

The Transportation Research Thesaurus (TRT): An Overview



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These slides will explain:

- What the TRT is
- How it is structured
- Why it is useful
- How it is updated

What is the TRT?

- A tool to improve the indexing and retrieval of transportation information
- Provides a common and consistent language between producers & users of information

The TRT is:

- A Controlled Vocabulary: restricted list of terms

AND

- A Taxonomy: hierarchically structured system of organizing concepts

AND

- A Thesaurus: provides information about each term and its relationships to other words

History of the TRT

1993-1996 The TRT initially developed (NCHRP 20-32)

2007 TRB assumes in-house maintenance of the TRT. The TRT integrated into TRIS. The TRT published on Internet (NCHRP 20-70)

2016-First comprehensive assessment of the TRT launched (NCHRP 20-109)

1997-2001 The TRT is updated and TRIS records converted to use the TRT. User Guide published. (NCHRP 20-32(2))

2008-Definitions added for many terms (NCHRP 20-79)

Today's TRT

- LARGE~12,100 terms (9,600 “preferred” terms and 2,500 “nonpreferred” terms)
- COMPREHENSIVE-Covers all modes and functions of transportation
- TARGETED-Covers only transportation
- FREE TO USE
 - Integrated into TRIS databases
 - Searchable at <http://trt.trb.org>

TRT Term Arrangement

The TRT is structured into 21 facets. Below are the top terms in each of the facets. All of the TRT terms are arranged into hierarchies below one of these top terms. The hierarchies differ in size and complexity—some facets are as many as 12 levels deep. Other facets have only a few levels. The top terms in many cases correspond roughly with the TRT subject areas.

A: Transportation

B: Transportation operations

C: Management and organization

D: Communication and control

E: Planning and design

F: Construction and maintenance

G: Testing

H: Safety and security

J: Environment

K: Economic and social factors

M: Persons and personal characteristics

N: Organizations

P: Facilities

Q: Vehicles and equipment

R: Materials

S: Physical phenomena

T: Disciplines

U: Mathematics

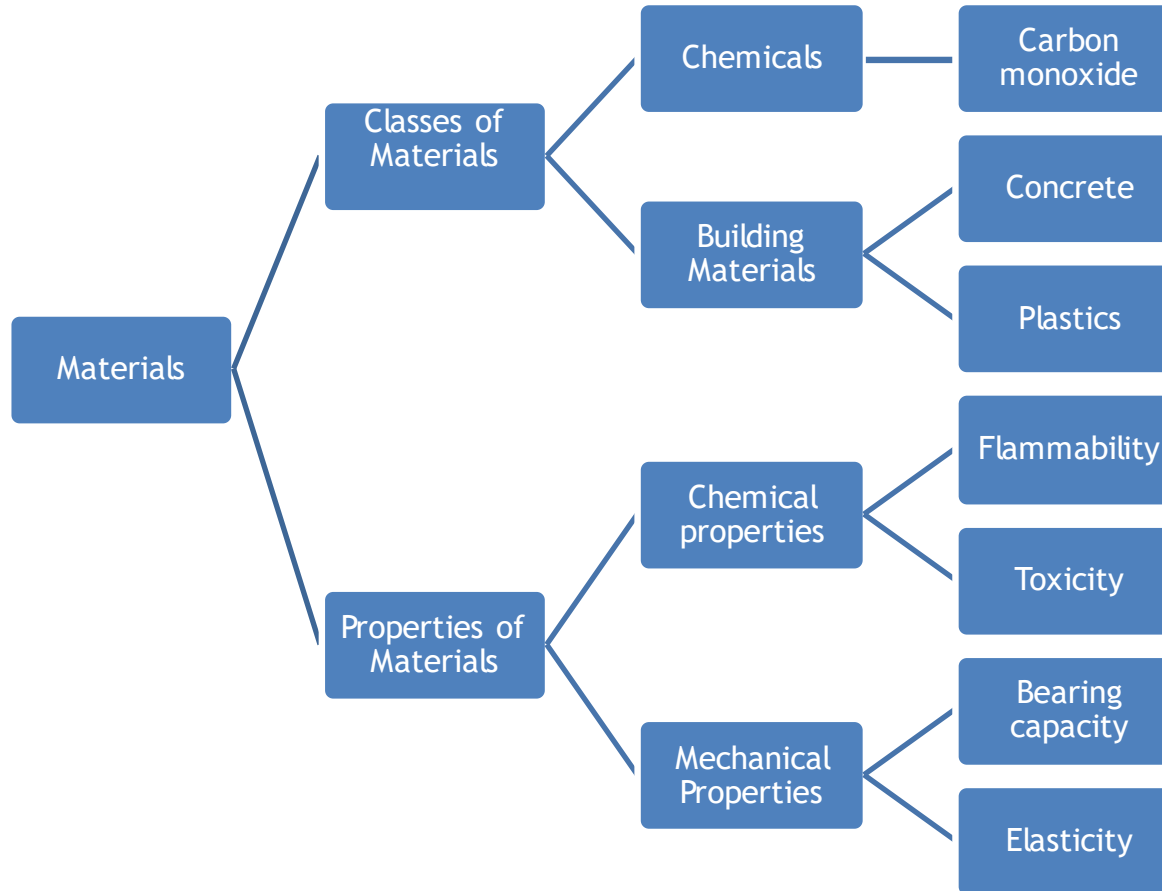
V: Areas and regions

W: Time

X: Information organization

Sample TRT Structure

Below is a VERY simplified view of one hierarchy. In this example, a very broad term, Materials, is subdivided into Classes and Properties, and each of those has been subdivided. An indexer or a searcher can use any term, depending on how specific they want to be.



