



GUIDE ON USING INVENTIONS IN THE PUBLIC DOMAIN

World Intellectual Property Organization
Webinar – Cameroon (Apr 20, 2021)

Your Innovation Management & IP Partner



Innovation & IP Consultants

Greece, USA, Cyprus

Patent Search, Drafting, Filing and Prosecution (EU, US, China, PCT)

Patent Valuation, Due Diligence & Monetization

New Product Development and Re-engineering

R&D Streamlining and Management

Technology Transfer

R&D ROI Maximization

R&D Integration with HR practices for Sustainable Competitive Advantage



Dr. Vassilios Vlahakis

Clients/Projects



The Guide in a Nutshell

The Guide addresses the questions like...

Who

TISC staff in developing and least developed countries (LDCs) who can assist clients with inventive ideas

When

The guide can be used when a client comes with a new idea for a product/service and wants to commercialize it. Guide on identifying inventions in the public domain is the prerequisite guide for this.

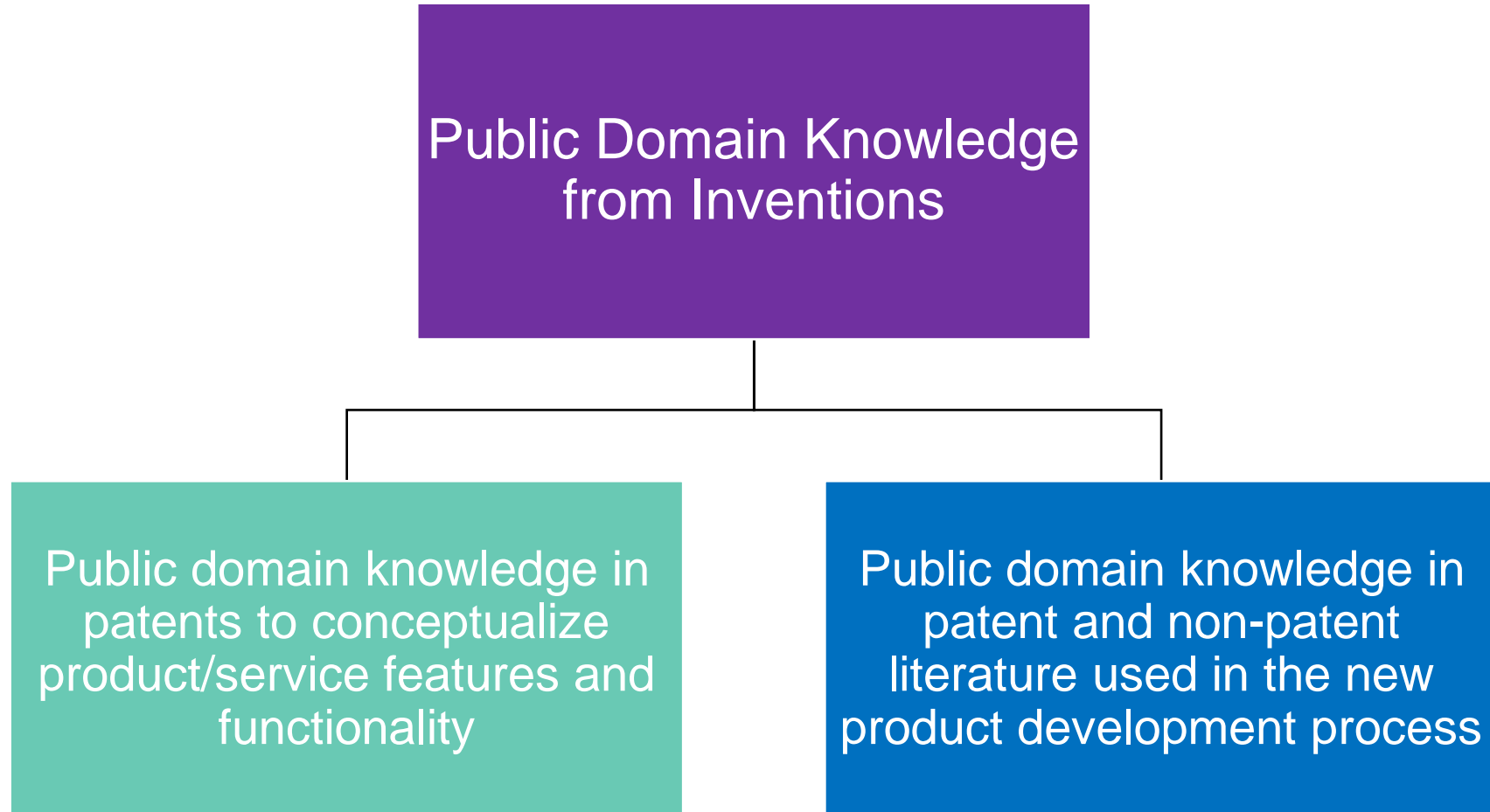
Where

To be used in TISCs, institutions, firms and companies

How

To be used to explore public domain knowledge for improvement of invention of new products/services

Framework for the Guide: 2 Approaches to using public domain knowledge



Limitations of the Guide

Explanations in the Guide are...



NOT a formal introduction to the product development process



NOT to be used as a legal guide in any way



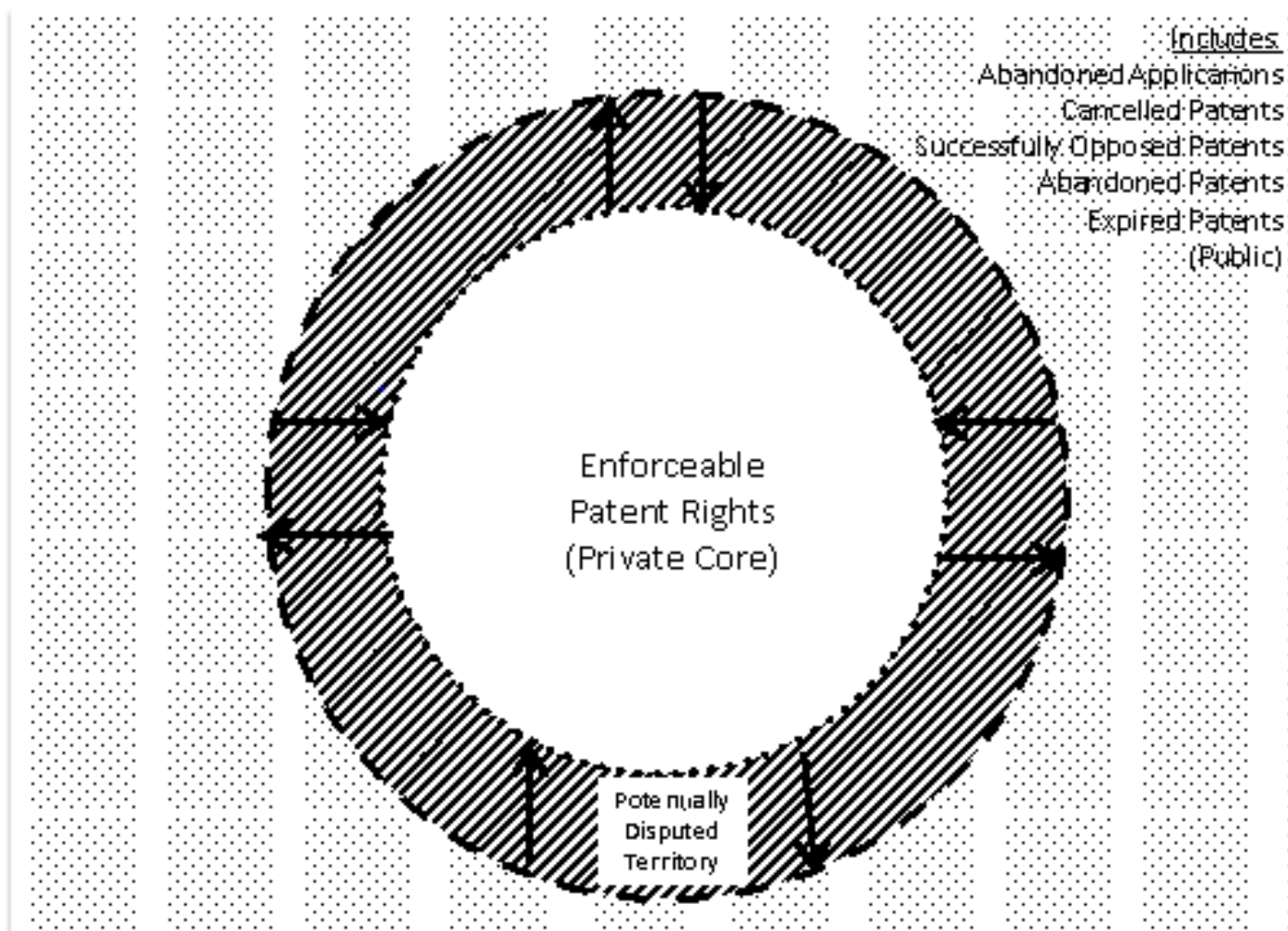
NOT a comprehensive guide on public domain



Aware of the lack of access to resources discussed in the Guide in many regions in the world

What is Public Domain?

Public domain as a function of Geography and Time



Patents in Public Domain:

- Abandoned applications
- Abandoned previously granted patents
- Cancelled patents
- Successfully opposed patents
- Expired patents

Source: Conley J., et al.(2013). Study on patents and public domain (CDIP/12/INF/2 REV)

Public Domain in Developing Countries and LDCs

Developed countries are leading applicants of patents.

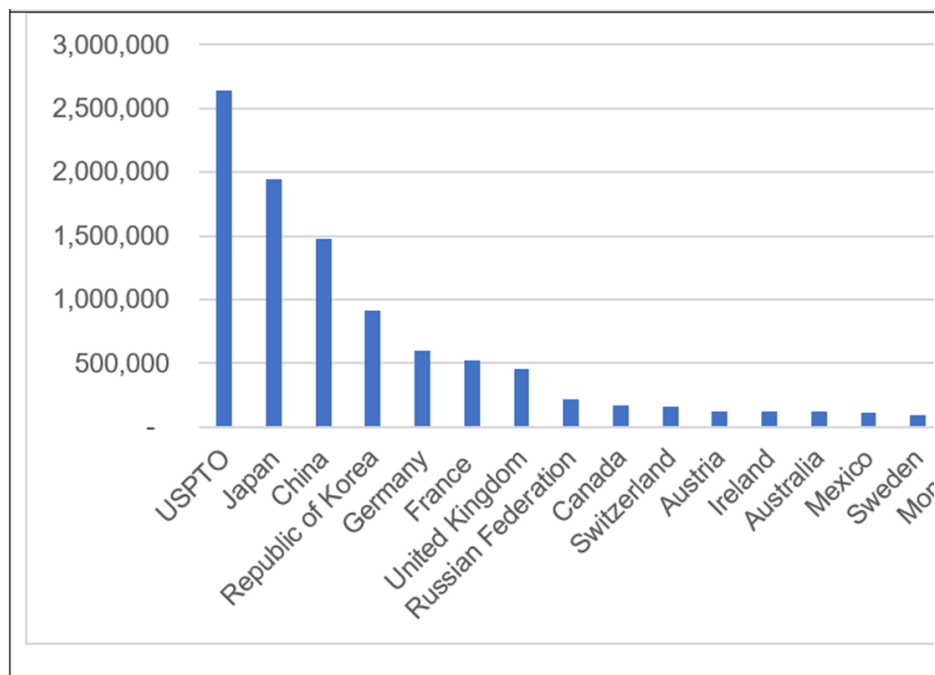
Patents need economic reason to be filed in developing and LDCs. In practice few patents from developed countries are filed in LDCs. Hence most inventions from developed countries are part of public domain in LDCs.

Freedom to Operate (FTO search) is important regardless.

Patent knowledge in most cases could be part of public domain in developing and Least Developed Countries (LDCs).

Top 20 Patent Offices with Active Patents + Filings

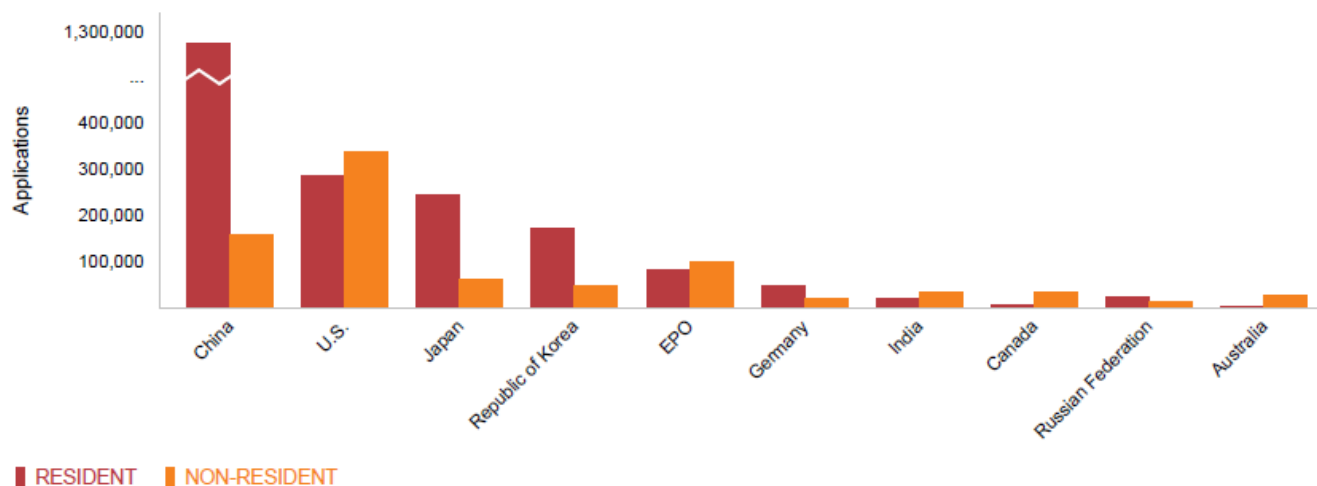
in 2015



in 2019

China's office received more than twice the amount of applications received by the U.S.

1.2. Patent applications at the top 10 offices, 2019



Source: Figure A8.

Based on the data provided in World Intellectual Property Indicators 2016 and 2020. WIPO.

Patent Filings and Cameroon ranking

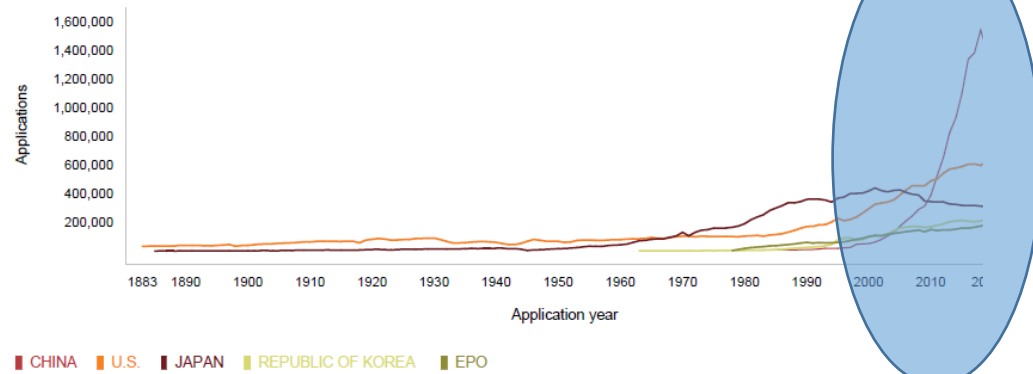
Table 1. Ranking of total (resident and abroad) IP filing activity by origin, 2019

Origin	Patents	Marks	Designs	Origin	Patents	Marks	Designs
China	1	1	1	Bulgaria	59	43	36
U.S.	2	2	4	Morocco	69	48	22
Germany	5	4	2	Chile	40	32	76
Japan	3	3	8	Cyprus (b)	65	56	28
Republic of Korea	4	10	3	Colombia	54	36	60
France	6	6	6	Hungary	43	60	50
U.K.	7	7	9	Pakistan	62	35	57
Italy	11	13	5	Slovakia	56	54	59
India	10	8	13	Belarus	44	65	62
Switzerland	8	14	10	United Arab Emirates	51	51	71
Iran (Islamic Republic of)	20	5	12	Greece (b)	47	80	47
Russian Federation	12	9	17	Liechtenstein (a)	42	90	49
Turkey	22	11	7	Croatia	67	64	54
Netherlands	9	20	14	Sri Lanka	61	72	55
Australia	19	16	16	Peru	77	37	79
Spain	23	17	11	Slovenia (a, b, c)	58	79	58
Sweden	13	26	15	Uzbekistan	60	66	69
Canada	14	15	26	Bangladesh	94	69	39
Brazil	24	12	20	Mongolia	93	59	51
Austria (c)	16	24	25	Serbia	70	71	63
Poland (c)	29	23	18	Lithuania	74	73	65
Ukraine	33	21	19	Estonia	71	74	70
Denmark	18	40	21	Kazakhstan (a, c)	48	50	117
Belgium	17	34	30	Kenya	64	76	77
China, Hong Kong SAR	35	25	24	Azerbaijan	55	83	80
Mexico	32	18	38	Malta	63	77	83
Indonesia	30	27	33	Syrian Arab Republic	86	62	78
South Africa	41	44	42	Mauritius	101	85	81
Malaysia	38	38	53	Qatar (c)	83	97	90
Philippines	53	33	44	Cameroon (a, b, c)	57	116	98
Ireland (b)	27	53	52	Oman	109	58	106
Romania	46	41	48	Bosnia and Herzegovina	106	104	68

Source: WIPO Statistics Database, September 2020.

Increasing Importance of Patents as Info Sources

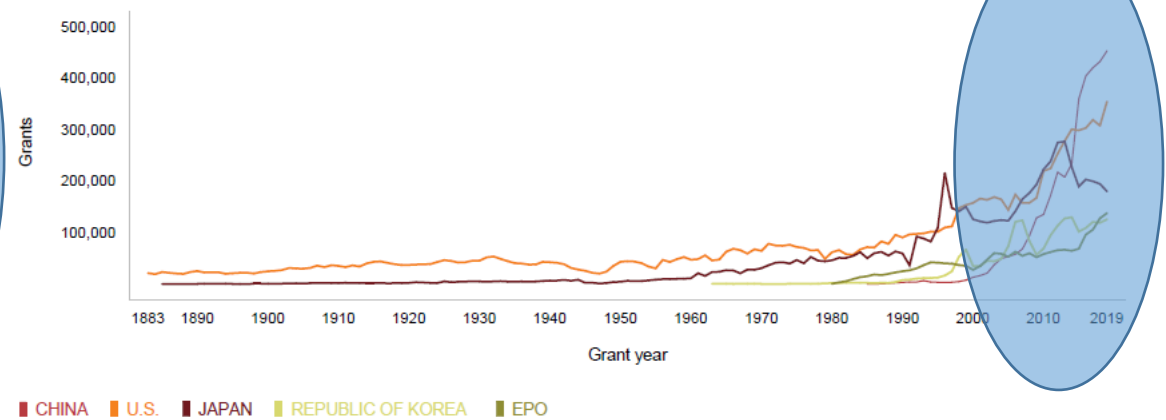
Trend in patent applications for the top five offices, 1883–2019



Note: The IP office of the Soviet Union – not represented in this figure – was the leading office globally in terms of filings from 1964 to 1969. Like Japan and the U.S., the office of the Soviet Union saw the amount of applications it received remain stable until the early 1960s, after which it recorded a rapid growth in applications filed.

