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World TRIZ Sites Project (WTSP):

for Building and Maintaining Catalogs of Global TRIZ Resources

Sept. 13, 2018

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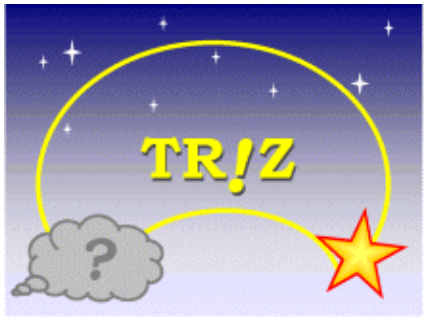


Introduction (Outline)

TRIZ has been expanding from ex-USSR in 1990s into the whole world and developing as an important methodology for innovations in technology, business, etc.

TRIZ-related activities, developments of methods, application results, accumulation of knowledge have become so huge that its overall view is not easy to survey not only for beginners but also experts in TRIZ.

When we try to survey for TRIZ in the Internet, we would have a lot of noisy information which hides good and reliable TRIZ information sources.

To solve this problem we have established the World TRIZ Sites Project (WTSP) and started the activities for building Catalogs of TRIZ-related sites in the world.

A prototype is Annotated TRIZ Links built by Nakagawa in 2008.
TRIZ Links in Japan (100 sites), TRIZ Links in the world (120 sites).
--- But these were not updated for these 10 years.

Nakagawa proposed WTSP in Nov. 2017, and obtaining supporting messages from many TRIZ colleagues, started the WTSP Project in Dec. 2017.

Japan WTSP Catalog was built already as a pilot project (92 sites, Japanese & English)

We are going to build WTSP Catalogs in every country and then in the whole world.

Difficulty in building voluntary teams and describing Catalogs in various countries.

(1) Annotated TRIZ Links in 2008

Nakagawa made the TRIZ catalogs in Japan and in the world, spending full 4 months.

Annotated List of TRIZ Sites in Japan (100 sites) (in 2008)

Type of site	Number
(a) TRIZ-related Information Sending Sites	11
(b) Consultants/Venders/Dealers in TRIZ	21
(c) Academic societies, associations, journals, etc. in TRIZ-related areas	16
(d) Universities, public organizations, not-for-profit organizations, etc.	26
(e) Commercial/non-commercial organizations operating lectures, seminars, e-learning, etc. in the TRIZ-related fields	6
(f) Technical dictionaries, book search, technological news, communities, etc. in TRIZ-related areas	8
(g) Personal sites, blog sites, and other non-TRIZ sites which post some TRIZ-related articles	10
(h) Personal sites, blog sites, and other non-TRIZ sites which are useful for TRIZ even though the site do not post TRIZ articles	2
(i) Index of papers/presentations in TRIZ by user industries and organizations	(38)

Annotated List of TRIZ Sites in the World (120 sites) (in 2008)

Region (no. of sites)	Countries Number of sites
Japan (10)	Japan 10
North America (36)	USA 34 , Canada 2
Western Europe (33)	EU 1, UK 6, Spain 2, France 5, Italy 1, Belgium 2, Netherlands 4, Germany 6, Switzerland 1 Austria 1, Czech Republic 1, Sweden 1, Finland 2
Russia and Eastern Europe (19)	Russia 16, Belarus 2, Ukraine 1
Middle East (6)	Israel 3, Turkey 1, Iran 2
Asia (18)	South Korea 6, China 3, Hong Kong 2, Vietnam 1, Thailand 2, India 4
Oceania (2)	Australia 2
Latin America (3)	Mexico 1, Nicaragua 1, Brazil 1
Africa (0)	
Others (3)	Others 3

Most sites post in their own languages (non-English), and some in English as well for wider visibility. Difficult to introduce the sites written in non-English languages.

Problem Situations in 2008:

For building the TRIZ Links, Internet survey was made using google with the keyword 'TRIZ'.
Survey was made mostly in English, thus it was poor in non-English speaking countries.
Pages of TRIZ Links in various sites were also useful to reach new, important sites.
For writing the annotations, Nakagawa visited the sites one by one and read the contents.
In non-English sites, I did my best to speculate/understand what the pages are saying.

The Annotated TRIZ Lists were made in 2008, but were not updated later for 10 years.
Updating needs much efforts and time. I was too busy to take time in the update.
Especially, the language barriers are big problems for introducing TRIZ sites in the world.

Proposal in 2008 "Global Network of Public Web Sites related to TRIZ"(Nakagawa)

Let's build a (or multiple) Public Web site(s) related to TRIZ in every country, and
connect them as hub sites to form a Global Network of TRIZ-related Web sites.
Each site should post their articles in their own languages and in English translation,
and also introduce excellent articles/papers in the world by translating from English.

Many people agreed with this proposal, but Public Web sites were rarely built.
(cf. Even the TRIZ Journal declined later.)

(2) Proposal of 'World TRIZ Sites Project (WTSP)' (Nakagawa, Nov. 2017)

"Let's Make a Page of Introducing 300 TRIZ-related sites in the World."

Let's start the project by many volunteers working together in the world.
Anybody will be accepted as a member.

In each country, we should first build a Catalog of TRIZ-related sites in the country,
and then integrate them into the World Catalog of TRIZ-related sites.

For the ease of cooperative work, we should use a groupware system in Cloud,
make a rule of file names, prepare templates in Excel for writing site introduction,
and set rules for writing documents, editing them, and publicizing the Catalogs.