Example of Term Details

This display for a term, Risk Assessment, illustrates the TRT's features, including the term's hierarchy, definition, broader term, and related terms. "Use For" terms are synonyms that are not TRT terms themselves. Instead, a searcher is directed to use the preferred term.

[Top Terms](#) > [Safety and security](#) > [Risk](#) > **Risk assessment**

Risk assessment (Hka)

Definition

The identification and evaluation of critical assets in terms of their susceptibility to the consequences of terrorist attacks or acts of war and a recommendation of options to address those weaknesses. (Source: AASHTO Glossary)

Use For

Vulnerability assessment

Broader Term

[Risk](#) (Hk)

Related Terms (Hierarchical)

[Crash exposure](#) (Hke)

Related Terms (Associative)

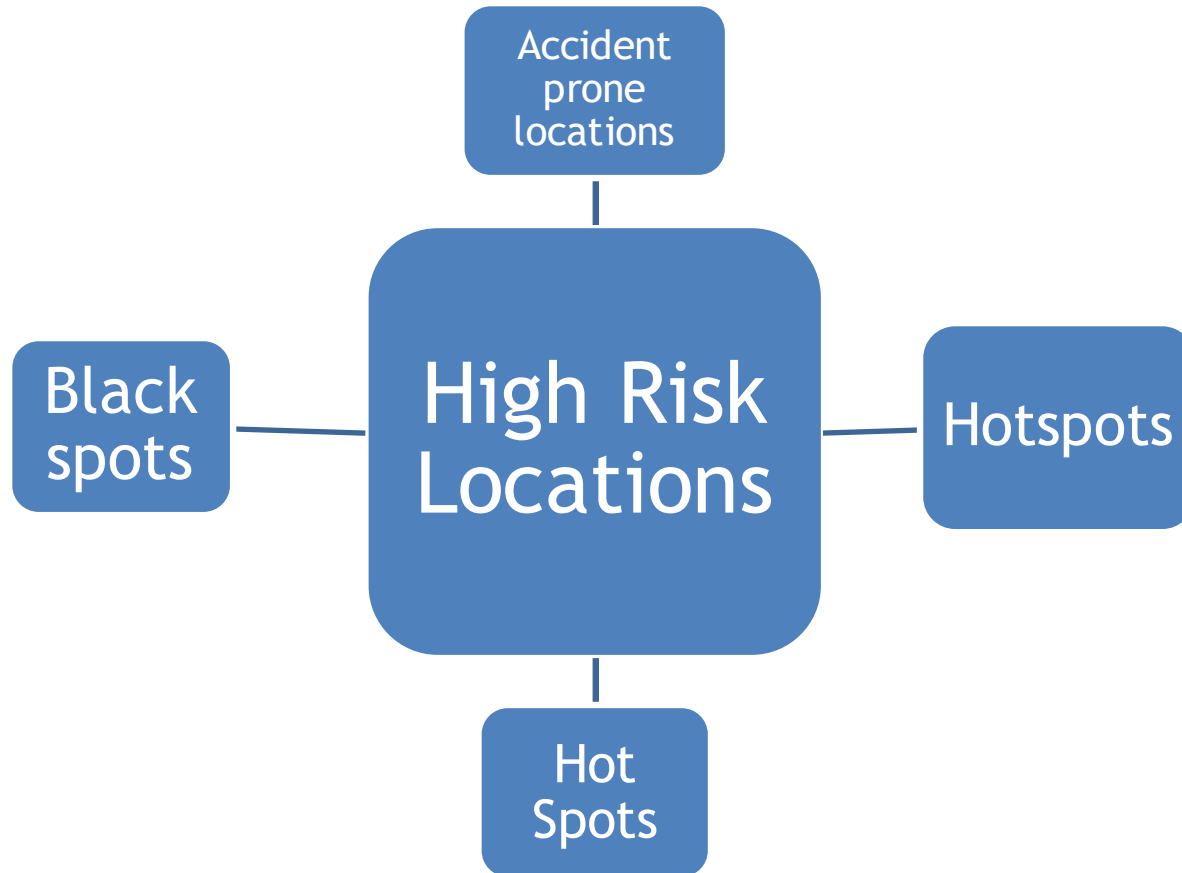
[Risk management](#) (Cnb)

[Crash risk forecasting](#) (Hbxxsv)

[Environmental risk assessment](#) (Jfd)

Different Words, Same Meaning

There are many ways to express the concept, “a location where a lot of crashes happen.” All of these ways are included as non-preferred terms to the TRT concept “High risk locations.” This makes it easier to find all records that address this concept with one search.