Source: Figure A7.

A14. Trend in patent grants for the top five offices, 1883–2019



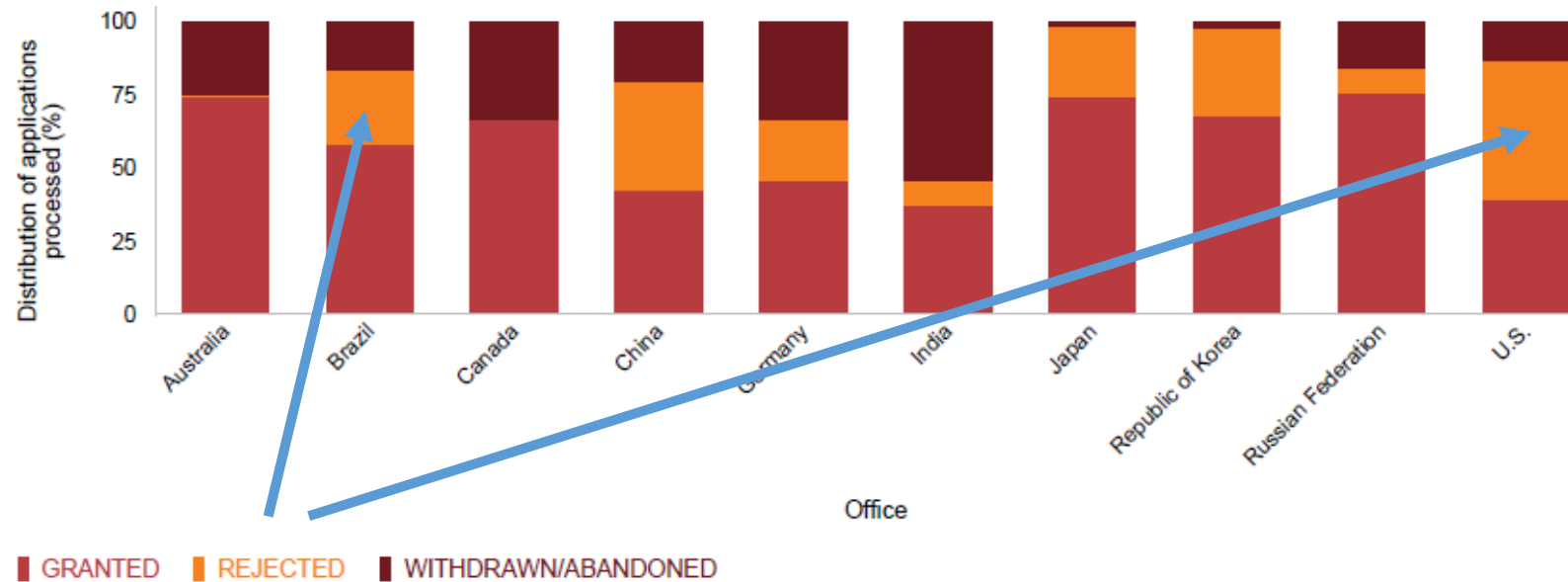
Note: EPO is the European Patent Office. The top five offices were selected based on their 2019 totals.

Source: WIPO Statistics Database, September 2020.

**Around 15 million patents were
in force globally in 2019**

Rejected Applications = Valuable Source of Information

The proportion of rejected applications was largest in the U.S.
1.9. Distribution of patent examination outcomes for selected offices, 2019



Source: Figure A43.

Distribution of Patent Applications per Technology Field

A30. Distribution of published patent applications by technology field for the top 10 origins, 2016–2018

Field of technology	Origin									
	China	U.S.	Japan	Republic of Korea	Germany	France	U.K.	Switzerland	Netherlands	Russian Federation
Electrical machinery, apparatus, energy	6.6	4.4	10.1	8.7	8.8	6.4	5.4	5.9	7.0	3.5
Audio-visual technology	2.2	2.7	4.5	5.1	1.5	2.2	1.8	0.9	2.2	0.6
Telecommunications	1.7	2.3	2.4	2.7	0.9	1.9	1.6	0.5	1.3	1.4
Digital communication	4.6	7.8	2.9	6.3	1.7	4.5	3.0	1.3	2.3	0.7
Basic communication processes	0.3	0.8	0.8	0.6	0.6	0.6	0.7	0.3	0.8	0.7
Computer technology	7.3	12.5	5.8	8.2	3.1	5.2	6.8	2.6	6.1	2.8
IT methods for management	1.8	2.8	1.3	3.0	0.5	0.9	1.4	0.7	0.6	0.5
Semiconductors	1.4	2.9	5.4	6.2	2.3	2.1	1.2	0.7	3.1	0.8
Optics	1.4	1.8	6.1	3.4	1.8	1.9	1.4	1.0	4.9	0.8
Measurement	6.0	4.0	4.4	3.7	5.9	4.9	5.0	7.5	5.2	7.7
Analysis of biological materials	0.5	0.9	0.4	0.5	0.6	0.9	1.3	1.2	0.6	2.1
Control	2.8	2.1	2.2	1.7	2.1	1.5	1.7	1.6	1.2	1.8
Medical technology	2.7	8.5	3.7	3.7	4.6	4.6	6.8	7.8	11.6	7.2
Organic fine chemistry	1.9	2.9	1.5	1.8	3.2	4.6	4.9	6.3	3.8	1.7
Biotechnology	1.5	3.9	1.0	1.5	1.9	3.0	4.6	6.1	3.7	1.7
Pharmaceuticals	3.3	5.9	1.3	2.0	2.5	4.1	7.6	10.4	3.4	4.1
Macromolecular chemistry, polymers	1.9	1.4	2.3	1.4	2.0	1.8	0.8	1.9	3.4	0.9
Food chemistry	3.9	1.0	0.8	2.0	0.4	0.9	1.0	3.6	3.2	12.0
Basic materials chemistry	4.0	2.7	2.2	1.8	3.2	2.3	3.1	3.0	4.8	2.7
Materials, metallurgy	3.4	1.1	2.4	1.9	2.0	2.4	1.6	1.4	0.8	4.5
Surface technology, coating	1.5	1.3	2.5	1.4	1.7	1.5	1.1	1.5	1.4	1.4
Micro-structural and nano-technology	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.8

Focus is on Patent Document Use



In the past 120 years, 150 million inventions disclosed in patent documents



Patent documents contain full disclosure of inventions by the original inventors



Patent rights are territorial and typically prosecuted/secured in a limited number of countries



Information in a patent document is free-to-use in the countries where the patent right has not been prosecuted



Patents are good indicators of chronological technology trends

...So what's more in a patent document that can be useful?

Useful Elements in a US Patent Document

The diagram shows a page from a US Patent document with several key elements highlighted by callouts:

- Title of invention:** (54) ACTIVE SCREEN PROTECTION FOR ELECTRONIC DEVICE
- Inventors and location of inventors:** (72) Inventors: Tyson B. Manullang, Sunnyvale, CA (US); Stephen B. Lynch, Portola Valley, CA (US); Emery A. Sanford, San Francisco, CA (US)
- Assignee:** (73) Assignee: Apple Inc., Cupertino, CA (US)
- IPC codes:** (51) Int. Cl. G06F 1/18 (2006.01), G06F 1/16 (2006.01), H04M 1/18 (2006.01), H04M 1/02 (2006.01)
- Patent number and Date of issue:** (10) Patent No.: US 9,715,257 B2; (45) Date of Patent: Jul. 25, 2017
- Portion of domestic patents cited as references:** (56) U.S. PATENT DOCUMENTS: 2,171,808 A 9/1939 Von Schlippe; 2,989,869 A 6/1961 Hanggi; 3,606,296 A 9/1971 Chassagne; 3,772,923 A 11/1973 Burt; 3,919,575 A 11/1975 Weber et al.; 4,278,726 A 7/1981 Wieme; 4,288,051 A 9/1981 Göschel; 4,314,735 A 2/1982 Fullenkamp et al.; 4,750,894 A 2/1983 Stuesson
- Portion of foreign patents cited as references:** FOREIGN PATENT DOCUMENTS: CN 1458804 11/2003; CN 2710238 7/2005

Other visible elements include: (12) United States Patent Manullang et al.; (71) Applicant: Apple Inc., Cupertino, CA (US); (*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 560 days; (21) Appl. No.: 14/256,002; (22) Filed: Apr. 18, 2014; (65) Prior Publication Data: US 2015/0301565 A1 Oct. 22, 2015; (57) ABSTRACT: An electronic device includes one or more screens, multiple screen protectors moveable between a retracted position and extended position where they extend above the screen to create a gap, and one or more sensors. When the sensor detects a drop event, the screen protectors move from the retracted to extended position, functioning as a shock absorber and preventing the screen from connecting with a surface that the electronic device contacts. In some implementations, the screen protectors may be multiple tabs that may be moved between the retracted and extended positions by one or more motors and/or other actuators coupled to one or more pinions. Such tabs may be formed of various flexible and/or rigid materials such as plastic, plastic film, polyethylene terephthalate or other polymers, metal, thin film metal, combinations thereof, and/or other such materials.

20 Claims, 8 Drawing Sheets

Useful Elements in a PCT Patent Document

Patent Classification

International Application no. & Filing Date

Priority Date: May 7, 1998

Names & Addresses of:
Applicant
Inventor
Agents (patent attorney)

Title of Invention

PCT WORLD INTELLECTUAL PROPERTY ORGANIZATION International Bureau

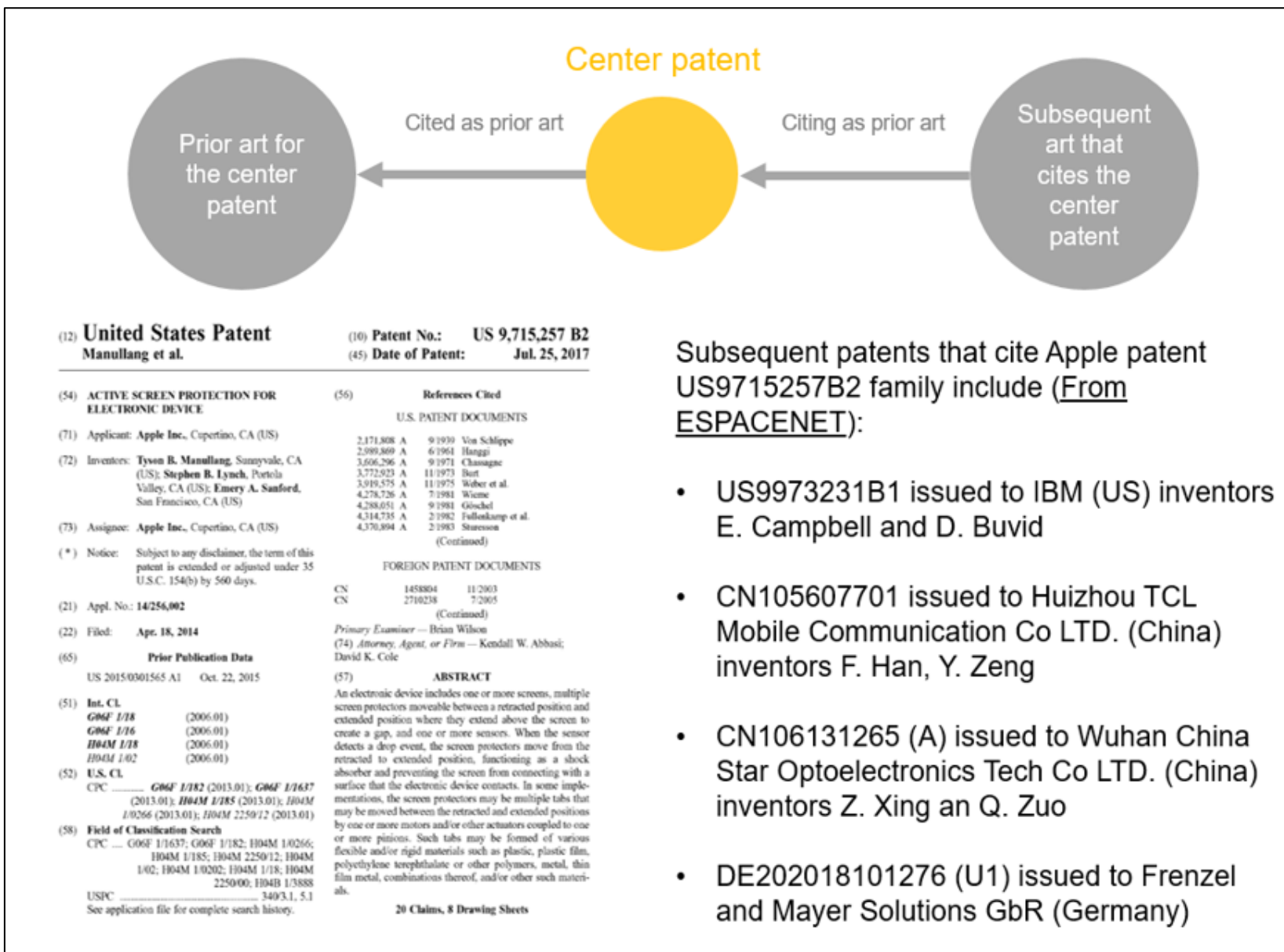
INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁶ : B43K 29/00, 24/08	(11) International Publication Number: WO 99/56970
(12) International Application Number: PCT/US99/10003	(43) International Publication Date: 11 November 1999 (11.11.99)
(22) International Filing Date: 6 May 1999 (06.05.99)	(81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).
(30) Priority Data: 09/074,244 7 May 1998 (07.05.98) US	published With international search report. Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.
(71) Applicant: TTOOLS, LLC [US/US]; 686 Angell Street, Providence, RI 02906 (US).	
(72) Inventor: HAZZARD, Thomas, B.; 686 Angell Street, Providence, RI 02906 (US).	
(74) Agents: HOLMES, Stephen, J. et al.; Barlow, Josephs & Holmes, 5th floor, 101 Dyer Street, Providence, RI 02903 (US).	
(54) Title: WRITING IMPLEMENT INCLUDING AN INPUT STYLUS	
(57) Abstract	
<p>A writing implement (10) includes an integrally formed stylus tip (12) for inputting information into electronic device. An ink cartridge style pen (10) with a push-button spring actuator (38) is modified to include an integrally formed stylus tip (12) molded into the writing end of the pen. When the ink cartridge (30) is retracted, the stylus tip (12) is available for use. However, when the ink cartridge (30) is extended, it extends beyond the stylus tip (12) for engagement with paper writing media. The pen (10) allows the operator to quickly and easily switch between writing with an ink tip cartridge (30) to input information with the stylus tip (12) without significant manipulation of the pen.</p>	

Patent no. and Date of Issue

(81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

Citation Cloud in a Patent Document



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US9715257 (B2)
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 Claims
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 INPADOC legal status
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Citing documents: US9715257 (B2) — 2017-07-25
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6 documents citing US9715257 (B2)
 Sort by Priority date Sort order Descending Sort

★	Inventor:	Applicant:	CPC:	IPC:	Publication info:	Priority date:
	1. Protective structures to provide impact protection for portable devices					
★	BUVID DANIEL J [US] CAMPBELL ERIC I [US] (+2)	IBM [US]	A45C11/00 A45C13/001 A45C13/002 (+4)	A45C11/00 A45C13/00 A45F5/00 (+2)	US9973231 (B1) 2018-05-15	2017-03-20
	2. ACTIVE SURFACE PROTECTION FOR PORTABLE ELECTRONIC DEVICES					
★	RIVELLINI TOMMASO P [US] KOCH RICHARD H [US] (+1)	APPLE INC [US]	B65D81/054 H01F7/064 H01F7/122 (+3)	B65D81/05 H01F7/06 H02K33/18 (+1)	US2017355507 (A1) 2017-12-14	2016-06-14
	3. DROP COUNTERMEASURES FOR ELECTRONIC DEVICE					
★	PETERSON CARL R [US] WODRICH JUSTIN R [US] (+2)	APPLE INC [US]	F16F15/067 F16F2230/0023 G01L5/0066 (+5)	H04B1/3888 H04M1/18 F16F15/067 (+3)	US2017317707 (A1) 2017-11-02 US9929767 (B2) 2018-03-27	2013-03-11
	4. Method and device for preventing stretchable screen from being scraped					
★	XING ZHENZHOU ZUO QINGCHENG	WUHAN CHINA STAR OPTOELECTRONICS TECHNOLOGY CO LTD	H04M1/185 H04M2250/12	H04M1/185	CN106131265 (A) 2016-11-16	2016-06-13
	5. PROTECTING AN ELECTRONIC DEVICE					
★	ROTHKOPF FLETCHER [US] ELY COLIN M [US] (+1)	APPLE INC [US]	G05F1/1626 G05F1/1656 G05F1/1694 (+3)	G05F1/16 H04M1/18	US2016154439 (A1) 2016-06-02 US9780621 (B2) 2017-10-03	2011-09-16
	6. Keyboard used for portable terminal and multi-gear positioning structure thereof					
★	HAN FUXUE ZENG YONG (+2)	HUIZHOU TCL MOBILE COMMUNICATION CO LTD	G05F1/16 G05F1/1662 G05F3/0202	G05F1/16 G05F3/02	CN105607701 (A) 2016-05-25	2016-01-07

Apple patent cited by the US patent US9973231 (B1) issued to IBM

Apple patent cited by the Chinese patent CN106131265 (A) issued to Wuhan

Apple patent cited by the Chinese patent CN105607701 (A) issued to Huizhou

Technical Know-how from a Patent

(12) **United States Patent**
Manullang et al.

(10) **Patent No.:** US 9,715,257 B2
(45) **Date of Patent:** Jul. 25, 2017

(54) **ACTIVE SCREEN PROTECTION FOR ELECTRONIC DEVICE**

(71) Applicant: **Apple Inc.**, Cupertino, CA (US)

(72) Inventors: **Tyson B. Manullang**, Sunnyvale, CA (US); **Stephen B. Lynch**, Portola Valley, CA (US); **Emery A. Sanford**, San Francisco, CA (US)

(73) Assignee: **Apple Inc.**, Cupertino, CA (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 560 days.