==> As the results of a pilot work in Japan, easier and more practical operations have been adopted. (Feb. 2018)

Site introductions may be written in a free format in MS Word, and are simply listed.

Manuscripts in MS Word may be sent as attachments in emails for regular communication.

Activities will be posted up-to-date in "TRIZ Home Page in Japan",
where interim documents can be downloaded for revision and editing work.

Current state of TRIZ-related Sites in the World (2017)

55 main sites are displayed here. Probably 10 - 50 times of these (?).

There are many individual sites. Each of them posts and promotes individually, separately .
Most of the sites post in their own language.

(e.g., In Japan, TRIZ HP Japan and JTS HP only has English pages.)

Proposal: " Let's Build Catalogs of TRIZ-related Sites in the World."

Nov. 2017

TRIZ Leaders and Colleagues in the World, Let's work Together ! Connected !!

The WTSP Catalogs are to be publicized in many main sites in the world.
Also Editions in various languages will be posted.

In WTSP Catalogs, we can learn many reliable information sources in TRIZ.
==> We can learn the overview of TRIZ easily.
==> This has the effect of forming cooperative TRIZ community.
==> TRIZ will be activated. ==> ・・・・・

(3) WTSP Catalog in Japan has been made already. (Mar. 2018)

(a) Internet Search: Selecting a search engine and setting the search options

With Google: Keyword = 'TRIZ', Location = Japan, Language = Japanese,

==> 3.23 Million hits (0.31 seconds).
Displayed pages (URL): 157 pages (suppressing similar pages)
464 pages (displaying all similar pages)

Much noisy information. Several pages in the same site are shown in various places.
Many important sites are missing.

With Yahoo.Japan: Results are similar with the Google search.

==> 45,300 hits. Displayed pages: 112 pages (suppressing similar pages)
78,500 hits. Displayed pages: nearly 600 pages (displaying all similar pages)
Language specification is effective

A special option: Displaying the hyperlink for 'site internal search'
78,500 hits. Displayed pages: 192 pages
(One representative page is shown for each site.)

The hyperlink for 'site internal search' is useful. Number of TRIZ pages in each site:
E.g., Nikkei ITpro 11, Wikipedia 25, SANNO Inst. of Management 276,
Japan TRIZ Society 286, Ideation Japan 604, TRIZ Home Page in Japan 1330

(b) Not a List of Links to pages (articles) but a Catalog of Sites with introduction

Reasons: TRIZ documents are huge. Important sites have hundreds of articles each.
New important articles will be published mostly in important sites, in future.
Updating of Introduction of sites every two years may be good enough.

Visit each site actually, understand its purpose, structure, features, main articles, etc., and then write the introduction of the site.

At first in the project, we assumed 'Single-line introduction + Excel form (about 1 page)'.
We now recommend 'Free format introduction of about 3 to 10 lines, in MS Word'.

We may adjust the way of description, depending on the importance of the site.
Important articles and publications in the site are to be introduced briefly with URL.

Introduction of sites should be attractive, easy to understand its significance, usefulness, etc. in a fair stance without advertising attitude.

(c) Survey and introduce various sites in the areas around TRIZ.

Using various background information, such sites are surveyed, visited, and described.

(d) Classify the sites with categories, arrange them in some appropriate ways, and edit into Catalogs.

Describe the sites in Japanese, and build the Catalog in Japanese.
Visit the sites again in their English pages, and build the Catalog of selected sites in Japan in English.

WTSP Catalog of TRIZ-related Sites in Japan (92 sites) (Toru Nakagawa, Mar. 2018)

Type of site	Number of sites	(Closed sites)
(a) TRIZ-related Information Sending Sites	24	(2)
(b) Consultants/Venders/Dealers in TRIZ	13	
(c) Academic societies, associations, journals, etc. in TRIZ-related areas	17	(1)
(d) Universities, public organizations, not-for-profit organizations, etc.	13	(2)
(e) Commercial/non-commercial organizations operating lectures, seminars, distant education, etc. in the TRIZ-related fields	3	
(f) Technical dictionaries, book search, technological news, communities, etc. in TRIZ-related areas	14	
(g) Personal sites, blog sites, and other non-TRIZ sites which post some TRIZ-related articles	10	
(h) Personal sites, blog sites, and other non-TRIZ sites which are useful for TRIZ even though the site do not post TRIZ articles	0	
(i) Index of papers/presentations in TRIZ by user industries and organizations	Not ready	

About 2/3 of these sites are new from the Annotated List in 2008 .

(4) Current State of the WTSP Project (Organization, platform, policy, etc.)

(a) Organization: Make the Project team with voluntary members supporting the aims.
Anybody may send an Membership Application Form to the Project Leader.

Project Leader: Toru Nakagawa (Osaka Gakuin University, Japan)

Global Co-editors: Darrell Mann (Systematic Innovation Network, UK),
Michael Orloff (Academy of Instrumental Modern TRIZ, Germany)
Simon Dewulf (AULIVE, Australia)
Simon Litvin (GEN TRIZ, LLC., USA)
Valeri Souchkov (ICG Training & Consulting, Netherlands)

Country Editors: Toru Nakagawa (Japan), Tan Runhua (China),
Sylvio Sylveira Santos (Brazil)
--- To be assigned much more later.

