovative new or original products, their creative designs and their brands. The exclusivity creates an appropriate incentive for investing in improving their competitiveness

Competitiveness of T & C SME

- Value chain analysis: Buyer-driven value chains
- Know your competitors
- Improve sourcing; supply chain management
- Understanding changing markets and adapt products accordingly (New Products)
- E-capability; forward integration; service orientation
- Compare performance: benchmarking
- Improve productivity

Competitiveness of T & C SME

New Risks:

- Eco-Labeling
- Codes of Conduct- Ethical Sourcing/Labor Standards
- Increased patchwork of Free Trade Agreements with complex rules of origin requirements/ Documentation requirements

Subcontracting in T & C

Four factors driving subcontracting in Europe:

- **Cost:** Based on low labor costs (declining)
- **Quick response and flexibility:** based on proximity to markets and ability to respond to volatile demand
- **Know-how:** based on specialization on niche markets
- **Service:** Very important in the finishing sector. Based on cooperation with the main contractor for design and logistics

Price-Differential Textiles

- Traditional Textiles Sector: Woven and knit fabrics, garments, non-wovens and household textiles
- Textile Support Sector: Fibre production, yarn production, and dyeing and finishing

Tech-Differential Textiles

- New Products:
Microsystems/MEMS/Biotechnology/Nanotechnology
- Information textiles: electronic wearable textiles, sensory and fibre optics textiles, and electronic support textiles
- Transportation textiles: automobile airbags, engine-support textiles, transport interiors, aircraft components
- Special textile materials: Construction and insulation textiles, geotextiles, medical textiles, combat textiles, filters, circuit boards, protective textiles, flame-retardant textiles

Smart Clothes

- (a) Clever or intelligent or (b) fashionable or chic:
- **Intelligent textiles:** Insulation; Phase change materials and shape memory materials
 - **Fashion:** (a) Music T -shirts (music stored in a chip; tune to favorite radio-station; moving images)
 - (b) Businessmen garments (microphone in collar; PDA in the sleeve)
 - (c) Solar energy rechargeable jacket
 - (d) Massage Kimono

PRODUCT DEVELOPMENT STRATEGIES

	Old Product	New Product
Old Market	Market Penetration	Product Development
New Market	Market Development	Product Diversification

Trends 1

**In a knowledge-based economy,
IP assets are valuable and
flexible key assets for
creating and sustaining
enterprise competitiveness
by preventing ‘free riding’**

Centrality of Knowledge

**KNOWLEDGE underpins
PERFORMANCE**

But...

**Wolfgang Stofer, Director of BMW's
Treasury Department:**

**“Whenever the technology becomes
commoditized, we buy it from third
parties”.**

Corporate Image, Product Positioning and Brand Equity

TRUST and RELATIONSHIPS are the bulwark of any enterprise, be it big or small, with a global or local ambit, having a traditional or modern management style, high tech or low tech, leader or follower, and irrespective of it being a part of the old world of 'brick and mortar' or a rising star reliant on e-commerce.

Trust is to Business What Trademark is to Brand

- Brand Equity built on the foundation of a protected Trademark**
- Brand/Trademark can:**
 - (a) be disposed off separately from other company assets (Free-standing Institutions);**
 - and**
 - (b) give rights that can be legally protected**

“Brand” Companies

Nike...

Adidas...

Reebok...

Levi-Strauss...

...Own No Factories

Trends 2

Modern IP system provides the essential tools for managing such intangible assets.

Managing IP in one's business provides the ultimate power in making a globally competitive enterprises.