(21) Appl. No.: **14/256,002**

(22) Filed: **Apr. 18, 2014**

(65) **Prior Publication Data**

US 2015/0301565 A1 Oct. 22, 2015

(51) **Int. Cl.**

G06F 1/18 (2006.01)
G06F 1/16 (2006.01)
H04M 1/18 (2006.01)
H04M 1/02 (2006.01)

(52) **U.S. Cl.**

CPC **G06F 1/182** (2013.01); **G06F 1/1637** (2013.01); **H04M 1/185** (2013.01); **H04M 1/0266** (2013.01); **H04M 2250/12** (2013.01)

(58) **Field of Classification Search**

CPC **G06F 1/1637**; **G06F 1/182**; **H04M 1/0266**; **H04M 1/185**; **H04M 2250/12**; **H04M 1/02**; **H04M 1/0202**; **H04M 1/18**; **H04M 2250/00**; **H04B 1/3888**
USPC 340/3.1, 5.1
See application file for complete search history.

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4,370,894 A	2/1983	Sturesson

(Continued)

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CN	1458804	11/2003
CN	2710238	7/2005

(Continued)

Primary Examiner — Brian Wilson

(74) Attorney, Agent, or Firm — Kendall W. Abbasi; David K. Cole

(57) **ABSTRACT**

An electronic device includes one or more screens, multiple screen protectors moveable between a retracted position and extended position where they extend above the screen to create a gap, and one or more sensors. When the sensor detects a drop event, the screen protectors move from the retracted to extended position, functioning as a shock absorber and preventing the screen from connecting with a surface that the electronic device contacts. In some implementations, the screen protectors may be multiple tabs that may be moved between the retracted and extended positions by one or more motors and/or other actuators coupled to one or more pinions. Such tabs may be formed of various flexible and/or rigid materials such as plastic, plastic film, polyethylene terephthalate or other polymers, metal, thin film metal, combinations thereof, and/or other such materials.

20 Claims, 8 Drawing Sheets

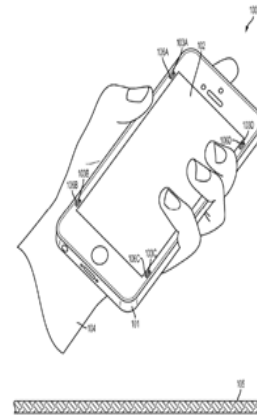


FIG. 1

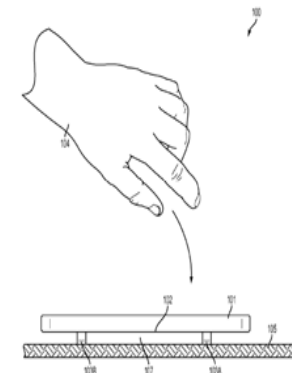


FIG. 2

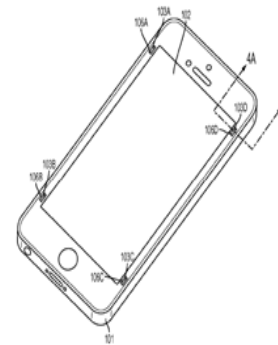


FIG. 3A

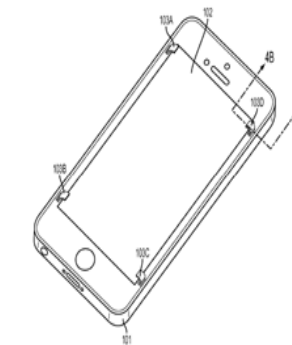


FIG. 3B

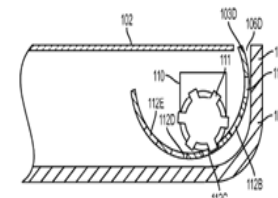


FIG. 4A

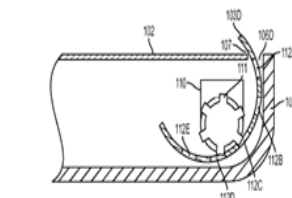


FIG. 4B

Does this look familiar?



Idea



And...Frenzel Filed a Utility Model Application in Germany



(19)  Deutsches Patent- und Markenamt 
 (10) **DE 20 2018 101 276 U1** 2018.05.09

(12) **Gebrauchsmusterschrift**

(21) Aktenzeichen: **20 2018 101 276.2** (51) Int. Cl.: **H05K 5/03** (2006.01)
 (22) Anmeldetag: **07.03.2018**
 (47) Eintragungstag: **03.04.2018**
 (45) Bekanntmachungstag im Patentblatt: **09.05.2018**
H04M 1/18 (2006.01)
H04M 1/02 (2006.01)

(73) Name und Wohnsitz des Inhabers: frenzel + mayer solutions GbR (vertretungsberechtigter Gesellschafter: Philip Frenzel, 73430 Aalen, DE), 73430 Aalen, DE	(74) Name und Wohnsitz des Vertreters: RAUNECKER PATENT, 89073 Ulm, DE
--	--

DE 20 2018 101 276 U1 2018.05.09

ZITATE ENTHALTEN IN DER BESCHREIBUNG

Diese Liste der vom Anmelder aufgeführten Dokumente wurde automatisiert erzeugt und ist ausschließlich zur besseren Information des Lesers aufgenommen. Die Liste ist nicht Bestandteil der deutschen Patent- bzw. Gebrauchsmusteranmeldung. Das DPMA übernimmt keinerlei Haftung für etwaige Fehler oder Auslassungen.

Zitierte Patentliteratur

- US 9715257 B2 [0003]
- US 7059182 B1 [0004]

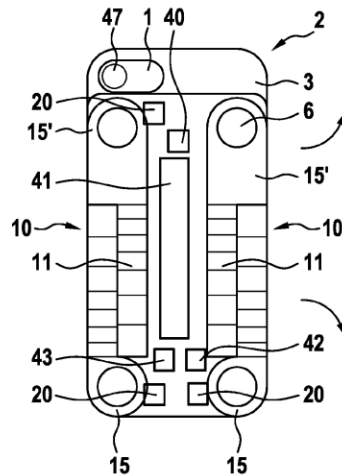
Cited Patent Literature

- US 9715257 B2 [0003]**
- US 7059182 B1 [0004]**

Die folgenden Angaben sind den vom Anmelder eingereichten Unterlagen entnommen.

(54) Bezeichnung: **Umhausung für ein elektronisches Gerät**

(57) Hauptanspruch: Umhausung (2) für ein elektronisches Gerät (1), umfassend,
 - mindestens eine Dämpfungseinheit (10), die zwischen einer eingefahrenen und einer ausgefahrenen Position bewegt werden kann, wobei die Dämpfungseinheit (10) eine Feder (13) und einen Dämpfer (12) umfasst
 - mindestens einen Sensor, der dazu ausgebildet ist, einen Fallvorgang des elektronischen Gerätes zu detektieren, eine Auslöseeinheit (20), die dazu eingerichtet ist, bei einer Detektion eines Fallvorganges einen Positionswechsel der mindestens einen Dämpfungseinheit (10) von der eingefahrenen in die ausgefahrene Position auszulösen, dadurch gekennzeichnet, dass die Feder (13) und der Dämpfer (12) dazu eingerichtet sind, bei der Bewegung von der eingefahrenen Position in die ausgefahrene Position ihre Form zu ändern.



Additional Useful Information Disclosed in Patent Records

Patent documents may be useful sources of...



Vital information, often, may not be deliberately disclosed by an inventor in a patent document



Patent families and patent prosecution history related to a patent of your interest widen your scope of research



Litigation records of a patented invention (private databases, court records)



Select licensing records of a patented invention

Multiple Regimes of IP protection ... a Portfolio of Intangible Assets, Rights and Management Options

RELATIONSHIPS AMONG TRADE SECRETS, PATENTS, TRADENAMES, TRADEMARKS, AND COPYRIGHTS

Trade Secret	Function/Information
Utility Patent	Function
Design Patent / Industrial Design	Form
Copyright	Expression
Tradenname, Trademark, Service Mark	Source Identity/Brand

Other Major IP Rights Regimes

■ Trademarks



■ Trade dress



■ Copyrights

■ Trade Secrets

Multiple Patent Protection Strategy Example

◀ Back to results



Roll over image to zoom in

THE NEGG BOILED EGG PEELER RED

by NEGG

★★★★★ 617 customer reviews
| 21 answered questions

Amazon's Choice for "negg"

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Color: Red



- Add 1/4 cup (Negg capful) of water to the Negg. Add your hard-boiled egg and snap on the top cap.
- Now you're ready to slip the egg out of its shell. SHAKE the Negg up and down with enough force so that the egg strikes the caps. Remember to take it a little easy, or you will end up with a slushy mess complete with shells.
- Shake until you feel the shell begin to "soften" - approximately 4 to 12 times. Timing will vary. The body is clear so you can watch the progress.
- When you see the white of the egg appear, you're done. Mission Accomplished. The egg will then slip out of its shell.
- If the egg is a reluctant sheller you may have to break the membrane after shaking to get the shell to release. This can

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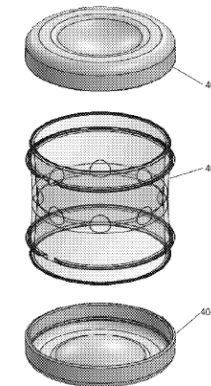
Share 40+ Shares



(12) United States Patent Tyler

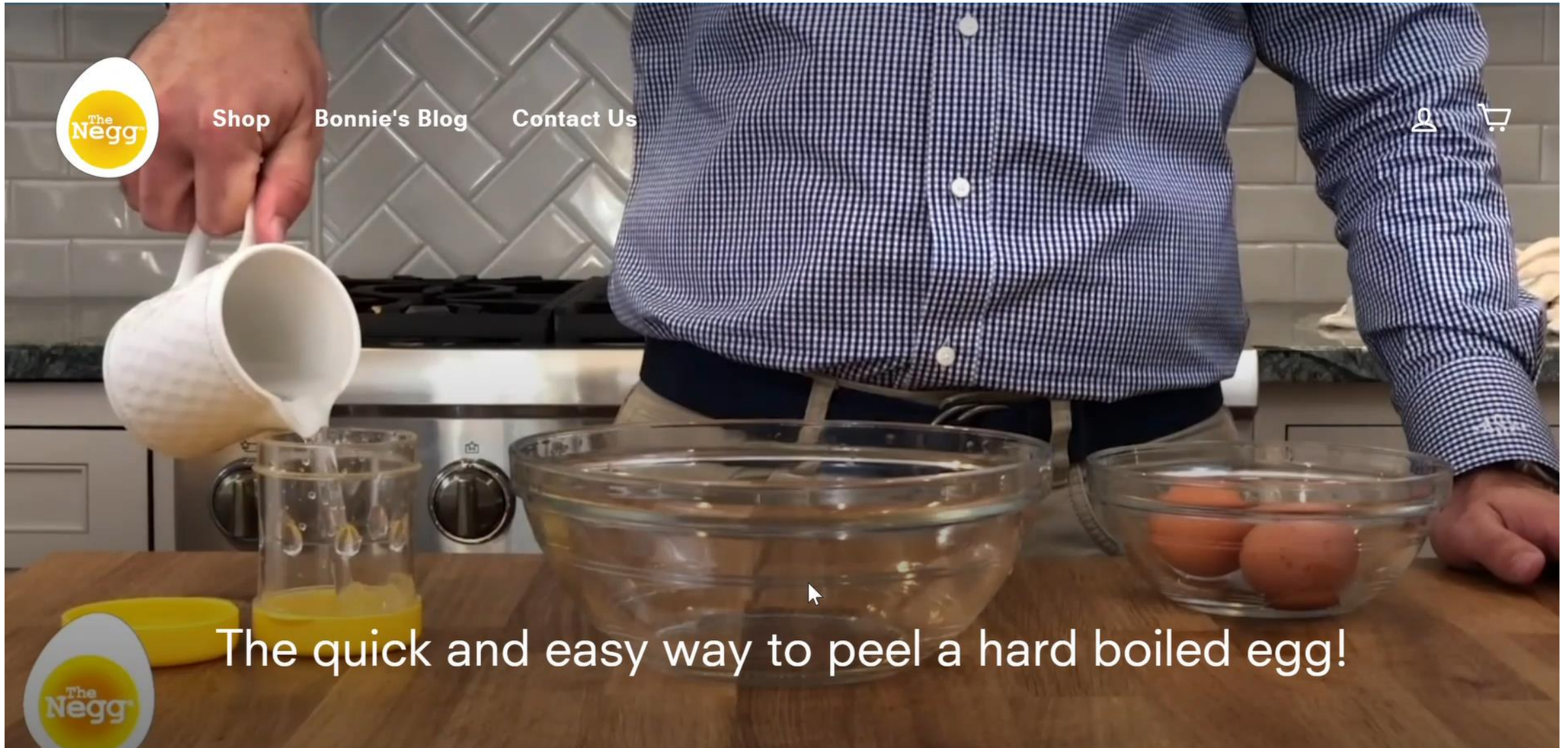
(10) Patent No.: US 9,968,211 B2
(45) Date of Patent: May 15, 2018

(54) PERSONAL EGG PEELER	(56) References Cited
(71) Applicant: Margaret B Tyler, Fairfield, CT (US)	U.S. PATENT DOCUMENTS
(72) Inventor: Margaret B Tyler, Fairfield, CT (US)	1,030,324 A * 6/1912 Pender A47G 19/28 30/120.1
(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 165 days.	2,962,067 A * 11/1960 Mesojedec A47G 19/28 99/498
(21) Appl. No.: 15/156,785	3,092,409 A * 6/1963 Murray A47G 19/28 99/498
(22) Filed: May 17, 2016	3,192,977 A * 7/1965 Bean A23N 7/01 426/483
(65) Prior Publication Data	4,149,456 A 4/1979 Gisoani A47J 17/02 4,308,290 A 12/1981 Fujii A47J 17/02 5,573,803 A * 11/1996 Omesti A47J 17/02 426/483
US 2016/0338515 A1 Nov. 24, 2016	8,497,845 B2 7/2013 Braithwaite et al. 426/483 2014/0004236 A1 1/2014 Braithwaite et al.
	* cited by examiner
	Primary Examiner — Reginald L. Alexander (74) Attorney, Agent, or Firm — John L. Sotomayor
	(57) ABSTRACT
	An apparatus is described that permits a user to quickly and effortlessly separate an egg shell from the body of a hard-boiled egg. The apparatus has a hollow body into which an egg is inserted, a convex shaped bottom section and a convex shaped top portion. Additionally, the interior surface of the hollow body has a number of protrusions that contribute to peeling action. Eggs are inserted into the apparatus, water is added, the apparatus is sealed, the user agitates the apparatus for a short time, and then pours out the separated egg and egg shell along with the water.
	10 Claims, 5 Drawing Sheets
	Related U.S. Application Data
(60) Provisional application No. 62/163,062, filed on May 18, 2015.	
(51) Int. Cl. A47G 19/28 (2006.01)	
(52) U.S. Cl. CPC A47G 19/28 (2013.01)	
(58) Field of Classification Search CPC A47G 19/28; A47J 43/14 USPC 99/568, 571, 577, 586, 587, 588 See application file for complete search history.	



Source: amazon.com

Multiple Patent Protection Strategy Example



Multiple Patent Protection Strategy Example

Sponsored products related to this item



Xiong chao1
iueyshrfisuhkgiush Egg
Peeler, Egg Peeler, Durable
Hard Boiled Egg Peel...

★★★★★ 10

\$8.98 ✓prime



Liveda Egg Peeler, simple
and quick boiled egg
peeler, convenient
breakfast tools, ...

★☆☆☆☆ 1

\$9.98 ✓prime



GRANIA, Original EGG
STRIPPER, Multi Hard-
Boiled Egg Peeler up to 5
Eggs at once

★★★★☆ 172

\$19.99 ✓prime



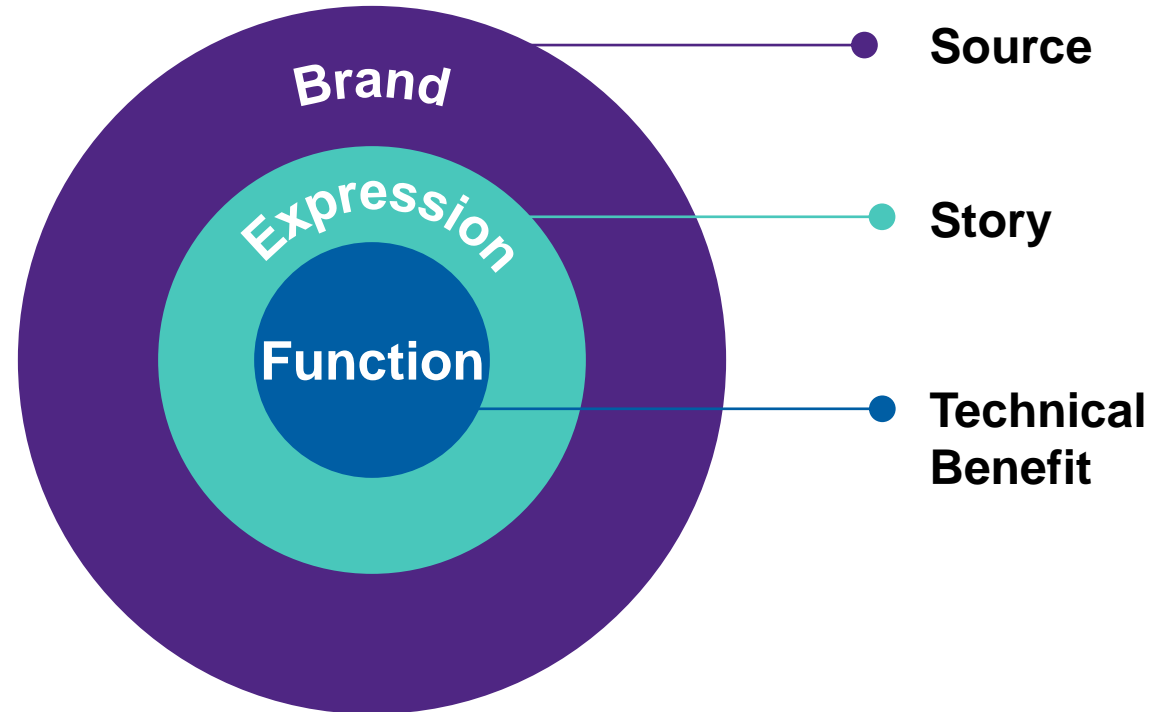
Egg Peeler, Durable Hard
Boiled Egg Peeler Shaker

★★★★★ 1

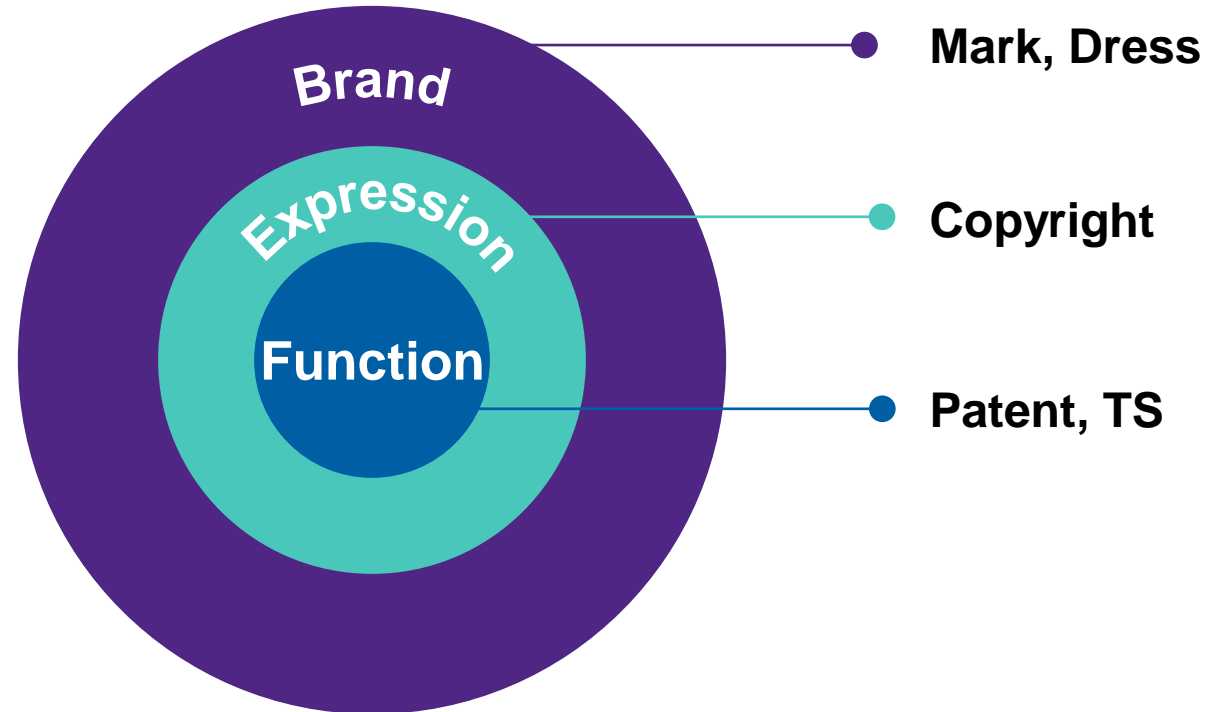
\$12.99 ✓prime



IP Regimes and the Unique Selling Proposition



IP Regimes Reconciled



What is the Unique Selling Proposition of Each Product?