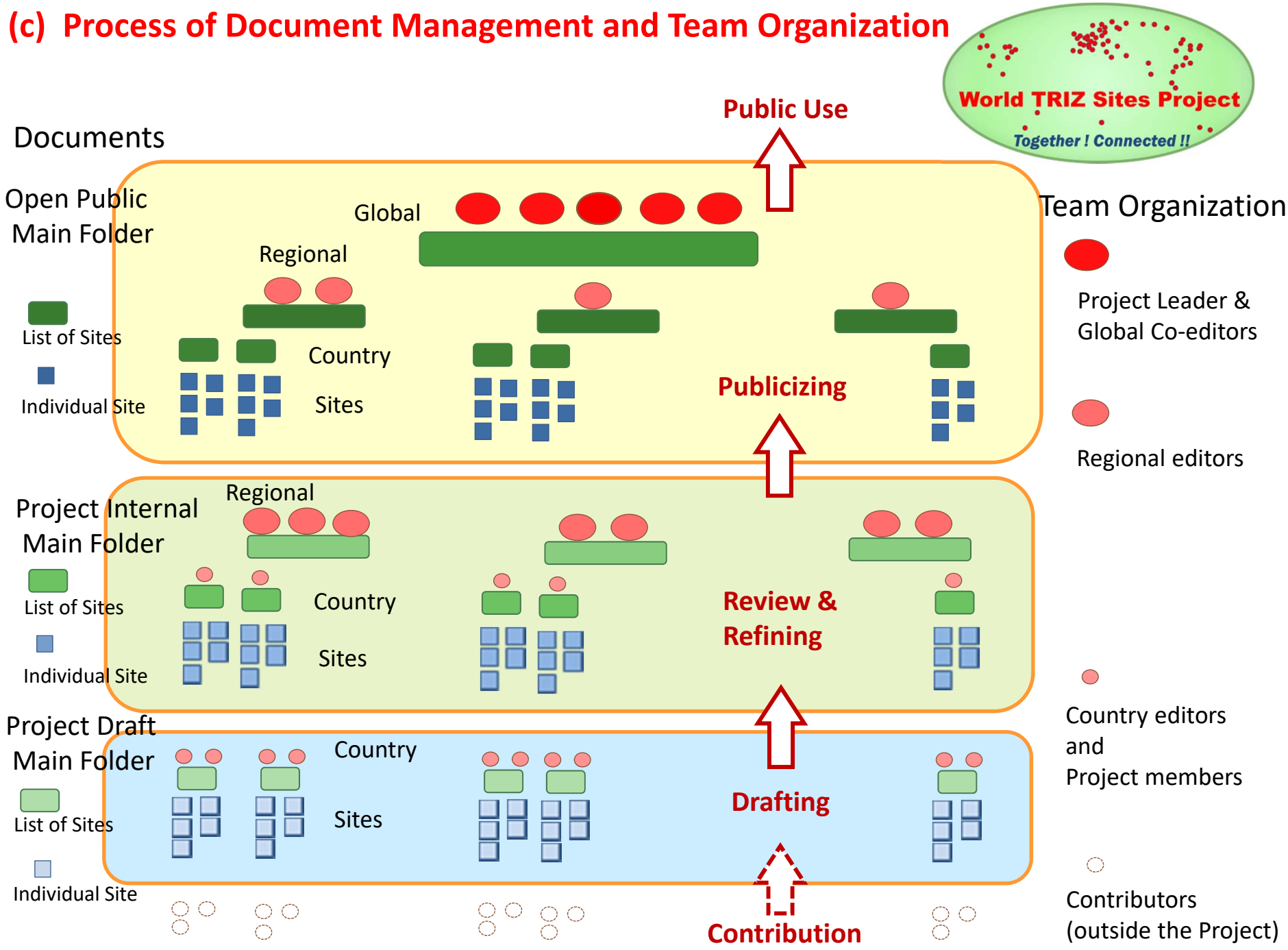
(b) Activity base (Platform and Web site)

Platform: Bitrix24 groupware system in Cloud: https://TRIZSites.bitrix24.com/

Number of users to register: No limit (free of charge)
Online storage: Up to 100GB

Web site for announcement and working activities: In "TRIZ Home Page in Japan":
http://www.osaka-gu.ac.jp/php/nakagawa/TRIZ/WTSP/WTSP-index.html (Japanese)
http://www.osaka-gu.ac.jp/php/nakagawa/TRIZ/eTRIZ/eWTSP/eWTSP-index.html (English)

(c) Process of Document Management and Team Organization



(d) Working Plan (Overseas/Japan)

1. To get voluntary members in various countries and to form WTSP teams in each country.

   Getting the Country Editors in every country is crucially important.

2. To survey TRIZ-related sites, visit the sites to describe introductions, in every country.

   Detailed options of internet search engines seem to vary depending on countries.
   WTSP members should describe and introduce all the sites in the country.
   We may ask owners of sites to describe the introduction (without advertising stance).

3. To make a WTSP Catalog of TRIZ-related Sites in each country.

   Initially in their own language. ==> Useful for people in the country.
   Then in English (translation) of selected sites. ==> For the people in the world.
   -- Prototypes may be useful: 120 World TRIZ Links (2008), Japan WTSP Catalog (2018)

4. To integrate WTSP Catalogs of various countries, and to edit the World WTSP Catalog.

   Interim results and manuscripts may be downloadable in TRIZ Home Page in Japan.
   In future, to work jointly by using the Bitrix24 platform.
   To review and revise the documents by many members in the world, in parallel.