TRT Terms Can Be Much More Specific than Subject Areas

TRB Subject Areas are very broad, and retrieve thousands of results in TRID. Using a more specific TRT term can reduce the results to only the most relevant.

TRB SUBJECT AREA	TRT TERM
Security & Emergencies	Disaster Resilience; Bombings; Computer Security
Planning/Forecasting	Travel Demand; Smart Growth
Materials	Concrete (or even more specific-- Reinforced Concrete, Cast in Place concrete, etc.)
Vehicles/Equipment	Intelligent Vehicles; Electric buses; Tires

How TRT Terms are Assigned in TRIS Databases (TRID, RIP, PubsIndex)

Every record indexed by TRB's Transportation Research Information Services is assigned index terms.

- Index terms are TRT terms.
- Any TRT term can be assigned.
- Professional indexers choose index terms for each record.
- 5-8 terms are chosen that capture the important concepts of the publication or project.
- Index terms answer the question, "What is this publication/project about?"

Example of TRT terms in TRID record:

Recovering International Recyclables from In-Flight Service

When exposed to certain foods or fluids, recyclables arriving on international flights are required to be quarantined due to potential contaminants. As a result, almost every country worldwide prescribes sterilization, incineration, or other disposal methods for these contaminated recyclables. This report examines issues involved in recovering recyclables from international in-flight service. The findings indicate that supply chains, advanced stakeholder engagement, value chain collaboration, and a globally standardized and adopted approach may be needed to increase and better monetize the recovery of Non-Contaminated Recyclable Materials (NCRM). With a multi-stakeholder approach, airports, airlines, and flight kitchens, along with support partners, can affect the recovery efficiency of NCRM. Through these collaborative efforts, gaps in supply and collection chains can be addressed.

Record URL:

<http://www.trb.org/Main/Blurbs/180655.aspx>

Authors:

James, Gregoire
Chiodo, Joseph

Publication Date: 2020-4

Language

English

Media Info

Media Type: Digital/other

Edition: Final Report

Features: Appendices; References;

Pagination: 52p


Serial:

[ACRP Web-Only Document](#)

Issue Number: 46

Publisher: Transportation Research Board

Publication flags:

 Open Access (libre)

Subject/Index Terms

TRT Terms: [Airlines](#); [Airport operations](#); [Aviation](#); [Food service](#); [International travel](#); [Recycling](#); [Solid waste disposal](#); [Solid wastes](#)

Subject Areas: Aviation; Environment;

Searching TRID using TRT Terms

(<http://trid.trb.org>)

- In the Advanced Search display, begin typing an index term.
- If the term is in the TRT, matching terms will appear in a drop down list from which you can select terms.
- Best matches appear first.
- More than one term may be selected; the default Boolean operator is OR.
- Similar search capabilities exist in RIP and PubsIndex.

Example TRID search showing drop down list for “waste”



The screenshot shows the TRID search interface with the following fields and options:

- Keywords**: A text input field.
- Highlight search keywords
- Title**: A text input field.
- Serial or Conference**: A text input field.
- Subject Areas**: A list of subject areas including Administration and Management, Aviation, Bridges and other structures, and Construction.
- Match Any Subject Listed Match All Subjects Listed
- Paper, Report, Contract or Grant Numbers**: A text input field.
- Source**: A dropdown menu currently set to "- All sources -".
- Index Term**: A dropdown menu with "waste" entered. The dropdown list is open, showing the following terms:
 - Waste disposal** (highlighted): *Garbage disposal, Refuse disposal, Scrapping, Dumping*
 - Waste disposal facilities: *Waste disposal sites*
 - Waste heat utilization
 - Waste management
 - Waste minimization

How Agencies and Universities are Using the TRT

Finding Information

- Selecting terms for literature searches
- Text mining to discover trends & patterns in research
- Locating definitions

Organizing Information

- Indexing/cataloging their own library catalogs and collections (including NTL's [ROSA-P](#) repository)
- Finding keywords for [Technical Report Documentation page](#)
- Seeding content management system taxonomies

New Terms in the TRT

- Sponsors, TRIS indexers, staff, public can suggest
- Send suggestions via form at <https://trt.trb.org/newterms.asp>
- All suggestions considered by TRT Subcommittee
Terms can be accepted, declined, or tabled
Decisions based on:
 - Use in literature
 - Use by searchers
 - Gap in existing terminology
 - “Staying power”

Suggest a TRT term

<https://trt.trb.org/newterms.asp>

More Information about the TRT

[*NCHRP Research Report 874*](#), *The Transportation Research Thesaurus: Capabilities and Enhancements*

Use the TRT in the TRIS Databases:

TRID trid.trb.org

RIP rip.trb.org

PubsIndex pubsindex.trb.org