Uber



UBER and the Unique Selling Proposition



Bits + Atoms

We're all about technology moving the physical world

US 2013/0132140 A1

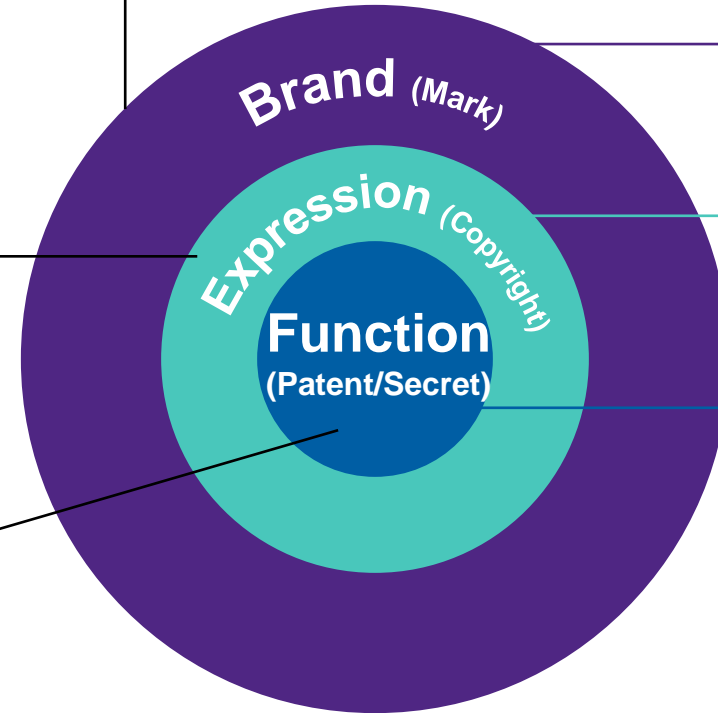
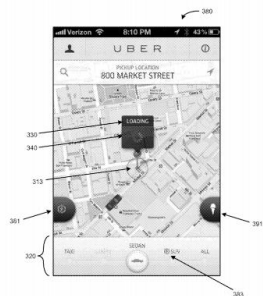
(19) United States
(12) Patent Application Publication
Amin et al. (10) Pub. No.: US 2013/0132140 A1
(41) Pub. Date: May 23, 2013

(54) DETERMINING A LOCATION RELATED TO ON-DEMAND SERVICES THROUGH USE OF PORTABLE COMPUTING DEVICES

Publication Classification
(71) Applicant: Uber Technologies, Inc., San Francisco, CA (US)
(72) Inventor: Shalle Amin, San Francisco, CA (US); Vito Balakrishnan, San Francisco, CA (US)
(73) Assignee: Uber Technologies, Inc., San Francisco, CA (US)
(21) Appl. No: 13/672,658
(22) Filed: Nov. 8, 2012

Related U.S. Application Data
(63) Continuation of application No. 12/961,493, filed on Dec. 6, 2010.

ABSTRACT
A method for determining a location relating to an on-demand service comprising: (a) a user provides, over one or more processors receiving a transport request from a user. The transport request specifies at least one of a pick-up region or a drop-off region. Use or more locations of interest within the at least one of the pick-up region or the drop-off region are determined. Based on the at least one of the pick-up region or the drop-off region, one or more historical locations related to the user is identified. A likely location is determined based on the determined one or more locations of interest and the one or more historical locations.

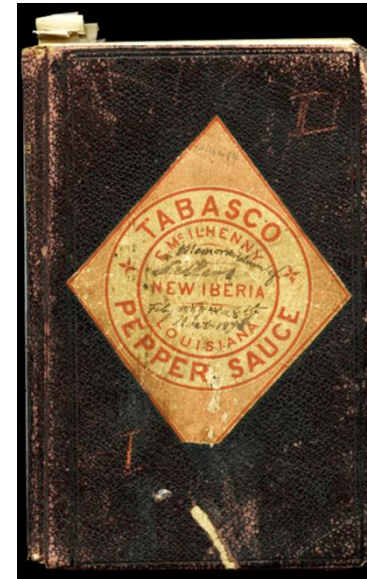
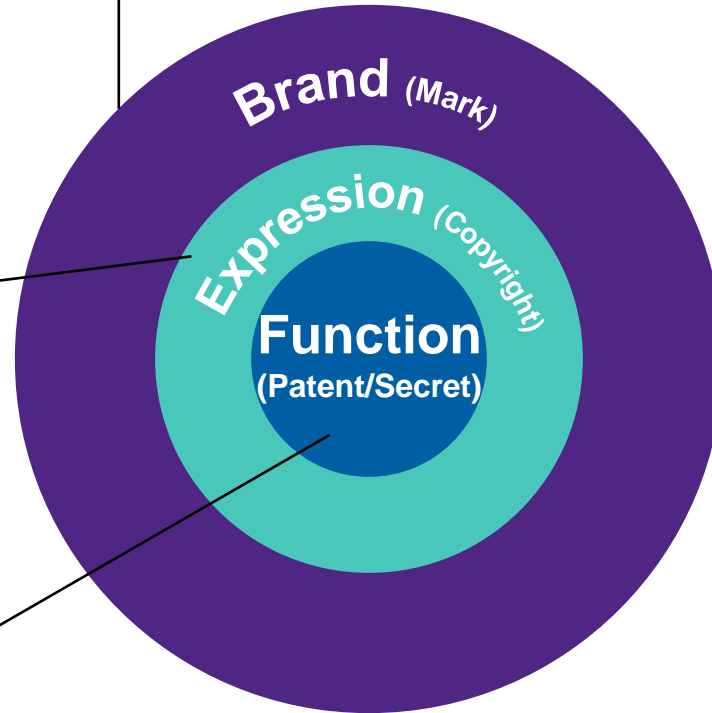
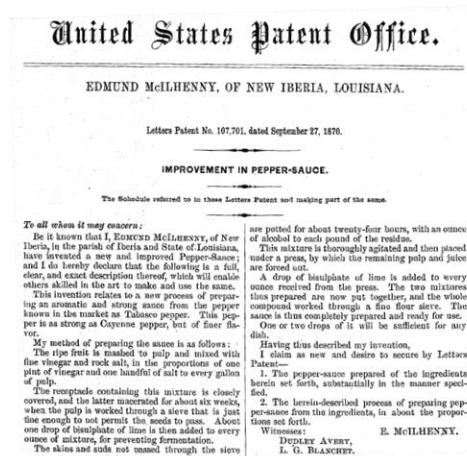


Unique Selling Proposition

- Source of Benefit
- Story about Benefit
- Technical Benefit

<https://brand.uber.com/>

Tabasco and a Timeless USP



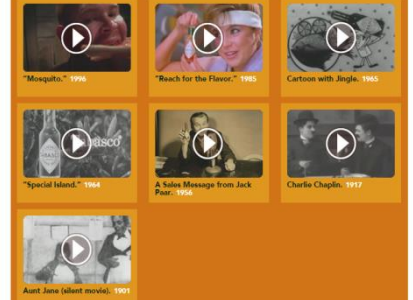
McIlhenny Company

FAQs MYTHS ADS

TIME IN A BOTTLE

TABASCO® ADVERTISING DATING BACK TO THE LATE 1800s

TV & RADIO



7 FLAVORS OF DELICIOUSNESS. FROM MILD TO WILD, THERE'S SOMETHING FOR EVERYONE.



ON TABLES SINCE 1868.

MEET OUR FAMILY.

The TABASCO® Family of Flavors® traces its roots back to 1868, and to the rich soil of Avery Island, Louisiana, where Edmund McIlhenny first planted pepper seeds. The sauce he made from them became today's TABASCO® brand Original Red Sauce.

Five generations later, McIlhenny Company crafts seven unique and distinct flavors of sauce. With all the varieties of deliciousness from our family, there's bound to be at least one to delight every member of yours!

OUR PEPPER SAUCE FLAVORS ▶

*So you are all set to begin...
what's next?*

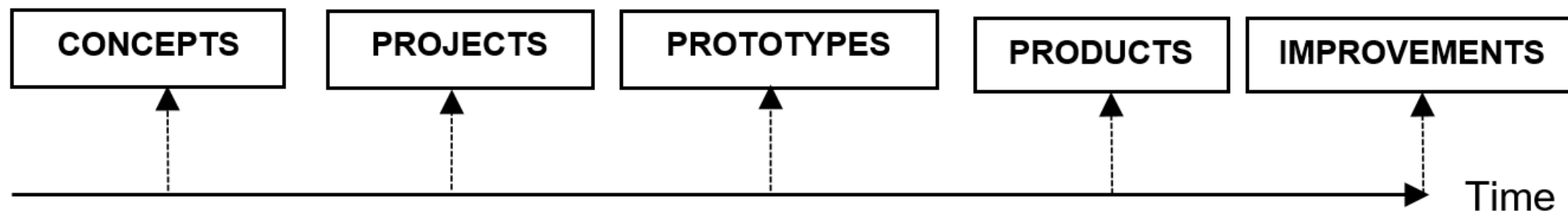
New Product Development Process



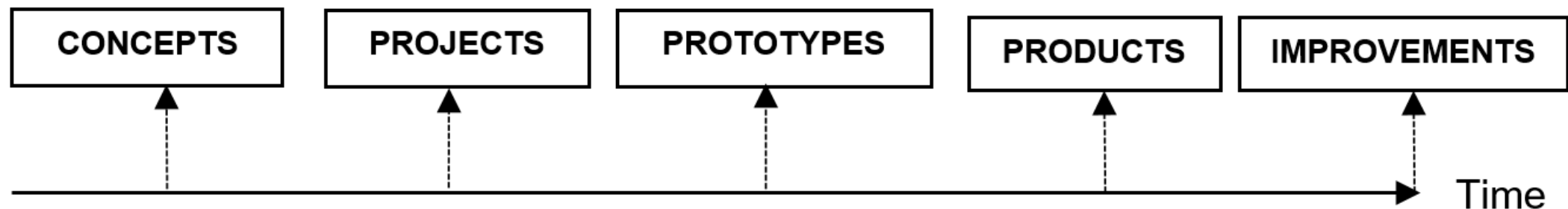
Theme 9

Overview of the Key Concepts with Case Study Examples for Extracting Valuable Business Information from Public Domain Knowledge

New Product Development Process

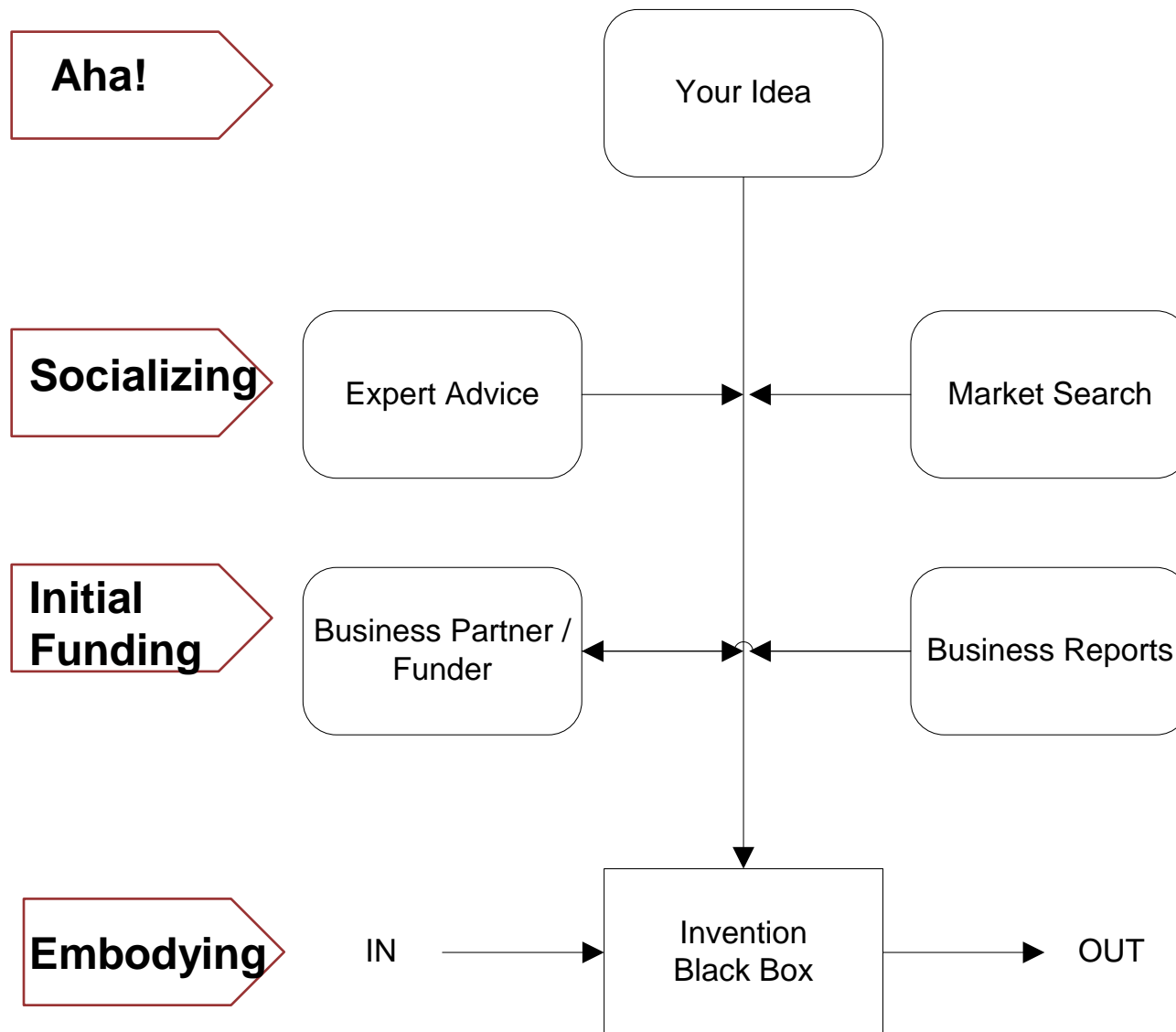


New Product Development Process





It All Begins with an “Idea”






Your team with a set vision should be encouraged to be innovative by the start. You can do so by:

- Stating the intention to be innovative
- Mobilizing with respect and recognition to the people of the firm

- Implementing related and concrete projects focused on the reality of the firm
- Identifying and explicitly stating the potential of the firm

- Disseminating and promoting the firm's innovation scheme
- Using tools to outsource the knowledge



A rhetorical question...

what is **innovation?**



A Definition of Innovation:

“The creation of substantial new value for customers and the firm by creatively changing one or more dimensions of the business system”