5. To publicize the completed WTSP Catalogs for open, public use. (in many countries)

   Catalogs of individual countries and World Catalog. (in English)

6. To translate the World WTSP Catalog into languages of various countries,
   and to publicize them in each country (to see the world in their own languages).

(e) Activities So Far and Difficulties

2017 Nov.: Proposal of WTSP (Nakagawa) via email to 100 TRIZ leaders. Many supports.
2017 Dec.: Started the WTSP Project. Project plan, Invitations, Preparing the platform, etc.
2018 Jan.-Feb.: Trials and reports of Internet surveys and site descriptions.
2018 Mar.-Apr.: Built and publicized Japan WTSP Catalog (of 92 sites) in Jap. and in English.
2018 May-Jun.: Appeals to many people. WTSP Appeal by the 6 Global Co-editors.

Difficulties and Problems:

Many people support the aims of WTSP, but very few actually join to work together.

Because: Talented, active persons are always too busy.
<== Divide the tasks into smaller jobs for easier handling. Jobs to do in each country.

Because: Not known whether there are many sites or rather few sites in each country.
<== Somebody should first carry out the Internet survey and make a list of candidates.
Then jobs to describe introductions may be distributed to several members.

Because: High level request to describe many sites in fair and attractive ways.
<== High quality is a crucial requirement for WTSP Catalogs. To refine with reviews.

Because: How novices and ordinary TRIZ practitioners can contribute to the project ?
<== Writing suggestions of good sites to TRIZ leaders in the country.

Anyway, to build WTSP Catalogs in several pioneering countries is crucial.
Start the ball rolling ! Let's work Together ! Connected !!

(5) Findings with the Japan WTSP Catalog (2018)

92 sites in total in categories (a) to (h)

TRIZ-related Information Sending Sites in Japan (Type (a), Selected 24 sites)

Note: ● : 11 selected sites described below

- ● **01 (d) TRIZ Home Page in Japan (Toru Nakagawa)**
- **02 (c) (Former）Japan TRIZ CB (Collaborative Board of TRIZ Promoters and Users in Japan)**
- ● **03 (c) Japan TRIZ Society (NPO)**
- **04 (c) Nikkei BP (Nikkei Business Publications, Inc.)**
- **05 (b) (Mitsubishi Research Institute) MRI Research Associates**
- **06 (b) Sozo Kaihatsu Initiatives**
- ● **07 (b) Cybernet Systems Co., Ltd.**
- **08 (b) ITEQ International, LLC.**
- ● **09 (b) IDEA Corp. (Mamoru Zenko)**
- ● **10 (b) MOST LLC. (Kazuya Yamaguchi)**

11 (b) SANNO Institute of Management

12 (b) Ideation Japan, Inc. (Teruyuki Kamimura)

13 (b)(c) I-TRIZ Promotion Association

14 (g) TRIZ Study (Shinsuke Kurosawa)

15 (b) Creativity Engineering Institute (Yuji Mihara)

16 (b) Pro-Engineers (Shigeru Kasuya）

17 (b) IdeaPlant (Rikie Ishii）

18 (e) Monodukuri.com (Osamu Kumasaka)

19 (c) J-STAGE (operated by Japan Science and Technology Agency (JST))

20 (c) SlideShare

21 (c) YouTube

22 (f) Wikipedia

23 (g) Mechanical Design Memo 2

24 (g) Dai1 Kousha (Akihiro Katahira)

01 (a) (d) TRIZ Home Page in Japan (Toru Nakagawa)

http://www.osaka-gu.ac.jp/php/nakagawa/TRIZ/ (in Japanese)
http://www.osaka-gu.ac.jp/php/nakagawa/TRIZ/eTRIZ/ (in English)

A Public Web Site in TRIZ on a not-for-profit basis.

Editor: Toru Nakagawa (Osaka Gakuin Univ.) (Professor (1998-2012)/Professor Emeritus (2012-)).
He established this site in Nov. 1998, and has been posting new TRIZ-related information actively with unfixed interval of 2 to 4 weeks constantly till present.

Pages in Japanese and pages in English are posted more or less in parallel.

The site posts introductory articles, overviews, papers, conference reports, etc. on TRIZ with a wider scope.

The articles/papers are written not only by the Editor (in Japanese and in English), but also by many Japanese authors (in Japanese and some in English translation) and by many overseas authors (in Japanese translation and some in English).

It has four 'Entrance Pages' adapted for four types of readers
(i.e., for Children and high school students, for Students and the general public,
for Engineers and researchers novice to TRIZ, and for Practitioners and experts of TRIZ);
they show categorized lists of many recommended pages with annotation.

The Editor's research themes have evolved from
(a) introduction and proliferation of (classical and modernized) TRIZ, to
(b) introduction and extension of USIT (Unified Structured Inventive Thinking),
(c) proposal of Generalized Methodology for Creative Problem Solving (CrePS), and
(d) Research on the Principal Contradiction ('Liberty vs. Love') of Human Culture.

03 (a) (c) Japan TRIZ Society (NPO)

http://www.triz-japan.org/ (in Japanese)
http://www.triz-japan.org/english_top.html (in English)

Japan TRIZ Society is the nation-wide Center for promoting and proliferating TRIZ in Japan, established officially in Dec. 2007 on the basis of Japan TRIZ CB.