Trends 3

**Market value of any
enterprise, including SMEs,
increasingly determined by its
portfolio and optimal use
of IP assets**

Trends 4

**Like any other corporate asset,
IP assets need to be
managed
to yield optimum results
based upon corporate goals**

Trends 5

Enterprises failing to embed the creation, capture, or protection of their IP assets into their product and business processes incur an undue risk of loss of both key competitive advantage and essential corporate value

Trends 6

Creating, protecting and managing IP rights of an enterprise vis-a-vis its employees, customers, partners and competitors and avoiding infringement of IP rights of others

Trends 7

Much More than a sword or shield in litigation to establish exclusive rights to the commercialization of specific technologies

Trends 8

- **Tax-saving licensing and donations**
- **Securitization of royalty streams**
- **Adding balance sheet value through IP insurance**

Trends 9

IP rights facilitate

- (a) outsourcing design, development production, distribution and/or marketing activities;**
- (b) entering into joint ventures and other strategic relationships; and**
- (c) securing investment to start or expand business**

Trends 10

IP Leveraging Strategies

Technology licensing

Brand-extension licensing

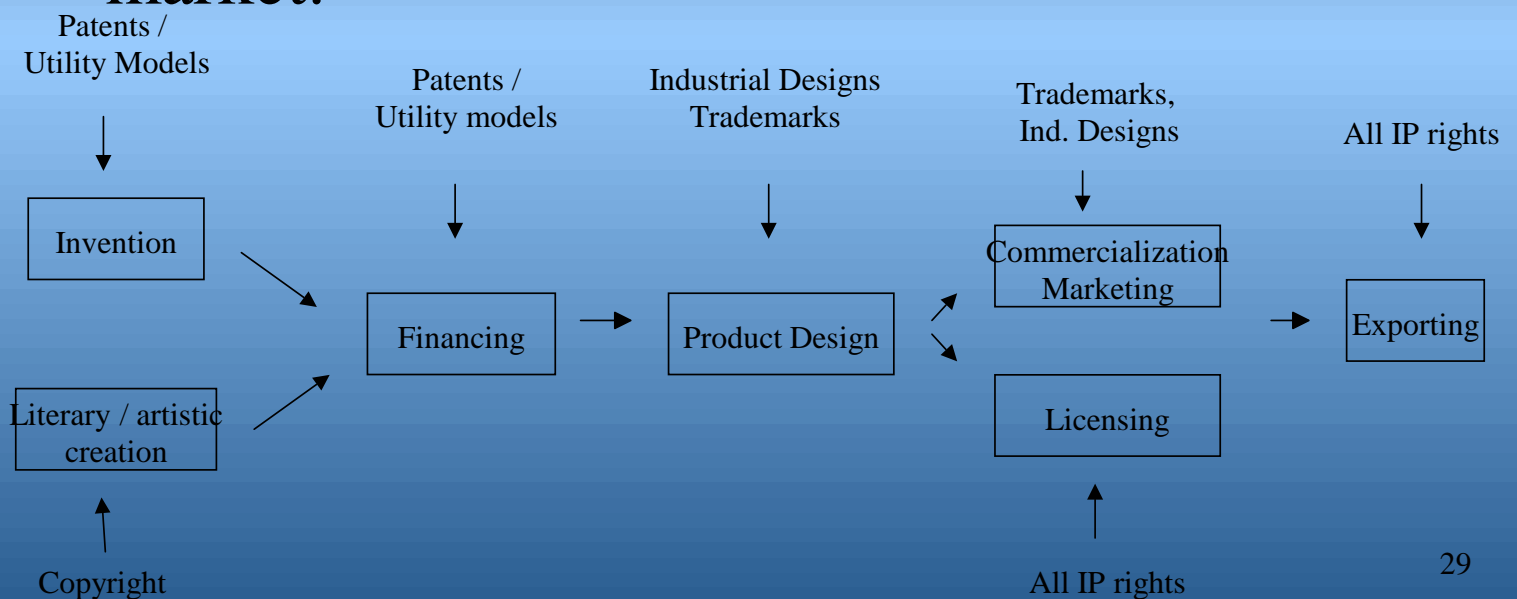
Joint ventures and strategic alliances

Business format franchising

Outsourcing/Subcontracting

Basic Message 1

- IP adds value at every stage of the value chain from creative/innovative idea to putting a new, better, and cheaper, product/service in the market:



Basic Message 2

- IP strategy should be an integral part of the overall business strategy of the enterprise
- The IP strategy of an enterprise is influenced by its creative/innovative capacity, financial resources, field of technology, competitive environment, etc.
- **BUT**: *Ignoring the IP system altogether, as is often the case for many enterprises, especially SMEs, is in itself an IP strategy and may eventually prove costly.*