MIT Sloan

Management Review

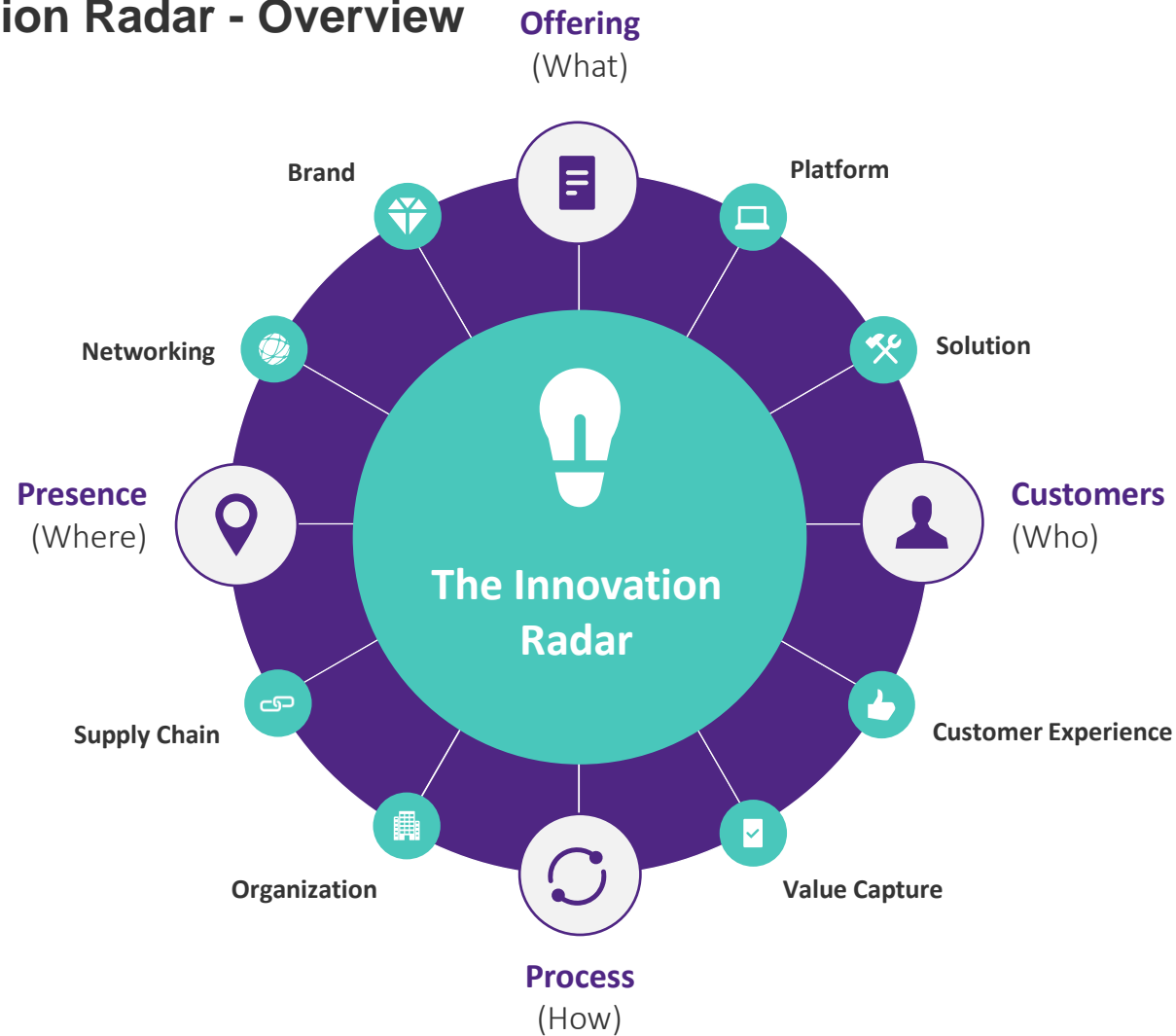
Mohanbir Sawhney, Robert C. Wolcott and Inigo Arroniz

The 12 Different Ways for Companies to Innovate

Kellogg CRTI Research Views Innovation as Systemic



The Innovation Radar - Overview





Idea





Idea

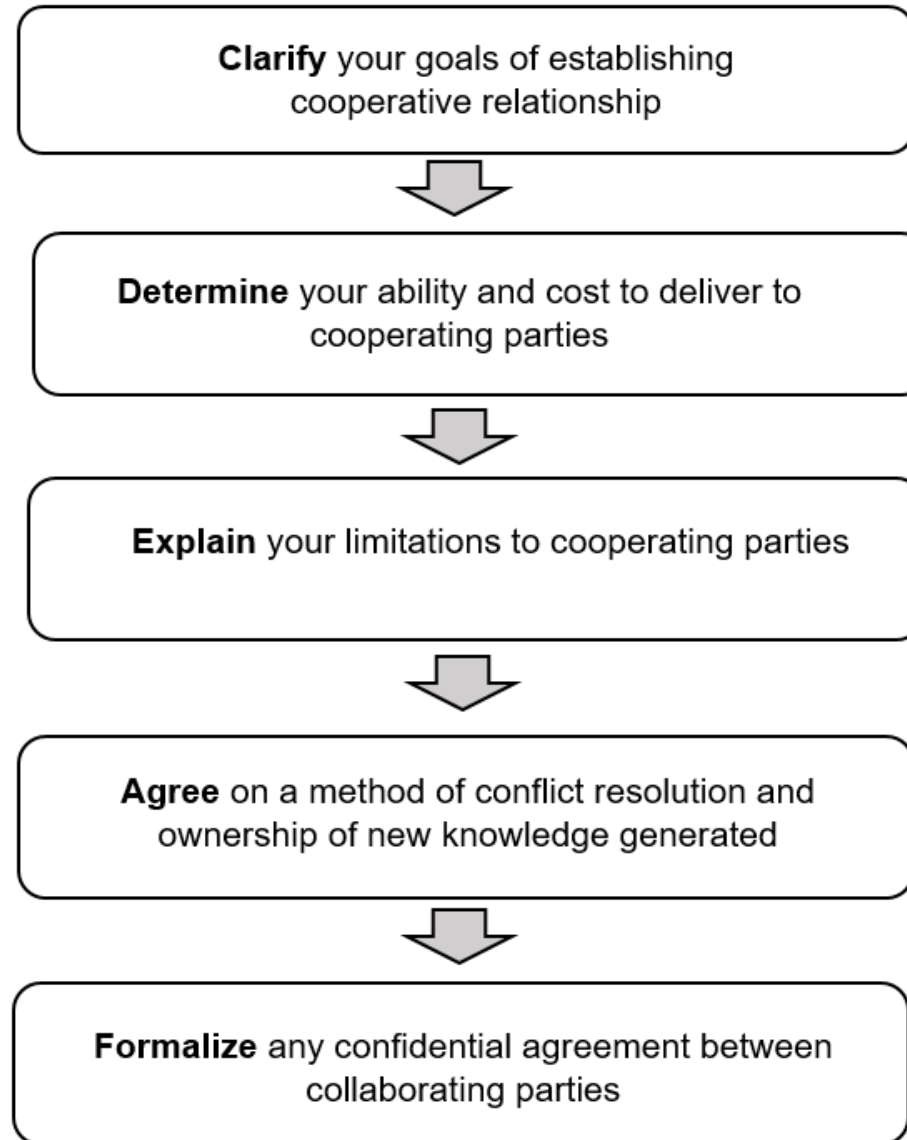


Identification and Evaluation of Resources

Cooperative Process of Innovation



Idea



Identification and Evaluation of Resources





Direct external resources



Customers



Suppliers



3rd party subcontractors



Competitors



Public events



Direct contacts
(friends, colleagues)

Indirect external resources



Non-patent literature



Business, trade
organizations



Academic resources



Internet databases

External Resources of a SME



Idea

area under some
policeman or social wa

patent an

document granting the
an invention protected
made or held under

Patent Intelligence



Patent Intelligence: Supplement your invention with information available in patent databases
Ask questions like...

What technology of interest is free-to-use?

What is the scope of patent search?

Do the target markets for your client's product/service also limit your client's use of certain technology?

3 Types of Patent Searches



Idea

Novelty

Is the technology new or has it been patented already?

Infringement

Will your new product infringe on a certain patent (or a set of patents) claims?

Freedom-To-Operate (FTO)

Is it risk-free to proceed with implementing and selling a product/service using a specific technology (or set of technologies)?

Example of Patent Information in Use



<p>(12) United States Patent Manullang et al.</p>	<p>(10) Patent No.: US 9,715,257 B2 (45) Date of Patent: Jul. 25, 2017</p>		
<p>(54) ACTIVE SCREEN PROTECTION FOR ELECTRONIC DEVICE</p>	<p>(56) References Cited</p>		

And...Frenzel Filed his Patent in Germany



(19)  Deutsches Patent- und Markenamt 
 (10) **DE 20 2018 101 276 U1** 2018.05.09

(12) **Gebrauchsmusterschrift**

(21) Aktenzeichen: **20 2018 101 276.2** (51) Int. Cl.: **H05K 5/03** (2006.01)
 (22) Anmeldetag: **07.03.2018**
 (47) Eintragungstag: **03.04.2018**
 (45) Bekanntmachungstag im Patentblatt: **09.05.2018**
H04M 1/18 (2006.01)
H04M 1/02 (2006.01)

(73) Name und Wohnsitz des Inhabers: frenzel + mayer solutions GbR (vertretungsberechtigter Gesellschafter: Philip Frenzel, 73430 Aalen, DE), 73430 Aalen, DE	(74) Name und Wohnsitz des Vertreters: RAUNECKER PATENT, 89073 Ulm, DE
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DE 20 2018 101 276 U1 2018.05.09

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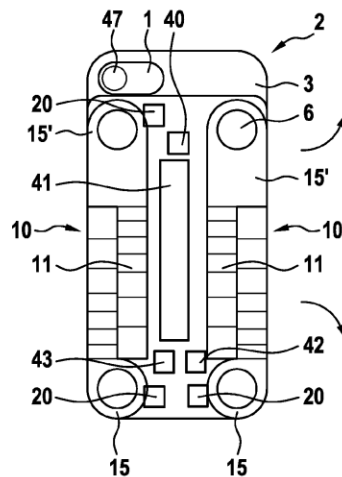
Cited Patent Literature

- US 9715257 B2 [0003]**
- US 7059182 B1 [0004]**

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(54) Bezeichnung: **Umhausung für ein elektronisches Gerät**

(57) Hauptanspruch: Umhausung (2) für ein elektronisches Gerät (1), umfassend,
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 - mindestens einen Sensor, der dazu ausgebildet ist, einen Fallvorgang des elektronischen Gerätes zu detektieren, eine Auslöseeinheit (20), die dazu eingerichtet ist, bei einer Detektion eines Fallvorganges einen Positionswechsel der mindestens einen Dämpfungseinheit (10) von der eingefahrenen in die ausgefahrene Position auszulösen, dadurch gekennzeichnet, dass die Feder (13) und der Dämpfer (12) dazu eingerichtet sind, bei der Bewegung von der eingefahrenen Position in die ausgefahrene Position ihre Form zu ändern.





**So...is it too early to
shape your IP strategy?**

IP Strategy is Necessary from Early Stage in NPD



Idea

Make sure your invention is protected against infringement

EVEN BEFORE YOU HAVE A WORKING PROTOTYPE

Determine what kind of IP protection would be the best

- Patent protection
- Trademark filing

Seek an expert to draft your IP strategy

- Lack of resources often discourage legal help but may prove worthwhile **in the long run**



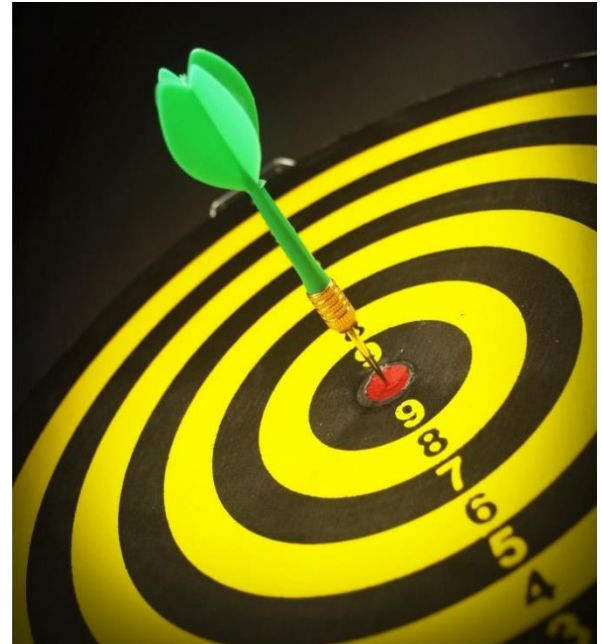
Technology Trends & Market Data

Identify Technology Trends and Market Segments



Idea

- ❑ Market Opportunities: who will buy your product/service?
- ❑ Market Data: what information do you have of the market you want to enter in?
- ❑ Reviewing what technologies are already in the market
- ❑ Finding if there are available technologies you can exploit to identify market opportunities
- ❑ Patent intelligence based on patent database searches, patent statistics and reports



Giants that Failed



Idea



amazon.com
fire
PHONE



WIPO
WORLD
INTELLECTUAL PROPERTY
ORGANIZATION

Market Opportunities Example: Gwatamatic



Idea

- ❑ An automated sadza maker by William Gwata
- ❑ Sadza – staple meal in Africa but too labor intensive
- ❑ Gwata pursued domestic buyers for his sadza maker
- ❑ Gwata finally realized the market opportunity for his invention – for commercial use



Existing Technology to Develop New Product Example: BIODOME



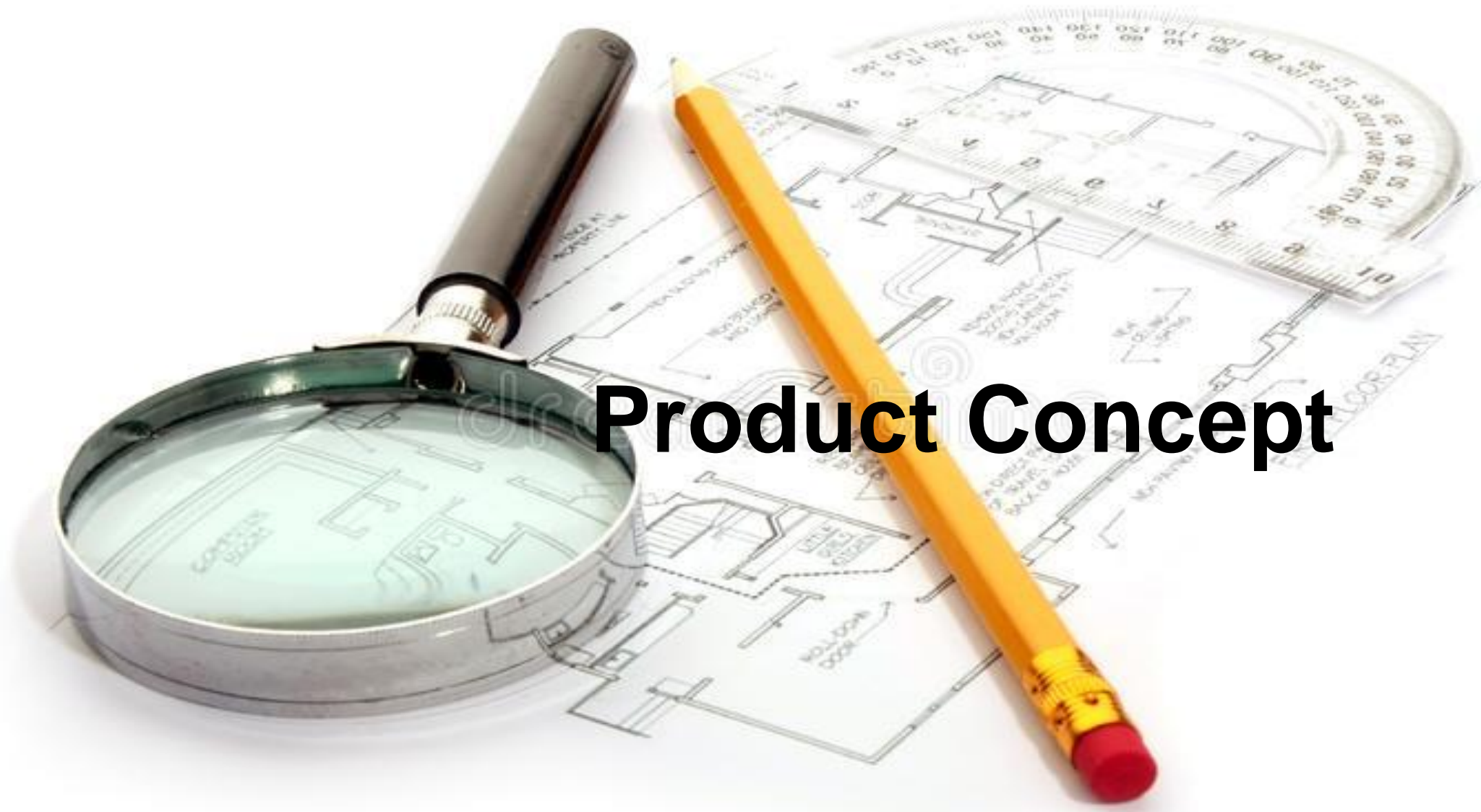
Idea

- ❑ BIODOME by Fatima Zahra of Morocco
- ❑ An alternate composter that harnessed renewable biogas
- ❑ Ms. Zahra studied existing composters in the market
- ❑ Target customers who could use a composter and biogas as a source of fuel





Screen

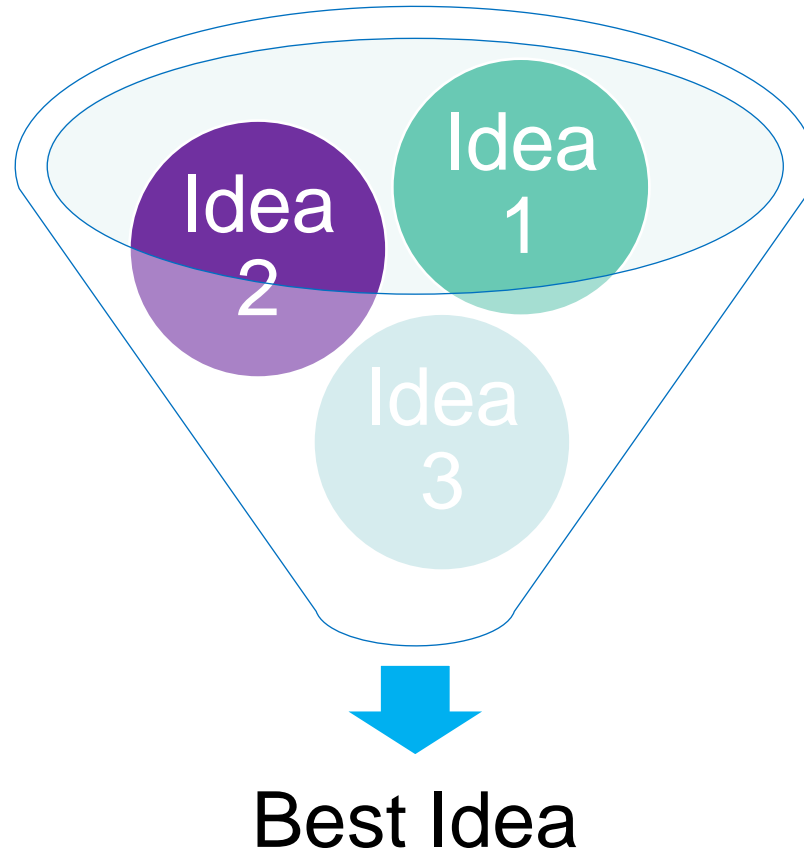


Product Concept

Screening Product Concepts



Screen



Examples of Competitive Intelligence and Technology Intelligence



Competitive Intelligence

- Corporate publications (annual reports)
- Patent & Trademark filings
- Market study reports
- Trade analyst reports
- White papers



Technology intelligence

- Patent citations in published patents
- Scientific journals
- Trade press
- Blogs
- Social media e.g. LinkedIn
- Publications from institutions



Essential Market Information from the Public Domain



Screen



Example of Essential Market Information from the Public Domain



Comprehensive information on the financial statements as well as operational activities disclosed to shareholders and general public

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549**

FORM 10-K

(Mark One)
 ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the fiscal year ended December 31, 2018
OR
 TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the transition period from _____ to _____
Commission File Number: 001-34756

Tesla, Inc.
(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction of incorporation or organization)
3500 Deer Creek Road
Palo Alto, California
(Address of principal executive offices)

91-2197729
(I.R.S. Employer Identification No.)
94304
(Zip Code)

(650) 681-5000
(Registrant's telephone number, including area code)

Title of each class	Name of each exchange on which registered
Common Stock, \$0.001 par value	The NASDAQ Stock Market LLC

Securities registered pursuant to Section 12(g) of the Act:
None

Indicate by check mark whether the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Act. Yes No

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 ("Exchange Act") during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes No

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes No

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§229.405 of this chapter) is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act:

Large accelerated filer	<input checked="" type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input type="checkbox"/>	Smaller reporting company	<input type="checkbox"/>
Emerging growth company	<input type="checkbox"/>		

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes No

The aggregate market value of voting stock held by non-affiliates of the registrant, as of June 30, 2018, the last day of the registrant's most recently completed second fiscal quarter, was \$46.57 billion (based on the closing price for shares of the registrant's Common Stock as reported by the NASDAQ Global Select Market on June 30, 2018). Shares of Common Stock held by each executive officer, director, and holder of 5% or more of the outstanding Common Stock have been excluded in that such persons may be deemed to be affiliates. This determination of affiliate status is not necessarily a conclusive determination for other purposes.