It has been organizing Japan TRIZ Symposium every year (from 4th in 2008 to 13th in in 2017).

The Symposium till 2012 was held for 3 days with actively calling for international participation/presentation, but later
since 2013 it was held for 2 days and with mostly-domestic participation/presentation except invited Keynote speakers from abroad.

Every year many user industries gave their presentations on TRIZ usage and promotion.
All the presentations were shown with slides in Japanese and in English in parallel.
Keynote Lectures and Award-winning presentations (about 5 papers every year, voted by the participants) are publicly posted in the Web site about 3 months later, and all other presentations are posted in the 'Members only' pages of the site.

In Japan TRIZ Society, four study groups are running for several years.

HP posts the announcements of JTS, the Symposium, and presentations at the Symposium.
The short TRIZ introduction article in this HP is rather poor unfortunately, I think.

07 (a) (b) Cybernet Systems Co., Ltd.

http://www.cybernet.jp/ (in Japanese) ;
http://www.cybernet.co.jp/english/ (in English) (only partial)

General Agency in Japan of Invention Machine Corp. (USA) since 2007.

The company is promoting the sales of the software tool, Goldfire Innovator (the successor of TechOptimizer), and conducting seminars on it.

Goldfire Innovator is capable to access to a huge body of information sources (not limited to patent DBs) in science and technology with its powerful semantic analysis tools, and hence to conduct surveys and knowledge sharing/management in a much wider scope than ordinary TRIZ techniques for problem solving.

In 2012 Invention Machine was merged into IHS (USA) with the hope to utilize even wider information sources in the world.

The Web site of Cybernet Systems posts
introductions to the functions and usage of Goldfire,
monthly articles on 'What can you do with Goldfire?',
and user supporting information, etc.

Inviting many user industries, Cybernet Systems held
Invention Machine User Conference annually in 2009 to 2011 and
Goldfire Innovation Forums annually in 2013 to 2017.

09 (a) (b) IDEA Corp. (Mamoru Zenko)

http://www.idea-triz.com/ (in Japanese)

IDEA is a consulting firm specialized in TRIZ, starting in 2003,
and has been actively conducting trainings & consulting in industries and open seminars.

IDEA has particular strength in applying QFD-TRIZ-TM in an integrated manner
to new product development,
and in consulting big and SME companies in such a strategy.

The Web site explains how to use the following four IDEA-style scientific development methods in an integrated way:

Seeds-driven Quality Deployment (SDCD, for developing new business fields),
IDEA-QFD (for developing new products in existing business fields),
IDEA-TRIZ (for innovative problem solving with break-through solutions), and
IDEA-TM (for implementing new solutions optimally).

Various documents of these TRIZ-related methods are downloadable free of charge.

IDEA also sells TechOptimizer and Goldfire Innovator of Invention Machine (later under IHS)
as a dealer and promotes the use of software tools together with their methods.

At Japan TRIZ Symposia, several industrial customer companies reported their successful results of promoting/applying IDEA ways in their new product development,
confirming the effectiveness of IDEA's methods and consulting.

10 (a) (b) MOST LLC. (Kazuya Yamaguchi)

www7b.biglobe.ne.jp/~most/ (in Japanese)

Since 2001 Kazuya Yamaguchi led the innovation of development process and quality management in Kyushu Matsushita Electric Co. (now Panasonic Communications Co. (PCC)) by using scientific methods including quality engineering, TRIZ, and QFD.
He retired from PCC in 2007 and started this consulting firm, together with his PCC OBs.

MOST's philosophy is to propose and provide methods for drastic innovation applicable in the era of AI (Artificial Intelligence, e.g., IoT and Factory big data).

More specifically, it proposes "to use scientific technology tools in the world (e.g., QFD, TRIZ, Quality engineering (or TM), MATLAB, and some other universal-use tools) effectively, to improve the current styles of R&D and manufacturing into new business promotion styles with high efficiency, and to put your business on a sustainable and growing curve by obtaining maximal results in achievements."

Their methods are written closely by the MOST members in their books (or white papers), which are available in their HP with free downloading (without registration). They include:

(1) "Improve your quality, then your costs get reduced (Taguchi Method)" by K. Yamaguchi (95 p.)
(2) "How to eliminate the needs of remaking software in the market due to bugs (Taguchi Method)" by K. Yamaguchi (27 p.).
(4) "Method to realize No. 1/only-one products easily (TRIZ)" by K. Matsui (28 p.). ・・・・・
(8) "Business strategy for executives to raise their performance surely" by K. Yamaguchi (31 p.).

All these textbooks are impressive with their strong encouraging messages.

12 (a) (b) Ideation Japan, Inc. (Teruyuki Kamimura)

https://ideation.jp/ (in Japanese)

Ideation Japan was raised by Teruyuki Kamimura, a patent attorney, in 2010 and currently is the only agency of International Ideation Inc. (USA) in Japan.

In Ideation International, TRIZ Masters (and collaborators of G. Altshuller since 1970s) Boris Zlotin, Alla Zusman, et al. developed TRIZ further in depth to form a new and big system named Ideation-TRIZ (or I-TRIZ).
The system is composed of 3 main components, i.e., Inventive Problem Solving (IPS), Anticipatory Failure Determination (AFD), and Directed Evolution (DE).
Such methods are supported by software tools which install well-systematized solution prototypes (called System Operators).