Introduction to IP Management 1

- **Legal**
- **Technical**
- **Business**
- **Export**
- **Financial**
- **Relationships**
- **Accounting**
- **Tax**
- **Insurance**
- **Security**
- **Automation**
- **Personnel**

Introduction to IP Management 2

- **Trade Secrets**
- **Patents and Utility Models**
- **Trademarks, Collective and Certification Marks**
- **Geographical Indications**
- **Industrial Designs**
- **Copyright and Related Rights**
- **New Varieties of Plants**

Introduction to IP Management 3

- **Business Plan (New Business or Product Development)**
- **Export Strategy/Market Segmentation**
- **Market Differentiation/Quality**
- **Employment and Consulting Contracts**
- **Security System (Physical and IT)**

Introduction to IP Management 4

- **Competitive Intelligence**
- **Software Licensing Negotiations**
- **Financing (Banks, VCs, Angels)**
- **Advertising and Marketing**
- **Internet (E-mail; Web Site)**

Introduction to IP Management 5

Innovation/Technology Management

IP/Technology Audit

Valuation of IP; Balance Sheet

**Links/Relationships (Employees, Vendors,
Subcontractors, Licensing, Franchising)**

**Research Contracts (Universities, Research
Institutes)**

Introduction to IP Management 6

- **Search (Databases)**
- **Monitoring (Internal/External)**
- **Dispute Resolution (ADR, Courts)**
- **Counterfeiting and Piracy**

Fundamentals 1

Create IP Awareness and Culture

**All Employees (Top to Bottom)
should be fully aware of importance
of protecting and using IP assets for
the benefit of the SME.**

**(CEO, Directors, Managers, Staff,
Accountants, IT personnel, Security
staff, etc)**

Fundamentals 2

Lack of proper planning on IP front may allow competitors to gain a competitive, long-term advantage from which there is NO recovery

Fundamentals 3

Implementing an IP management program requires:

(a) A comprehensive business perspective of different types of IP assets/rights and their inter-relationships.

(b) This perspective should drive the core business strategy, targeting specific markets of commercial value.

(c) Total integration of intellectual property goals and objectives throughout the organization; otherwise, there it is not possible to get the best business results from IP assets.

Fundamentals 4

- **Record appropriate details about the IP assets in an IP asset register**

Fundamentals 5

**Identify and protect all
the IP assets owned by
the Enterprise**

Fundamentals 6 (a)

**Audit the intellectual
property portfolios of the
enterprise periodically**

Fundamentals 6 (b)

IP Audit and Strategic Analysis

Key Aim:

Whether any hidden value in the IP portfolio can be better leveraged, sold or licensed

Fundamentals 6 (c)

- **Are IP assets exploited optimally?**
- **Is there any redundant IP?**
- **Are all IP assets optimally protected?**
- **Could it be earning more revenue?**

Fundamentals 6 (d)

- **What technologies have non-competing applications that could be licensed to others?**
- **What brands offer value in a brand-extension licensing or co-branding relationship?**

Fundamentals 6 (e)

- **What distribution channels or partnering opportunities can be strengthened if the other party had greater control?**
- **What growth and expansion strategies are being used by competitors? Why?**

Fundamentals 6 (f)

- **Where are the strategic/financial holes in current licensing and alliance relationships?**
- **What is the on-line and e-commerce strategy of the enterprise? How could it be strengthened/ improved?**

PRODUCT LIFE CYCLE (1) (STRATEGIC PLAN)

Am I competitive today?

Am I focused enough on the future?

On the one hand you've got to live for **today** or there's no **tomorrow**. **But** if you don't focus on **tomorrow** someone else will define your **future**.