As of February 12, 2019, there were 172,721,487 shares of the registrant's Common Stock outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's Proxy Statement for the 2019 Annual Meeting of Stockholders are incorporated herein by reference in Part III of this Annual Report on Form 10-K to the extent stated herein. Such proxy statement will be filed with the Securities and Exchange Commission within 120 days of the registrant's fiscal year ended December 31, 2018.

Source: tesla.com

WIPO FOR OFFICIAL USE ONLY



Example of Essential Market Information from the Public Domain



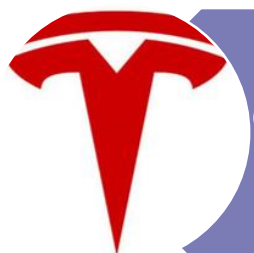
Our core intellectual property includes our electric powertrain, our ability to design vehicles that utilize the unique advantages of an electric powertrain and our development of self-driving technologies.

Basis of IP for Tesla



In December 2016, we entered into a long-term agreement with Panasonic to manufacture photovoltaic (“PV”) cells and modules with negotiated pricing arrangements.

Info on Tesla’s Supplier



The market for energy storage products is also highly competitive. Established companies, such as AES Energy Storage, Siemens, LG Chem and Samsung, as well as various emerging companies, have introduced products that are similar to our product portfolio.

Competitors in energy storage



We will not initiate a lawsuit against any party for infringing our patents through activity relating to electric vehicles or related equipment for so long as such party is acting in good faith. We made this pledge in order to encourage the advancement of a common, rapidly-evolving platform for electric vehicles, thereby benefiting ourselves, other companies making electric vehicles, and the world.

Unique IP policy to promote innovation



Design

Design in NPD

Design



Design

At this stage of the NPD process, you have your...



Initial idea validated



Market research done



Internal capabilities assessed



Feasible product concept developed



Patent and/or other IP strategy formalized



Final product conceptualized



Design

Review of IP Strategy

IP Strategy in the NPD under Design Stage



Design

File for patent protection in the markets of interest

Make sure to search for non patent information in the public domain

Pursue design patent to protect ornamental /aesthetic features

Copyright protection for original works

Should you keep any (Trade) Secrets?



IP Strategy Example





Source: Gillian Zoe Segal,
Wikimedia



US006276176B1

(12) **United States Patent**
Blakely

(10) **Patent No.:** **US 6,276,176 B1**
(45) **Date of Patent:** **Aug. 21, 2001**

(54) **PANTYHOSE UNDER GARMENT**

(57) **ABSTRACT**

(76) **Inventor:** Sara T. Blakely, 800-A E. Morningside Dr., Atlanta, GA (US) 30324

A pantyhose garment is provided that has relatively sheer leg portions that end with knitted-in welts just below or above the knees, and a reinforced control top portion having good shaping and control characteristics that terminates at the top of the waist region with a knitted-in welt. The pantyhose under garment provides the user with shaping support, and because the lower leg is bare, it gives the user the freedom to wear any type of shoe (i.e., open-toed shoes, sandals, etc.). Pantyhose worn with open-toed shoes are usually undesirable, and also dangerous because the foot may slip in the shoe due to the lack of friction between the pantyhose and the shoe. In addition, there are many occasions when the user wants a more casual look in clothing, and therefore pantyhose on the foot and ankle would not be desired. The reinforced control top portion extends down the leg portions of the pantyhose far enough to provide support over the "saddlebag" and cellulite regions of the body. The knitted-in welt at the waist region blends into the control top without causing waist constriction. Similarly, the knitted-in welts at the ends of the leg portions blend into the leg portions without causing leg constriction. The overall design provides the user with a smooth, tight appearance when worn under clothing, without causing the user to suffer discomfort.

(*) **Notice:** Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) **Appl. No.:** 09/544,829

(22) **Filed:** Apr. 6, 2000

(51) **Int. Cl. 7** D04B 9/46; A41B 11/14

(52) **U.S. Cl.** 66/178 R

(58) **Field of Search** 66/116 R, 171, 66/178 R, 182, 183, 184, 185, 178 A; 450/101, 104, 156; 2/239, 240

(56) **References Cited**

U.S. PATENT DOCUMENTS

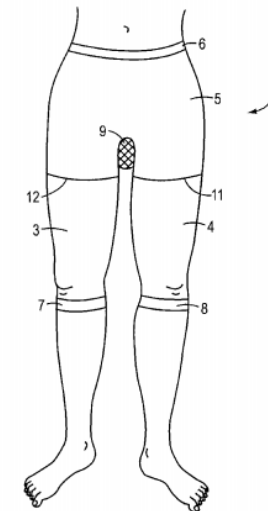
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* cited by examiner

Primary Examiner—Danny Worrell

(74) *Attorney, Agent, or Firm*—Morris, Manning & Martin, L.L.P.

20 Claims, 2 Drawing Sheets



SPANX[®]
BY SARA BLAKELY[®]



"It all started with a pair of pantyhose, some scissors and a bright idea."

Theme 10

Product Design and Development Process: Tools and Business Constructs with Relevant Examples for Using Public Domain Knowledge to Develop Marketable Products and/or Services

Tools To Be Discussed



Balanced Scorecard

The 5 Ps of Marketing

Porter's Value Chain Analysis

TRIZ Methodology

Business Model Canvas

Product Manager in NPD

SWOT Analysis

Technology Risk Management



Idea

Balanced Scorecard

Product Idea Scoring through Balanced Scorecard



4 steps that go into Balanced Scorecard, which does Product Idea Scoring:

Translation of a firm's vision into a set of performance measures

Conveying the firm's vision to the team

Planning, setting targets and aligning strategic initiatives

Capturing feedback and adapting it into internal learning process

Example of the Balanced Scorecard



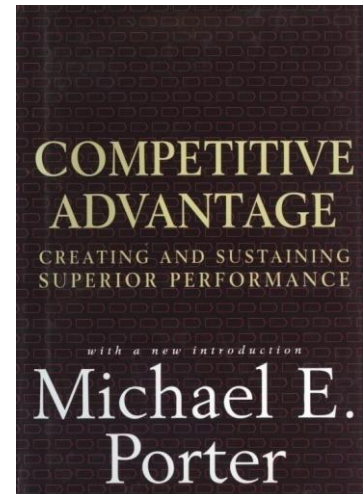
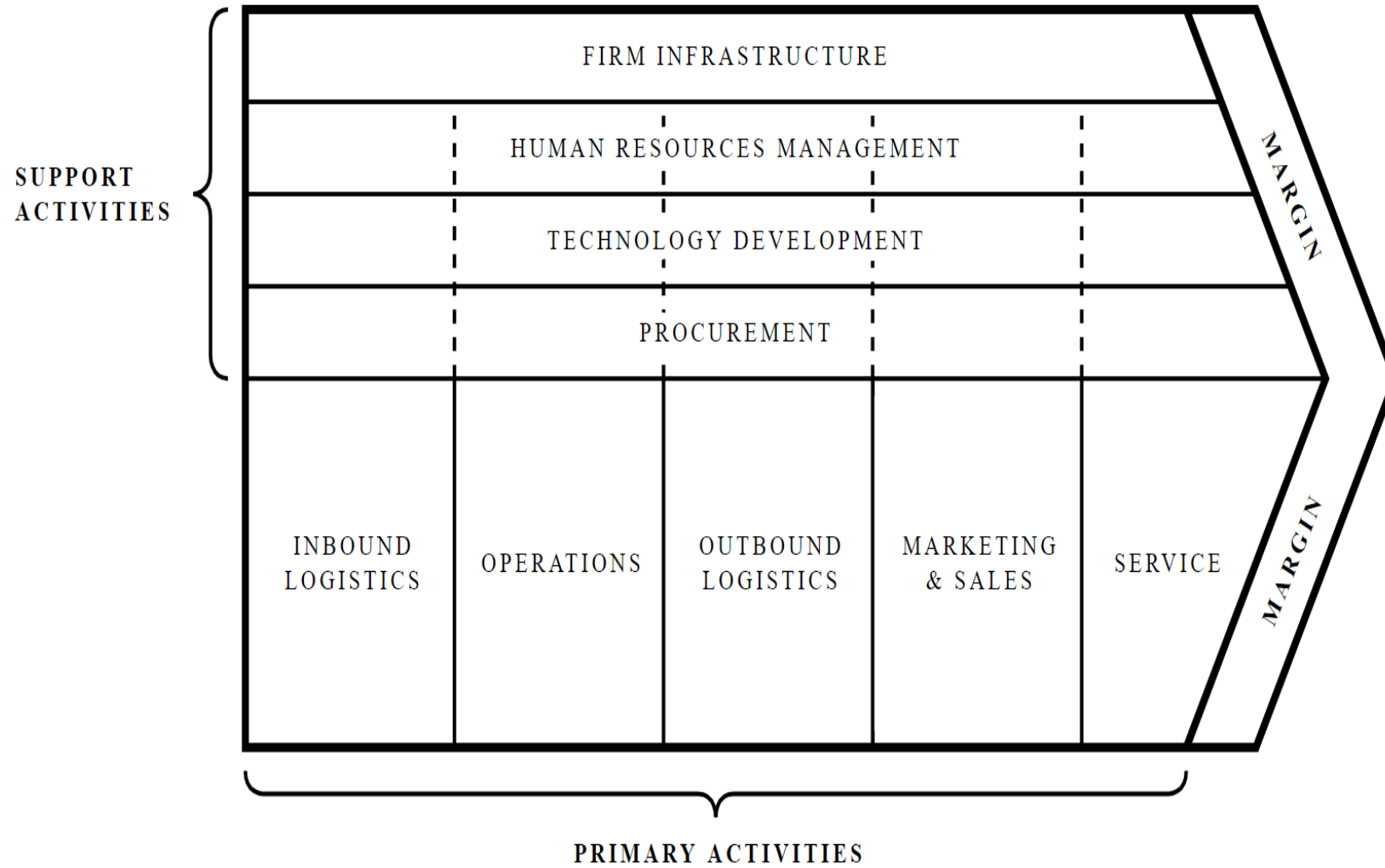
	Strategic Priorities	Objectives	Measures	Target	Initiatives
Financial	Become Financially Strong	<ul style="list-style-type: none"> – Profitability growth – Cost reduction 	<ul style="list-style-type: none"> – Cash flow – Profits – Cost of R&E/Sales – Cost of financing 	<ul style="list-style-type: none"> • \$200K • \$23K • \$80K/\$45K • 5% 	<ul style="list-style-type: none"> – Secure clients who pay on time – Reduce costs and use marketing – Streamline processes – Use collaterals to reduce cost of financing (e.g. use patent and IP)
Technology	Develop Competitive IoT Technologies	<ul style="list-style-type: none"> – Develop technologies to sell to other manufacturers – Develop technologies for use only in company's products – Protect IP 	<ul style="list-style-type: none"> – Number of technologies licensed to others or components sold to others – Number of technologies used in own branded products – File for international patents 	<ul style="list-style-type: none"> • 2 per year • 3 per year • 4 per year 	<ul style="list-style-type: none"> – Invest in R&D – Invest in staff training – Put emphasis on IP and incorporate it in company culture
Customer	Keep Customers Happy	<ul style="list-style-type: none"> – Build win-win relationship with customers 	<ul style="list-style-type: none"> – Returning customers – Spending per returning customer increases 	<ul style="list-style-type: none"> • 60% • 15% increase per month 	<ul style="list-style-type: none"> – More efficient product marketing – Adjust price – Offer incentives – Work with client in new product development
Internal	Operational Excellence	<ul style="list-style-type: none"> – Build innovative products – Streamline product development and manufacturing to reduce cost, increase quality, reduce time to market 	<ul style="list-style-type: none"> – Number of innovative products per year – ROI and R&D – Number of defective products – Time to market 	<ul style="list-style-type: none"> • 2 • 50% • 0.001% • 6 months 	<ul style="list-style-type: none"> – Train staff for continuous innovation – Give incentives to staff – Adopt quality management principles – Streamline R&E, manufacturing and testing processes



Idea

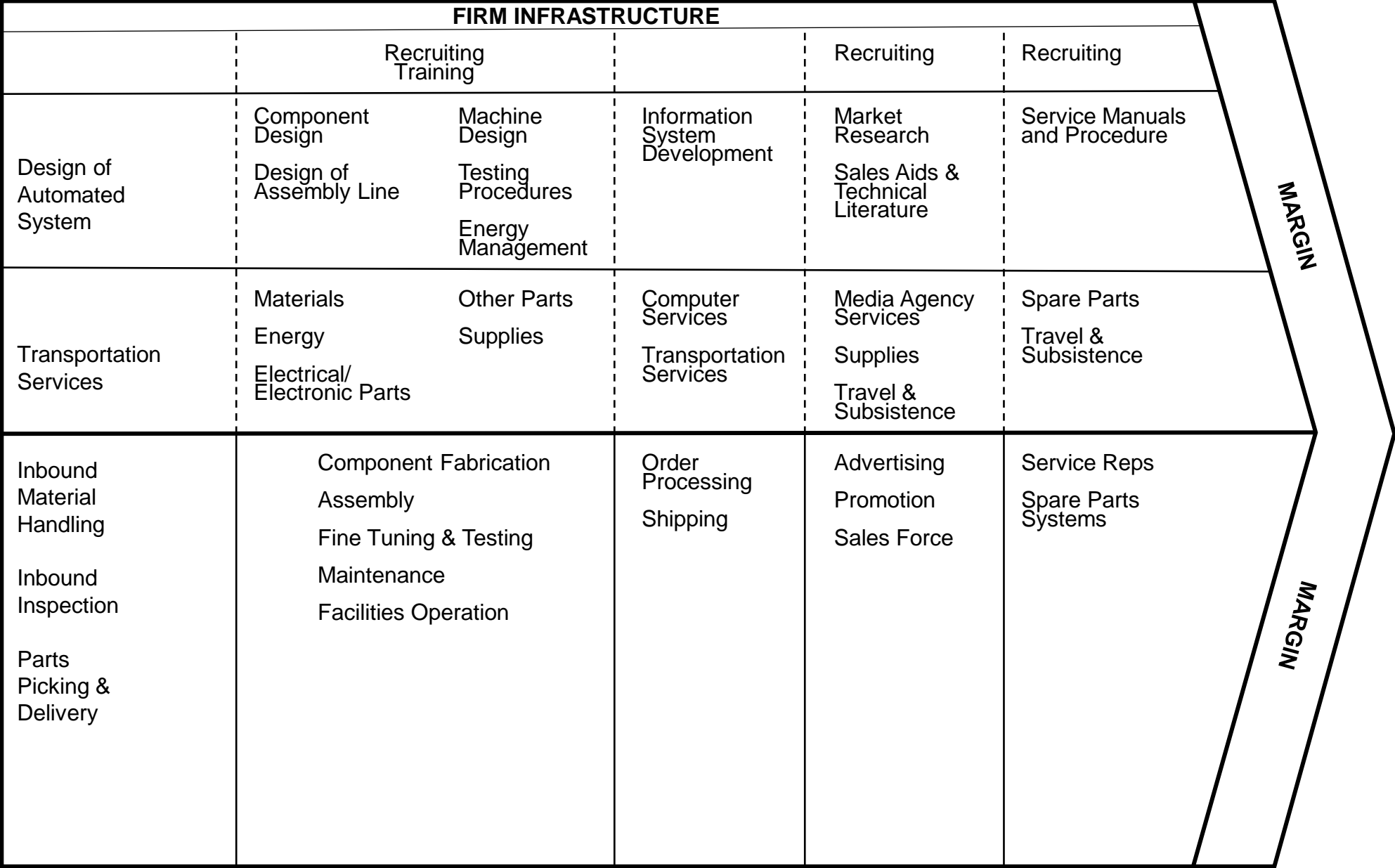
Porter's Value Chain

Porter's Value Chain Analysis





Value Chain for a Copier Manufacturer



MARGIN

MARGIN

INBOUND LOGISTICS

OPERATIONS

WIPO FOR OFFICIAL USE ONLY

OUTBOUND LOGISTICS

MARKETING & SALES

SERVICE



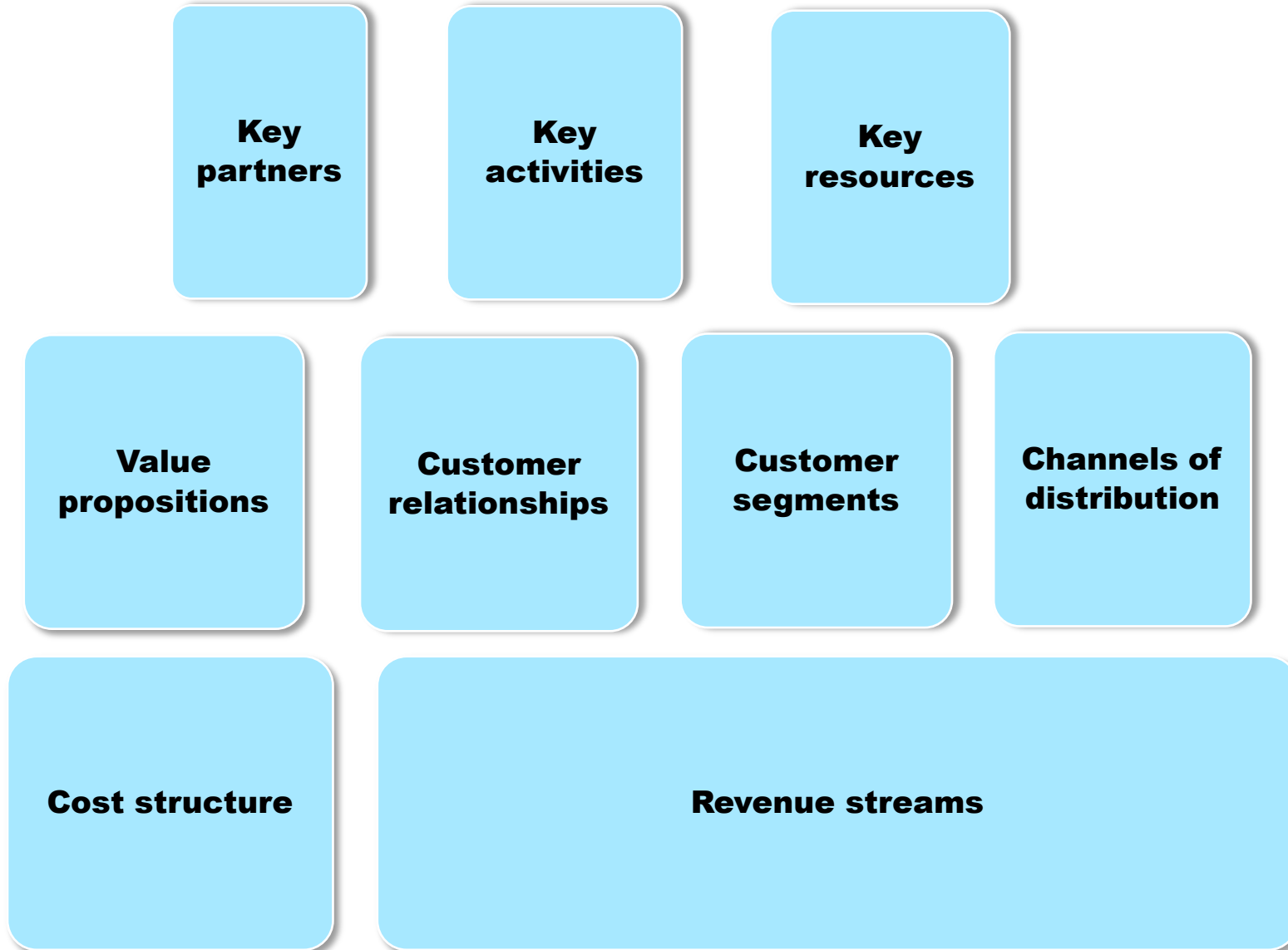
Idea

Business Model Canvas

Business Model Canvas



Idea



Source: www.businessideageneration.com

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Screen

SWOT Analysis



- ❑ Methodological assessment of one's Strengths, Weaknesses, Opportunities and Threats
- ❑ SWOT Analysis can help you build your strategy at a higher level and at a focused level.
- ❑ Use SWOT Analysis to match strength with opportunities to achieve sustainable competitive advantage
- ❑ Use SWOT Analysis to evaluate your options