The HP of Ideation Japan posts many introductory articles on these methods in a way easy to understand.
Multiple issues of pamphlets are downloadable (free of charge, with registration), and videos of an introductory seminar (14 parts, over 3 hours in total) can be seen free of charge (without registration).

Ideation Japan conducts seminars on I-TRIZ and its software tools pretty frequently (with or without charge) as a part of its active proliferation activities.

In 2013 it established 'I-TRIZ Promotion Association' for the purpose of promoting their private I-TRIZ certification.

14 (a) (g) TRIZ Study (Shinsuke Kurosawa)

http://www.trizstudy.com/ (in Japanese)
http://www.trizstudy.com/contentslist.html (in English, List of Contents in their original languages)

This site intends to be a Web site for those who want to study TRIZ deeply in Japanese.
The site owner is Shinsuke Kurosawa, formerly at SANNO Institute of Management.
He is fluent in Russian and has been working to proliferate TRIZ since mid-1990s.

This site is of special importance in Japan in the points that many original TRIZ papers written by G. Altshuller are posted in Japanese directly translated from Russian.
He also posts Japanese translation of various documents authorized by MATRIZ (i.e., International TRIZ Association), e.g., TRIZ Textbook for MATRIZ Level 1 certification, TRIZ Body of Knowledge (BOK), etc.
Besides them he introduces a number of papers on modern TRIZ in Russia, especially those related to education with TRIZ.

A wonderful article in this site for introduction to TRIZ is the instructions and worksheets of "16 steps in TRIZ for you to use today (for solving your problems)", which he has originally written down concisely.

As the process for solving problems, he shows the sequential points of focus in 6 main steps (i.e., problem/task/ideality, situations/viewpoints, inventive principles, resources, strategies/contradictions, and action plan) having 16 sub-steps in total.

For each sub-step, he shows in a worksheet the questions to think, and in the text in parallel he describes the instructions, simple examples, and a consistent set of case study.
The process is quite simple and yet powerful and useful for engineers.

16 (a) (b) Pro-Engineers (Shigeru Kasuya）

http://www.proengineer-institute.com/ (in Japanese)

Shigeru Kasuya worked for SONY and for Fuji Xerox, and started his consulting firm in 2006.

His site states its purpose as "TRIZ & Support for Differentiating Technology Development".
He intends to support not only the usage of TRIZ but also more widely the development of new technologies/products, innovation in business processes, human resource development of researchers and engineers, etc.

The top page of his Web site is a tightly packed index to a lot of information in the site.
There are interesting articles such as abstract documents of his various seminars, articles in newspapers and journals mentioning about his work, his answers to questions/issues raised by various industry users (over 40 articles) (posted also in the Q&A corner of Monodukuri.com,).

He also shows his own examples for 40 Inventive principles; they include
illustrated examples for all the 104 sub-principles,
examples from the areas of IT/SW, chemistry, and biology.

Contradiction Matrix (in the classical form) is also installed in the HP so that the inputs of an improving parameter and a worsening parameter return the outputs of four inventive principles.

His interesting suggestion: "A simple Google search with keywords of target object and function/property can give the information similar to the results from TRIZ Effects DB."

Several case studies of solving problems with TRIZ are demonstrated.

17 (a) (b) IdeaPlant (Rikie Ishii)

https://ideaplant.jp/ (in Japanese), Rikie Ishii's Activity Report http://ishiirikie.jpn.org/ (in Japanese),
https://ideaplant.jp/triz/index.html (in English) (only partly)

IdeaPlant was a name of a group organized by Rikie Ishii in 2005 in Sendai,
with the intention of 'a place for growing seeds of ideas into large trees'.
(The group also worked in the name of 'Miyagi TRIZ Study Group' for a certain time.)
Ishii made the IdeaPlant as a business in 2009.

He has been working energetically for raising creative persons and creative organizations,
mostly by devising/practicing/proliferating the methods/processes/tools for enhancing the idea generation.

He has produced 'TRIZ Brainstorming Cards' (i.e., playing cards with simplified phrases and illustrations of TRIZ 40 Principles), 'BreStir' (i.e., a playing process for enjoying and activating the Brain Storming using some specialized cards), among others.

He conducts many 'Workshops for enhancing idea generation' at various industries, universities, high schools, local communities, etc., getting high reputation on his vivid way of workshops.

His activities at various places in Japan (and some in neighboring countries) are reported frequently in his blog "Activity Reports by Rikie Ishii".

He also actively uses various IT media such as Facebook, Twitter, YouTube, SlideShare, etc.

We can learn his way of workshops and idea generation through his presentation slides,
"Techniques for creative idea generation" at his 5-hour mini-lecture and workshop
held in Kyoto in February 2018. https://www.slideshare.net/ishiirikie/5-88358296 .

18 (a) (e) Monodukuri.com (Osamu Kumasaka)

https://www.monodukuri.com/ (in Japanese)

This is a nice portal site which has produced and implemented a mechanism for connecting
(a) Issues in monodukuri (or manufacturing in general) (and the industries having them)
with (b) Methods useful for solving the issues (and the professionals in such methods).

The basis of this mechanism is the 'Monodukuri Engineering Matrix' which O. Kumasaka built during his R&D work for Pioneer Corp.