Essence of Competition: To Improve Continuously:

Customer Relationships

Product Quality

Time-to-Market

PRODUCT LIFE CYCLE (2) (STRATEGIC PLAN)

- (1) Market-Driven New Product Introductions: Innovate or decline/die: Customer expectations, competitor pressures, quality pressures; and investor/shareholder expectations
- (2) Growth Strategy: Market share or profit share; Innovate or Die; Risk Vs. Reward; Failure Vs. Learning; Cost Vs. Profit
- (3) Venture Capital: Development cost; payback -period
- (4) Business Strategy and Intellectual Property Strategy: Length of Product Life Cycle

PRODUCT LIFE CYCLE (3) (STRATEGIC PLAN)

- **Thomas Edison** had thousands of Patents; most of them produced nothing.
- Small number of **Successful Ideas** changed the course of civilization.

Incandescent Lamp:

Subordinate: “*Why do you persist in this Folly? You Have failed more than 9000 times!!!*”

Edison: “**I haven’t failed once; 9000 times I've learned what does not work**”.

PRODUCT LIFE CYCLE (4) (STRATEGIC PLAN)

Key Elements of Success for a New Product:

1. Solves a problem or performs a function in a new or better (creative or innovative) manner than competing or substitute products.

(a) Product: Any product has a component of goods and a component of services. Any product can be positioned on the goods/services continuum.

(b) Goods: part, sub-assembly, final item or machine (Trade Secret; Patent; Utility Model; Industrial Design, Layout-Design or Topography of an Integrated Circuit, New Plant Variety Protection)₅₁

PRODUCT LIFE CYCLE (5) (STRATEGIC PLAN)

Key Elements of Success for a New Product:

2. The perceived value (quality) of the new product by the customer supports the retail selling price.

(IP in costing a new product and fixing retail price)

**(Branding: Trade Name; Trademark;
Geographical Indication)**

PRODUCT LIFE CYCLE (6) (STRATEGIC PLAN)

Key Elements of Success for a New Product:

3. The new product can be mass-produced/replicated, delivered, maintained and serviced, if need be, in a cost efficient manner; in-house automation and e-collaboration in design, manufacturing, delivery, maintenance, after sales service and/or repair; spare parts.

(Patent; Industrial Design; Copyright; Trade Secret)

PRODUCT LIFE CYCLE (7) (STRATEGIC PLAN)

Key Elements of Success for a New Product:

4. Appropriate and attractive packaging and labeling designs are developed.

(Trade Dress; Industrial Design; Trade Mark; Trade Name; Copyright)

PRODUCT LIFE CYCLE (8) (STRATEGIC PLAN)

Key Elements of Success for a New Product:

5. The new product is properly branded and positioned. It receives adequate promotional and advertising support. (Customer Relationship Management; Value Network)

(Marketing: Branding, Advertising: Trade Mark; Trade Name, Geographical Indication; Patent)

PRODUCT LIFE CYCLE (9) (STRATEGIC PLAN)

Key Elements of Success for a New Product:

6. The new product is readily available to customers. (Collaboration; Value Network Management)

**(Trade Secret; Business Method Patent;
Licensing)**

PRODUCT LIFE CYCLE (10) (STRATEGIC PLAN)

- (1) Inventor or Entrepreneur; Leader or Follower;**
- (2) (a) In-house manufacturing (employees; advisors; consultants, out-sourcing); or**
 - (b) Sub-contract; License, Franchise**
- (3) Value Chain:** Investor, Supplier/vendors, R & D, Designer, Manufacturer, Distributors (Wholesalers, Dealers, Retailers), Marketer, Customer.
- (4) Strategic Alliance:** Collaboration in research and development, product/service design, manufacturing, marketing and/or distribution.

PRODUCT LIFE CYCLE (II) (STRATEGIC PLAN)

Generating, selecting, developing and using an original or new idea, concept or design to create, develop and deliver a new product in the marketplace for business wealth creation requires:

- (a) Time;
- (b) Funds (own or borrowed);
- (c) Creative and innovative effort (Own, Employees, Partners; on-line brainstorming, etc); and
- (d) Persistence and patience; and
- (e) Focused management of the entire process from idea to market.

PRODUCT LIFE CYCLE (12)

Idea/Concept/Design: Screening

- (1) Laboratory research studies (in-house/out-sourced) to define new Science and Technology (High Technology);
- (2) Based on market research and level of need;
- (3) Dependence (on other products, infrastructure, regulations, controls,).