Screen

Example of SWOT Analysis

STRENGTHS

- Food & Drinks Inc. has flexibility to implement new business strategies
- The company has seen a 10% boost in sales in the last 5 years

WEAKNESSES

- Small portfolio of products concentrated in a few categories of food products
- Limited and only local distribution network
- Limited budget for advertising and marketing

OPPORTUNITIES

- The edible oils category is expected to grow at 6% annually until 2021 in developing countries. Other categories performing well within the packaged food are: Snacks, Baby Food, Breakfast
- Consumers in both developed and emerging countries are increasing their internet purchases; reach core consumers by creating an omni-channel distribution strategy

THREATS

- Slow global growth in the packaged food market: smaller gains means smaller room for outside companies to win market share as most well established brands use their market dominance to diversify their portfolio
- Increasing uncertainty keeps impacting developed markets: many scenarios and variables could impact the market, making it difficult to have a clear path for the future



Screen



Design

5 P's of Marketing

5 P's of Marketing: Determine your Marketing Mix



Design

Key questions are addressed by each of the 5 P's

Product

What are you making?

Price

At **what** price are you selling your product/service?

Place

What platform/market will you be selling your product/service?

Promotion

How will your customers know of your product?

People

Who will be helping you with your business?



Screen

Example of 5 P's of Marketing

Chai Rum: Implementation of the 5 P's



Design





Design



AKAL

400 Years in the Making

Introducing the 95 point rated AKAL Chai Rum. Born of over 400 years of nautical history & AKAL family legacy, it's the world's most sophisticated, ultra-premium rum.



Chairum.com
instagram.com/chai_rum_guys

WIPO
WORLD
INTELLECTUAL PROPERTY
ORGANIZATION

The 5 P's for Chai Rum



Design

Product

Premium rum with unique taste to compete with cognacs

Price

Approx. \$65 per unit as other top brands

Place

Sold through select channels and online

Promotion

Upscale events with luxury brands featured

People

Niche customers, tea growers in India, botanical growers in Trinidad, rum processors in Trinidad, etc.

...In every step Chai Rum has maintained its brand image





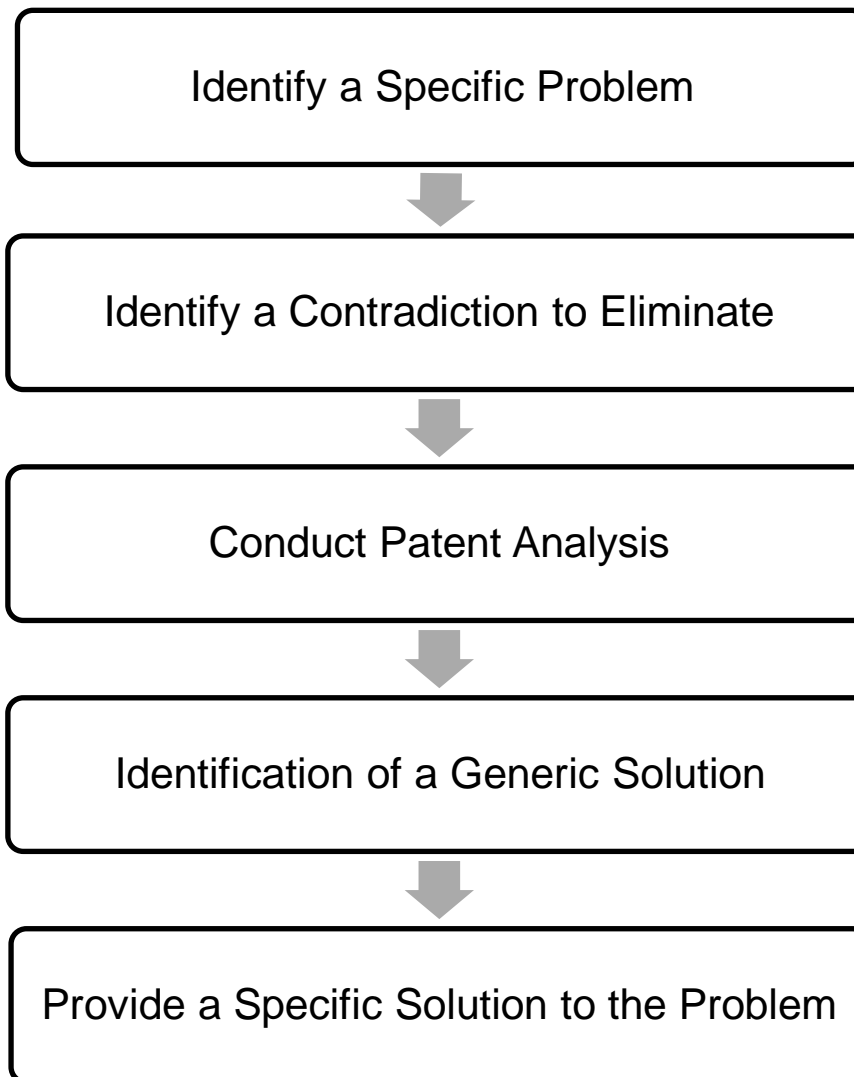
Design

TRIZ Methodology

Steps Involved in TRIZ Methodology



Design



40 Principles of TRIZ



Design

1	Segmentation	11	Cushion in Advance	21	Rushing Through	31	Porous Material
2	Extraction	12	Equipotentiality	22	Convert Harm into Benefit	32	Changing the Color
3	Local Quality	13	Do It in Reverse	23	Feedback	33	Homogeneity
4	Asymmetry	14	Spheroidality	24	Mediator	34	Rejecting and Regenerating Parts
5	Consolidation	15	Dynamicity	25	Self-service	35	Transformation of Properties
6	Universality	16	Partial or Excessive Action	26	Copying	36	Phase Transition
7	Nesting (Matrioshka)	17	Transition into a New Dimension	27	Dispose	37	Thermal Expansion
8	Counterweight	18	Mechanical Vibration	28	Replacement of a Mechanical System	38	Accelerated Oxidation
9	Prior Counteraction	19	Periodic Action	29	Pneumatic or Hydraulic Constructions	39	Inert Environment
10	Prior Action	20	Continuity of Useful Action	30	Flexible Membranes or Thin Films	40	Composite Materials

Source: www.triz.org

Contradiction Matrix



two examples of application: →
 the velocity of the transported bearing ferromagnetic balls is to maximize, while preserving stability of the transporting system (task number 17 from G. S. Altshuller's book: "Invention as a strict science")

	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20
01 weight	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
02 weight	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
03 length	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
04 length	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
05 surface	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
06 surface	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
07 volume	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
08 volume	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
09 velocity	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
10 force	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
11 stress / pressure	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
12 shape	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
13 subsystem stability	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
14 resistance	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
15 durability of the performed action	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
16 durability of the performed action	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
17 temperature	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
18 brightness	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
19 consumed system's energy	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
20 consumed system's energy	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15

Contradiction Matrix, according to Savransky's book "Engineering of Creativity" (the first left upper quarter of the Matrix)

	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
01 weight	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
02 weight	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
03 length	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
04 length	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
05 surface	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
06 surface	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
07 volume	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
08 volume	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
09 velocity	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
10 force	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
11 stress / pressure	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
12 shape	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
13 subsystem stability	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
14 resistance	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
15 durability of the performed action	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
16 durability of the performed action	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
17 temperature	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
18 brightness	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
19 consumed system's energy	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
20 consumed system's energy	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15

Contradiction Matrix, according to Savransky's book "Engineering of Creativity" (the third right upper quarter of the Matrix)

the fourth example (defined within Topic's duties) and this also means, that facility is needed in cleaning mode of the air filter from particles of dust, and pollutants (problem number 13 from G. S. Altshuller's book: "Invention as a strict science")

the time span of continuous air filter operating mode is to be extended into infinity, while preserving the degree of facility in operating it.

for the con

the fifth example (defined within Topic's Duties)

Contradiction Matrix

“The velocity of the transported bearing ferromagnetic balls is to maximized, while preserving stability of the transporting system”

-Task no. 17 from Altshuller’s book “Invention as a Strict Science”

two examples of application: →
 the velocity of the transported bearing ferromagnetic balls is to maximize, while preserving stability of the transporting system
 task number 17 from G. S. Altshuller’s book: “Invention as a strict science”

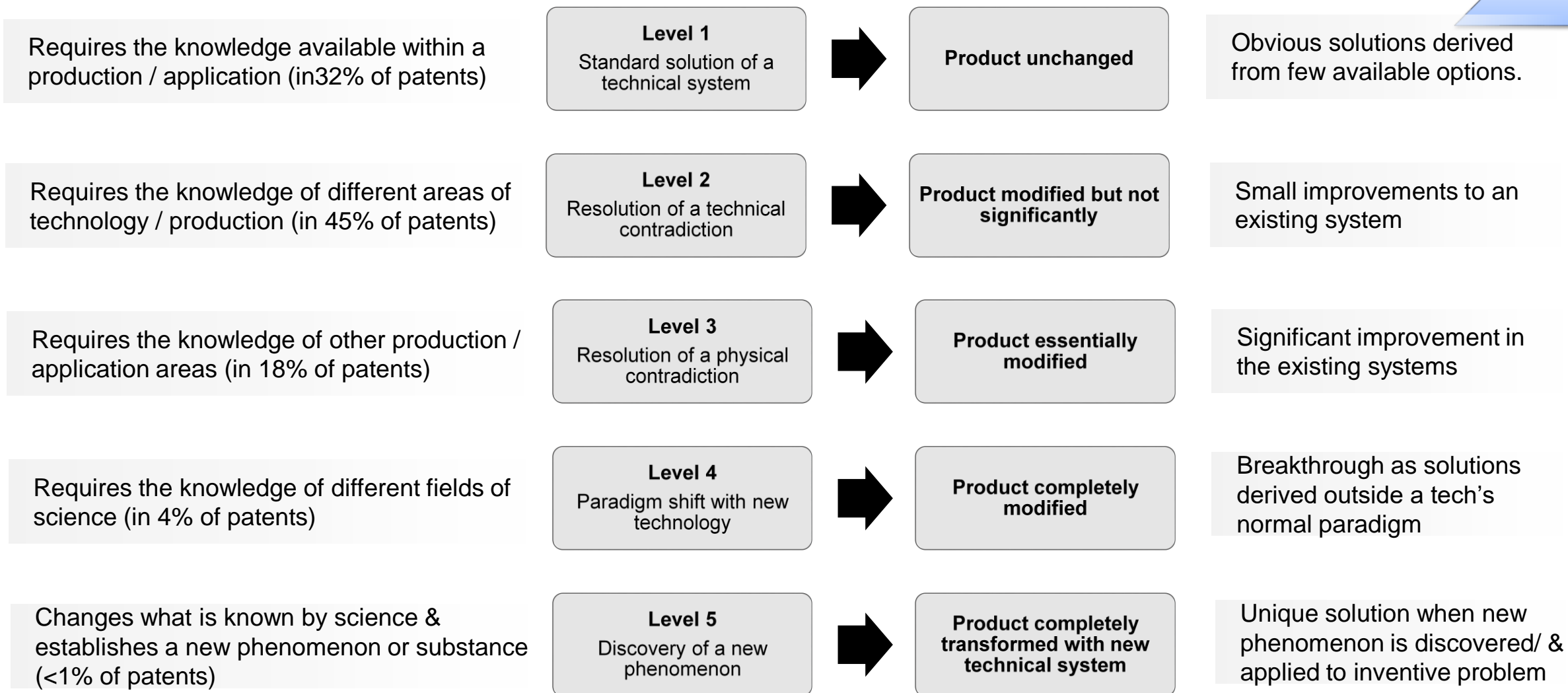
	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16		
	weight	weight	length	length	surface	surface	volume	volume	velocity	force	stress/pressure	shape	subsyst. stability	resistance	the durability of the performed action	the part		
01 weight	01			15		29		29		02	08	10	10	10	01	28		
02 weight		01		08		17		40		15	18	17	35	19	18	3		
03 length			15					28		38	37	40	40	39	40	3		
04 length				15				35		05	08	13	13	10	36	28		
05 surface					10			30		35	10	29	10	39	02	1		
06 surface					29			13		14	19	10	29	01	10	1		
07 volume			15		15		07			13	17	01	01	01	08	1		
08 volume					17		17			04	10	08	08	08	35	1		
09 velocity					04		043			08	04	35	10	15	29	1		
10 force			35		17		17		35		28	01	13	39	15	1		
11 stress / pressure					10		10		08		01	14	14	37	14	1		
12 shape					40		40		14		14	35	15	35	28	1		
13 subsyst. stability			10		44		07		20		19	10	05	11	03	1		
14 resistance					05		14		30		30	15	34	02	15	1		
15 the durability of the performed action					18		17		04		35	36	29	13	40	1		
16 the part					11		04		34		02	28	04	39	14	1		
01 weight		30		26					01		10	10		02	40	1		
02 weight			02		07				16		18	15		18		1		
03 length			14		08						37	36				1		
04 length			18		39						37	37				1		
05 surface	022		01		01				29		15	06	01	28	09	1		
06 surface	5		07		07				04		35	35	15	10	14	3		
07 volume	48		35		06				34		36	36	29	01	15	1		
08 volume			04		17				34		37	37	04	39	07	1		
09 velocity			351		35						02	24	07	24	09	1		
10 force			0		08						18	35	02	28	14	1		
11 stress / pressure			19		02						37		35	35	17	1		
12 shape			36		14								40	40	15	1		
13 subsyst. stability	103				29				07		13	06	35	16	08	1		
14 resistance	8				30				29		10	28	18	15	33	1		
15 the durability of the performed action	13				34				34		15	38	13	01	26	3		
16 the part	38										19	30	31	18	14	1		
01 weight		080		18	17	28		19	01	15	02	13	44	18	10	35	1	
02 weight		1		13	19	01		10	18	08	16	28	10	21	35	10	10	1
03 length		57		03	00			15	36	12	16	15	44			14	1	
04 length		18		26	36			37	37	37	12			34		27	1	
05 surface		10		13	33	35		10	10	06	35	06	36	44	35	09	1	
06 surface		36		29	10	01		15	15	35	34	35	35	1.1	04	33	18	1
07 volume		37		10	35	14		36	36	10	36	21	15	02	03	03	2	