The Matrix has rows of 60 Issues for monodukuri (i.e., Planning 7, Development & design 15, Manufacturing 22, and Quality in market 6) and columns of 118 Methods for solutions (including Strategy techniques 9, TRIZ 8, USIT 1, Quality engineering 8, etc.).
In the Matrix cells, applicability and usefulness of each method for the issue is shown with the 4-grade evaluation (i.e., 3, 2, 1, and 0).

Kumasaka started this Monodukuri.com site in 2012 after his retirement.
First he obtained supports and registrations by many professionals (currently 138), and obtained their contributions of introductory articles on individual methods and their usage (1600 articles, 2-3 pages), training texts (490 documents), and application case studies (950 cases), for publicly posting in the site.

Users (in industries) may choose an issue most relevant to his problem from the 60 Issues, then is led by the Matrix to possibly applicable/useful methods, and can further study the methods closely by reading their introductions and case studies.

If a user asks a question (or raise his own issue) openly at the site, any professionals may reply to it openly at the site as well.

All these basic use of the site is free of charge for the users, while there are additional services of seminars and individual consultation with charge.
The site is now operated with annual support money and payback from the registered professionals.

Useful information and nice business model make this portal site growing year after year.

22 (a) (f) Wikipedia

https://ja.wikipedia.org/wiki/TRIZ (in Japanese)

Wikipedia is a 'Free Encyclopedia' which is used very often by ordinary people
not specialized in each subject.
Individual pages (or subjects) in Wikipedia are written by any voluntary people and
revised many times by many people to improve the descriptions;
thus Wikipedia is usually supposed to be a reliable information source.

Unfortunately, however, in the case of TRIZ, such voluntary, collaborative work seems
not working well at present (especially so in its Japanese edition).

This is probably because of the complexity of the TRIZ system and
the diversity of opinions/understandings by different TRIZ leaders.

Current Japanese edition of 'TRIZ' page in Wikipedia describes,
besides a very short general introduction,
that the catch-phrase of 'Super-Inventive Technique' used in the initial stage of TRIZ
introduction in Japan was misleading,
and it lists 40 Inventive Principles with very short explanations.

At moment, the description of TRIZ in Wikipedia (in Japanese) is not recommendable.
Please refer various introductions and articles posted publicly as listed
in the present WTSP Catalogs of TRIZ-related sites in Japan and in the world.

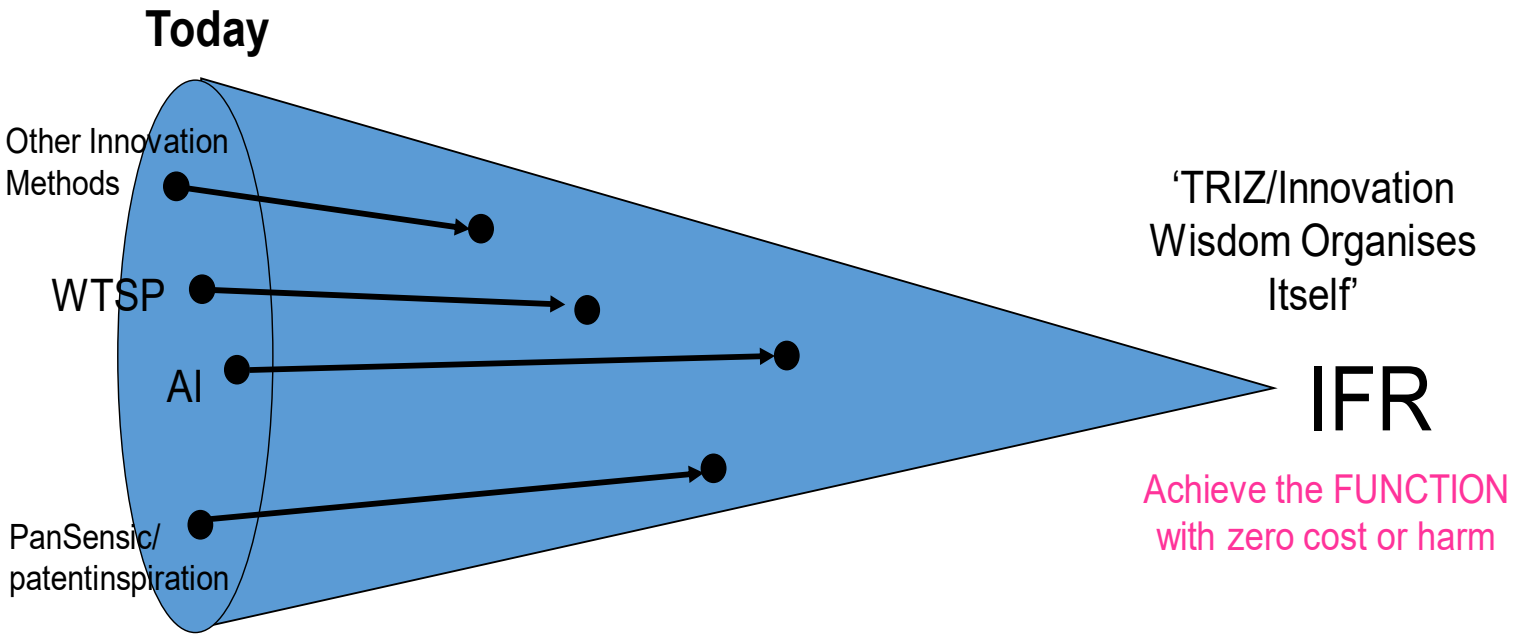
(6) Concluding Remarks: Two Future Visions

(a) Aiming at Ultimate Ideal (IFR):

The IFR for this project may be "The knowledge of TRIZ-related methods and innovation is accumulated and integrated by itself in the form easy to apply to problems.