Wealth creation potential of a new idea, concept or design:
incremental or breakthrough; discontinuous innovation; risk

Patent Information:Competitive Intelligence;Technology Mapping or Foresight;Data Mining;

Marketing the Idea/Concept/Design: technology stage-gating

PRODUCT LIFE CYCLE (13)

Idea/Concept/Design

1. **BUSINESS PLAN for raising FUNDS**
2. **COMPANY NAME or BUSINESS NAME**
3. **SECURITY POLICY (PHYSICAL and DIGITAL);
SECRECY;NON-DISCLOSURE or NON-COMPETE
AGREEMENTS**
4. **COMPETITIVE INTELLIGENCE; ESPIONAGE**
5. **UTILITY MODEL; PATENT INFORMATION;**
6. **PATENT APPLICATION; LICENSING (In or Out)**
7. **POTENTIAL MARKETS: PCT/MADRID/HAGUE**
8. **DISTRIBUTION CHANNELS; E-BUSINESS**

PRODUCT LIFE CYCLE (14)

Idea/Concept/Design

- (1) An average entrepreneur or manager/owner of an SME lacks experience in IP matters; and
 - (2) An average IP attorney lacks experience in entrepreneurship and management of a business, and may not understand his client's competitive environment or strategic business plan.
- (Check if idea/concept is new: Patent Information)**

PRODUCT LIFE CYCLE (15)

Idea/Concept/Design

- (1) How the patent system works;
- (2) The categories of features that are potentially patentable;
- (3) List new features of a system or process;
- (4) Analyze the features for commercial value; and
- (5) Discuss the business plan/strategy and the selected features with an IP attorney.

PRODUCT LIFE CYCLE (16)

Technical and Commercial Feasibility

(1) Further laboratory work to translate basic science & technology into product concepts and prototypes to meet real or perceived market need; 3D Digital Modeling; Digital Engineering Simulation and Analysis; Iteration

(2) Subcontract, Licensing (Exclusive/Non-exclusive), Joint Development, Joint Venture, Strategic Alliance, etc.

(3) Customer learning and adaptation

(Document Idea or Design: Laboratory Notebook; Secrecy (Non-Disclosure Agreement-- NDA) ; Provisional Patent Application; Copyright)

PRODUCT LIFE CYCLE (17)

Product Development/Manufacturing

- (1) **Product Definition:** What it must do for the customer; how to be sold, price, performance, relative quality requirements and timing.
- (2) **Product Specifications:** what it must be, the technical specifications, project milestones, and resource requirements for timely delivery.
- (3) **Product Testing and Evaluation:** Prototype compared with product specifications; in-house or outside evaluation.
- (4) **Pilot Production:** Statistical Process Control (SPC), Highly-Accelerated Life Testing (HALT) and Highly-Accelerated Stress Testing (HAST); Quality Systems: ISO 9000, ISO 14000, 6 Sigma.

PRODUCT LIFE CYCLE (18)

Competitive Advantage

- (1) **Profitability: Manufacturing costs versus retail price;**
- (2) **Availability and suppliers of raw materials and other inputs;**
- (3) **Size of market (domestic, international); market research**
- (4) **Function; competing products/substitutes; competitor response.**
- (5) **Modularity(reuse of components);**
- (6) **Engineering/production assessment: fit with existing equipment or new manufacturing technology.**
- (7) **Distribution channel; existing or new.**
- (8) **Ease of use; ease of repair, ease of recycling (environmental concerns);**
- (9) **Compliance with safety regulations and other standards;**
- 10) **Appearance (visual appeal) of the product;**
- (11) **Durability and reliability; and**
- (12) **Protection of Intellectual Property Rights (IPRs)**

PRODUCT LIFE CYCLE (19)

Trade Secrets in Manufacturing Processes

Process Design

- (1) Just-in-time production;**
- (2) Batch production versus flow production;**
- (3) Standard operations;**
- (4) Production smoothing;**
- (5) Pull system;**
- (6) Waste minimization;**
- (7) Machine set-up reduction;**
- (8) Operator multi-process handling;**
- (9) Workload assignments;**
- (10) Work design for new products & processes;**
- (11) Process map and layout.**