Source: wikicommons

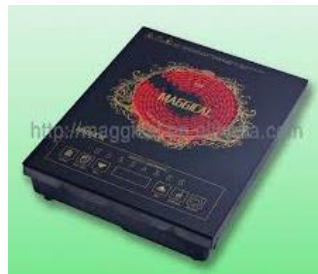
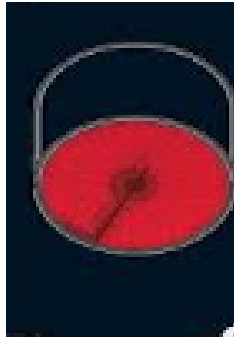
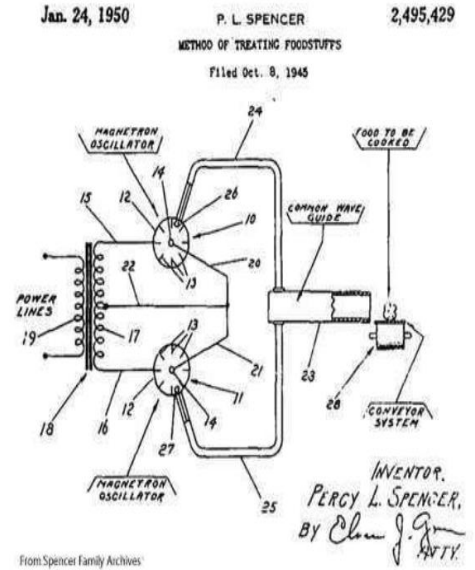
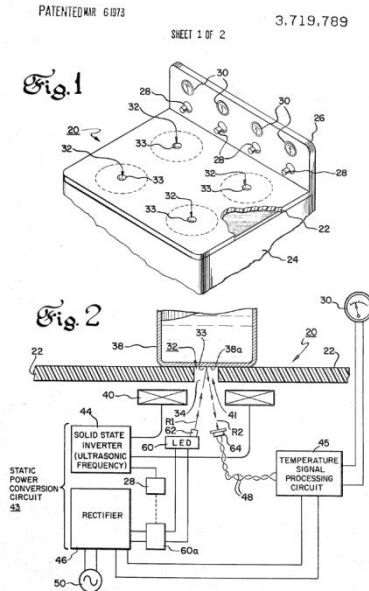
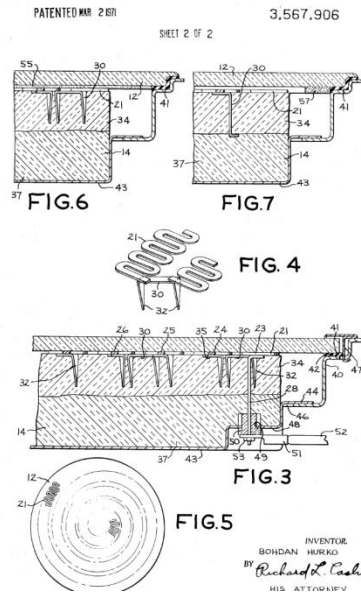
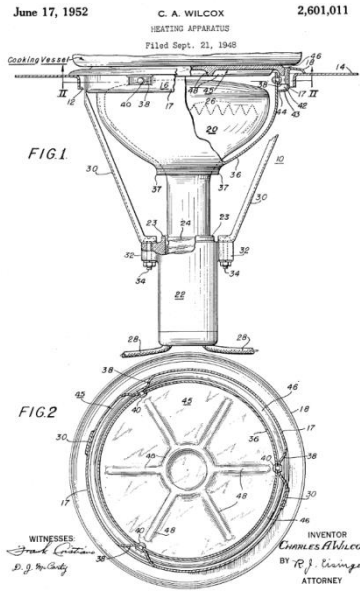
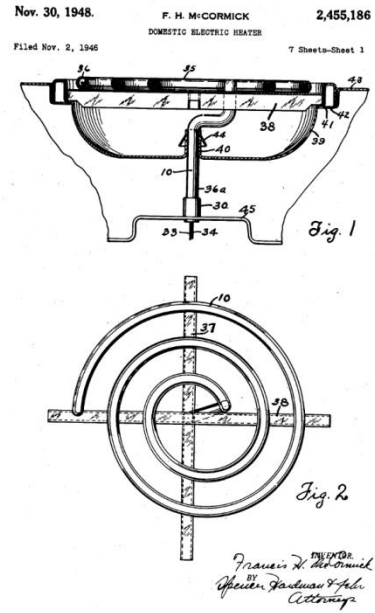
Levels of Invention in TRIZ with Technological Development



Design



Example of TRIZ Application



WIPO
WORLD
INTELLECTUAL PROPERTY
ORGANIZATION

GE's TRIZ Application



Over 200,000 Patents
(now >2M)
~ 20% Truly Inventive

Typical Solutions

TRIZ Can Help Us Get
More and Broader
Innovative Solutions

Levels of Inventiveness			
Level	Degree of Inventiveness	% of Solutions	Source of Knowledge
1	Apparent solution	32%	Personal knowledge
2	Minor improvement	45%	Knowledge within company
3	Major improvement	18%	Knowledge within the industry
4	New concept	4%	Knowledge outside the industry
5	Discovery	1%	All that is knowable



General Electric Company Proprietary

5 /
GE / Oliver Mayer ES-E





Design

Product Manager in NPD



What Product Managers Need to Know*

1. Do you know who will buy the product?
2. Is your product compelling to these target customers?
3. Have you made your product simple and easy to use?
4. Will your product succeed against current and future competition?
5. Can you explain how your product is differentiated in a minute?
6. Will your product work as promised?
7. Is your product a whole (complete) product?
8. Are your product's strengths aligned with what customers want?
9. Does the product team agree on the product's strengths?
10. Is your product worth the money we plan to charge for it?

*Sawhney, M. (2017) Foundations of product management. Kellogg School of Management



Design

Tech. Risk Management



At this point, you have done your relevant patent search and FTO. Your options to use protected technologies are:

BUY the rights to use

OR

**LICENSE from the
patent holder**

OR

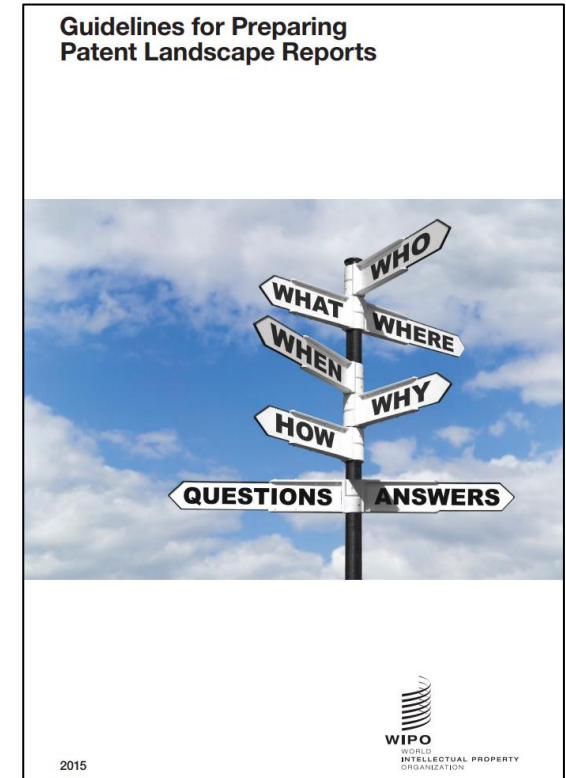
**USE alternative
technologies that are
not protected**

Remaining Stages of NPD

Finalization of Product Development



- Development
 - Prototypes & Iterations
- Testing
 - Alpha Testing
 - Beta Testing
- Launch
 - Patent Landscape Reports
 - FTO Search
- Post-Launch
 - Iterative process of feedback gathering



Theme 11

Demonstration of Tools and Business Constructs with Practical Exercises for Using Public Domain Knowledge



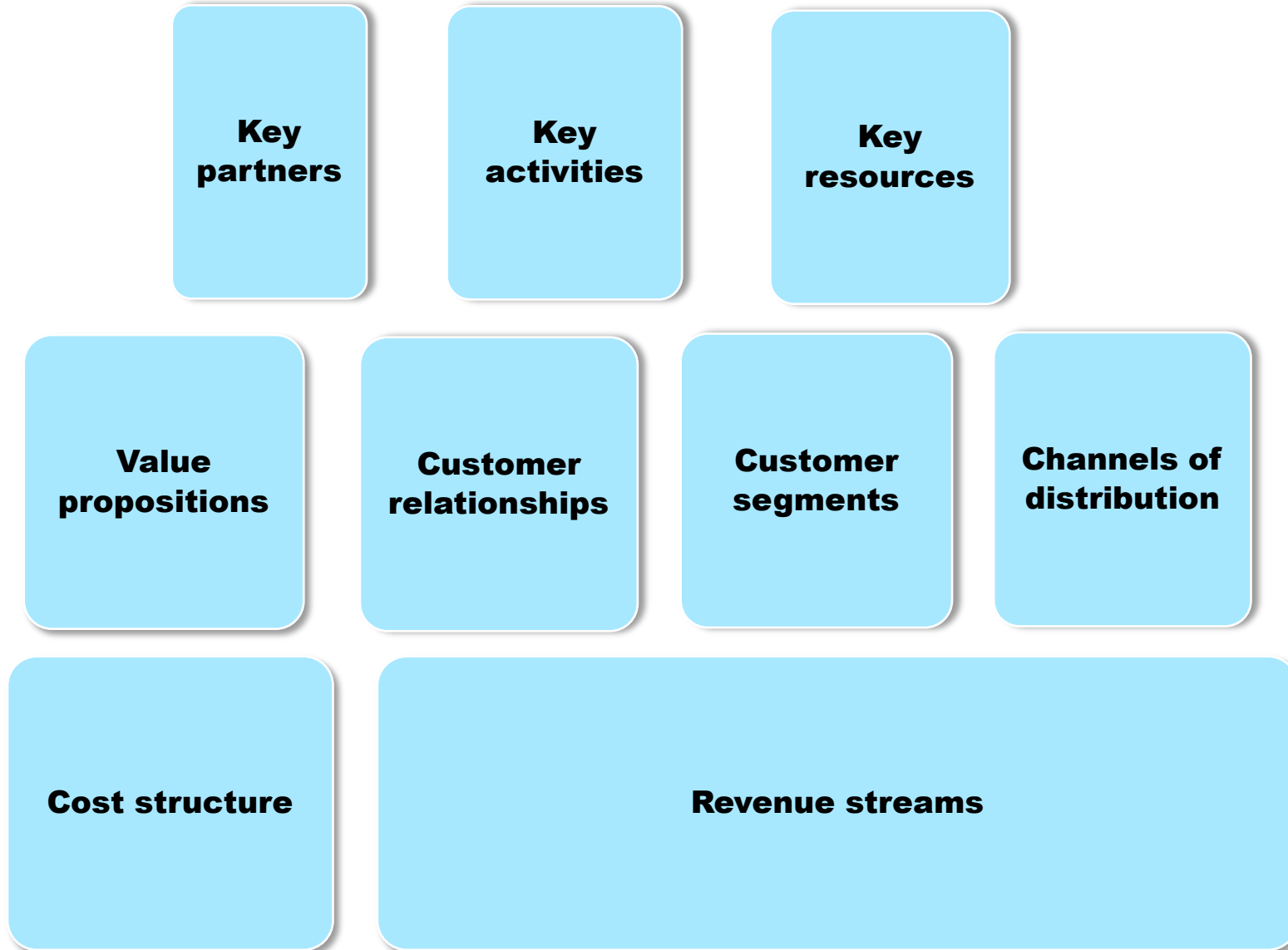
Idea

Business Model Canvas

Business Model Canvas



Idea



Source: www.businessideageneration.com

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Business Model Canvas Example: Hatua Charger



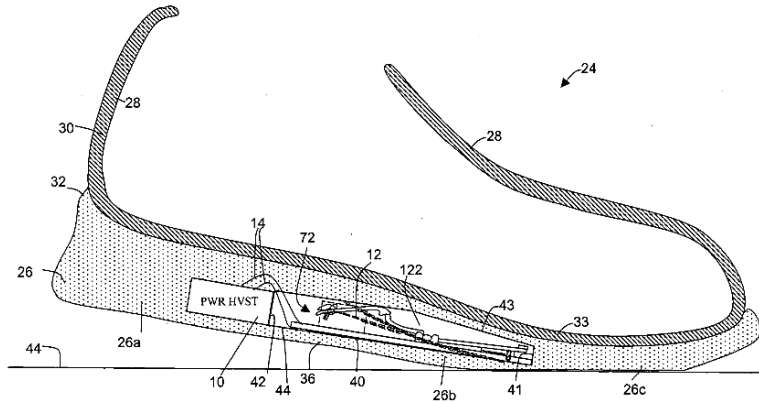
Idea

- ❑ Pressure based mobile phone charger
- ❑ Device installed inside a shoe's inner sole
- ❑ Walking motion exerts pressure on the piezoelectric crystal



Mr. Mutua with a finished market ready piezoelectric shoe phone charger.

US Patent Referenced for Mutua Shoe Charger



US20060021261A1 by Bradbury Face of 02-02-2006 was one of the patents which provided Mutua with information on the circuitry and control components

A schematic illustration of Mr. Mutua's shoe phone charger

Example of Business Model Canvas



Idea

Key Partners



- Innovation lab at TUM
- Kenyan Patent Office for patent research on existing technology
- Investors
- Shoemakers
- Piezoelectric crystal chip and other parts suppliers

Key Activities



- Assemble parts to be put in shoes
- Retrofit shoes with the chargers
- Provide solutions/feedback to complaints/suggestions

Key Resources



- Research partners at TUM
- Investors
- Skilled workers in assembly
- Shoemakers with technical know-how

Value Proposition



- Alternative solution to lack of electricity for charging phones
- No change in the original design of the shoes after retrofitting
- Low maintenance after retrofitting the shoes
- Quick turnaround for installing the phone chargers
- Low costs to the business
- Affordable pricing model for customers

Customer Relationships



- Cost effective
- Ease of use
- Safe to use

Channels



- Servicing:
- Licensed outlets for retrofitting
- Accessible retrofitting locations for customers
- Marketing
- Social media channels
- Word-of-mouth

Customer Segments



- People-on-the-go who walk frequently
- People who live in areas where electricity is unreliable or unavailable
- Moderate to frequent users of mobile phones

Cost Structure



- Cost of labor to assemble the chargers and to retrofit them in the shoes
- Cost of training staff and partner shoemakers
- Technical support for defective chargers
- Initial costs of the charger parts
- Research & Development (R&D)
- Marketing and sales cost

Revenue Streams



- Paid partnerships with shoemakers selling retrofitted shoes
- Revenue model: Price of retrofitted shoes paid by customers
- Future licensing fees from the patented technology

SWOT Analysis Example

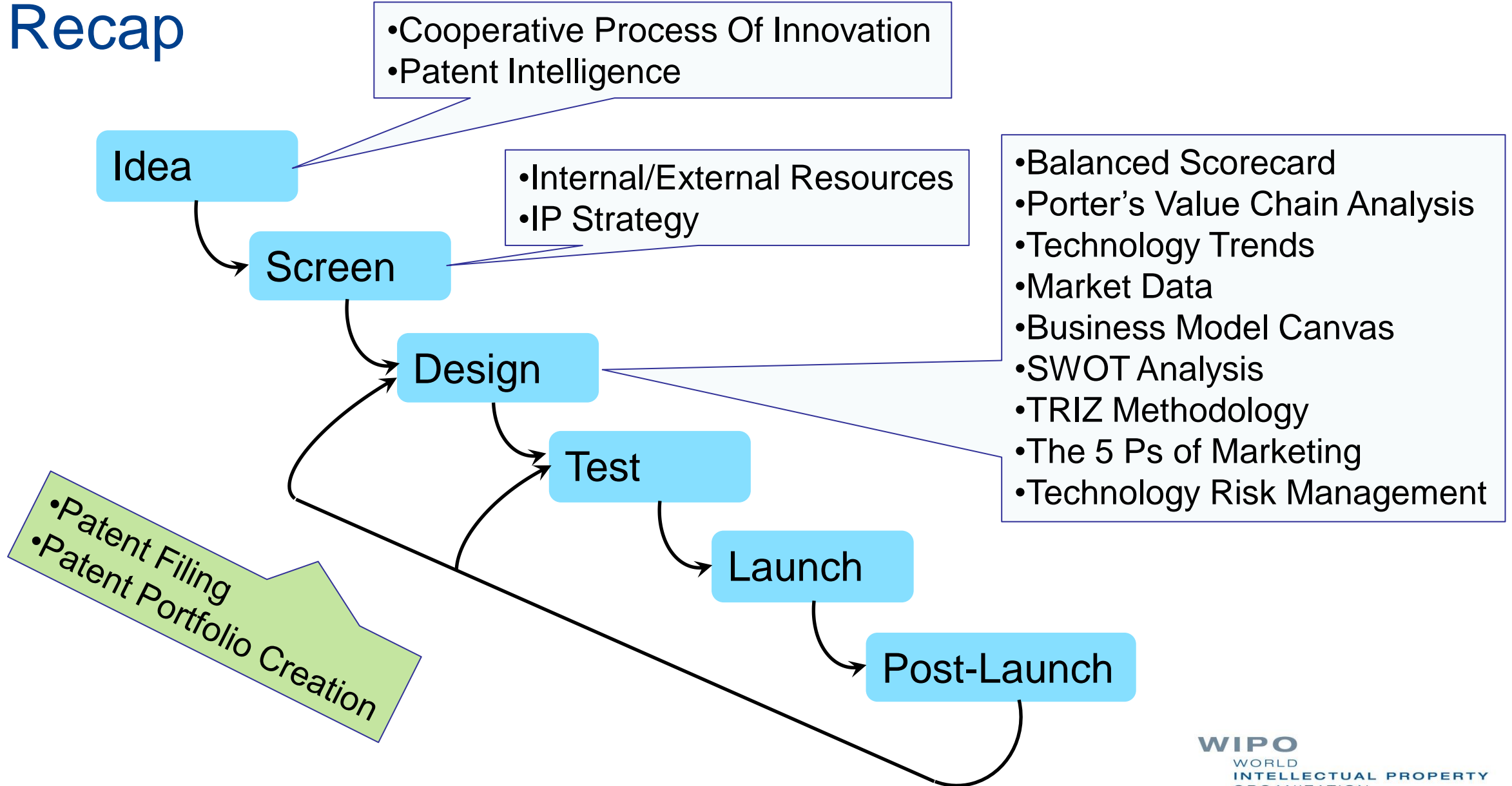
SWOT Analysis Matrix



Screen

INTERNAL FACTORS	
STRENGTHS (+)	WEAKNESSES (-)
<ul style="list-style-type: none">- Early entrant in the internet technology market- Aware of the client's needs and their price sensitivity- Cameroon firm catering to Cameroon clients- Flexibility to adapt products to clients' needs in short notice- Well-trained staff of highly skilled software developers and engineers	<ul style="list-style-type: none">- Higher cost incurred due to its commitment to adapt to clients' needs- Limited financial and human resources- Limited to Cameroon clients and Cameroon markets that did not grow exponentially
EXTERNAL FACTORS	
OPPORTUNITIES (+)	THREATS (-)
<ul style="list-style-type: none">- Potential for products which can help customers adapt to technology trends- Proliferation of internet technology in a global scale- Steady growth in sales of smart mobile devices	<ul style="list-style-type: none">- Constantly changing technology sector- Small firm would need to be vigilant of competition- Dominant, large firms capable of capturing market more easily- Limited domestic market in Cameroon- Consumers with limited skills may not adapt easily to advanced technology features

Recap



Advice to Take Away



Design

... and Always Keep in Mind

Think

Out of the box

Plan

Be proactive. Have a strategy. Reduce Risk. Use intelligence

Early

Decide early-on what to protect. File for Patent applications ASAP

Synergies

Work together with others and don't lose the big picture

Practical

Use analysis tools but not for the sake of it. Select what's needed

Surprise, Surprise!!!

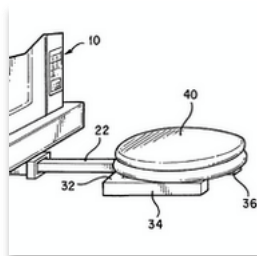


Design

High-tech, Complexity, and Visual Appeal do not always count... not even Common Sense

Which one was patented first?

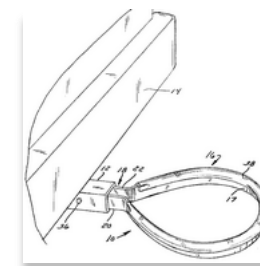
1



2



3



Which was a commercial success?

Source: IP Watchdog



Innovation & IP Consultants
Greece, USA, Cyprus

Thank you!

Questions?

Email: v.vlahakis@kainagora.com

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