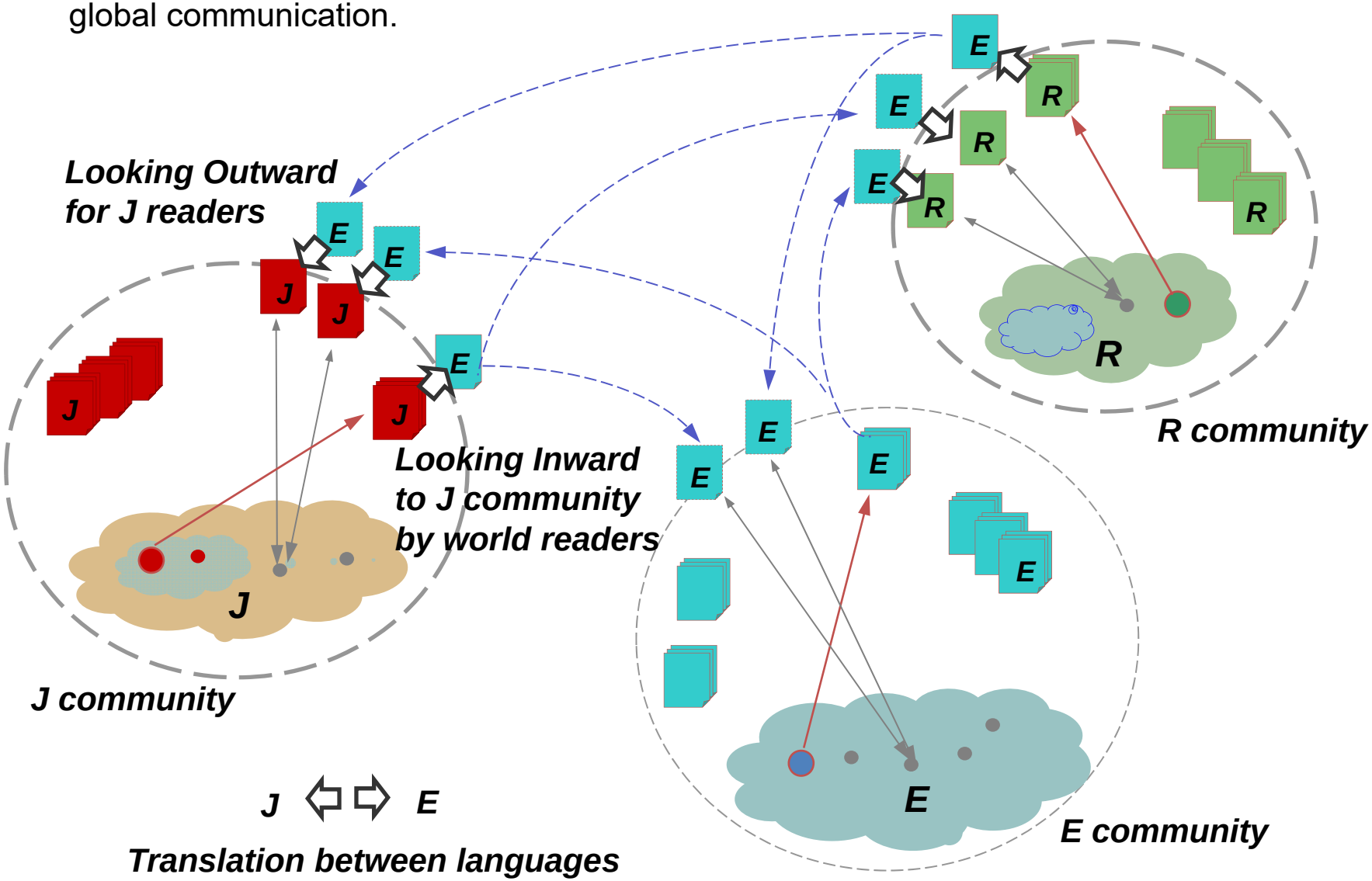
WTSP approach is to accumulate the knowledge by collaborative human brains.
World WTSP Catalogs with categories of methods and applications are also planned.

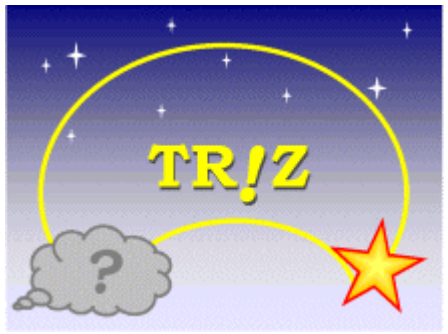
There may be other approaches utilizing AI, Big-data analyses, etc.
Collaboration and integration of such approaches will make even more advanced approaches.



(b) A Global Network of Many Public Web Sites in TRIZ

Public sites: Accept papers/articles widely, and post/publicize them openly/widely under some fair editorial policy. Hub sites. Translate good articles in bi-directional ways for global communication.





Thank you for your attention.

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http://www.osaka-gu.ac.jp/php/nakagawa/TRIZ/eTRIZ/

World TRIZ Sites Project (WTSP) Project Leader

Let's work Together ! Connected !!