PRODUCT LIFE CYCLE (20)

Product Development Manufacturing

- (2) Subcontract/Licensing/Joint Development
(Laboratory Notebook; Secrecy (NDA);
Copyright; Patent or Petty Patent/Utility
Model)

PRODUCT LIFE CYCLE (21)

Commercialization; Marketing

(1) A viable marketing strategy, based on unique selling proposition, is implemented after price/value established.

VISIBILITY of ADVANTAGES.

(Trade Secrets; Licensing; Franchising; Trademarks (Collective/Certification Mark); Trade Dress (Packaging); Geographical Indication; Industrial Designs; Patent; Copyright and Related Rights; New Plant Varieties).

(2) Web-Site and E-Commerce:

(Trade Secrets, Copyright, Trademark)

PRODUCT LIFE CYCLE (22)

Market Expansion and Export

- (1) Distribution channels: Branding; Franchising;
- (2) Partial Sale or Assignment;
- (3) Licensing; (International: PCT/ Madrid/ Hague)
- (4) Infringement of IPRs;
- (5) Market Share: Imitation and Copying (Counterfeiting, Piracy); monitoring, surveillance, Alternate Dispute Resolution (ADR), judicial action.
- (6) After sales service; **parallel imports**
- (7) Trend mapping and lead-user analysis.

PRODUCT LIFE CYCLE (23)

Market Expansion and Export

Peter Drucker

“It is not size (of the existing enterprise) itself that is an impediment to innovation; it is the existing successful operation. The existing business demands constant attention and high priority”

Innovation-Creativity-Ideation

Culture

Policy

PRODUCT LIFE CYCLE (24)

Product Maturity

Licensing

Petty Patents

Know How

Design

Branding

PRODUCT LIFE CYCLE (25)

Product Obsolescence

(1) New Product Portfolio Management

Pursue a number of new product projects in parallel.

(2) Performance Measurement

(3) Continuous Improvement; Potential for Product Line Extension

(4) Product Exit Strategies

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(Multiple Products; Larger portion of profits from new products)

PRODUCT LIFE CYCLE (26)

Exporting a Product

- (1) Pricing**
- (2) Raising funds**
- (3) Adaptation of product, design, brand, packaging**
- (4) Contractual agreements with foreign partners**
- (5) Advertising/marketing abroad**
- (6) Participation in fairs and exhibitions abroad**
- (7) Trade secrets; including export plan/strategy**
- (8) Strengthen position in export market**
- (9) Access to new markets**

PRODUCT LIFE CYCLE (27)

Exporting a Product (Common Pitfalls)

- (1) Believing IP protection is Universal**
- (2) Assuming IP Laws and Procedures are the same worldwide**
- (3) Not checking whether a trademark is already registered by someone else or is being used by a competitor**
- (4) Not using regional or international IP protection systems**
- (5) Applying too late for IP Protection abroad**

PRODUCT LIFE CYCLE (28)

Exporting a Product (Common Pitfalls)

- (6) Disclosing too much information without a confidentiality or non-disclosure agreement**
- (7) Infringing IP rights of others; parallel imports**
- (8) Ownership of IP issues while outsourcing manufacturing or design of products**
- (9) Seeking to license a product in a market where patent/design/trademark not registered**
- (10) Using a trademark which is inappropriate for the relevant export market**

PRODUCT LIFE CYCLE (29)

Exporting a Product (IP Policy Issues)

- (1) Awareness; (Education and Training)**
- (2) Access/cost (Translation, System; Agents; Lawyers)**
- (3) IP Service Providers (BDS); SME Consultants**
- (4) Valuation, Finance, Insurance**
- (5) E-Commerce (Territoriality, domain names, Copyright, patent, design, trade secrets, etc)**
- (6) Harmonization; parallel imports**
- (7) Counterfeiting, piracy and other crimes
(Narcotics, Terrorism, etc)**