APPLICATION OF LOGISTIC GROWTH CURVE

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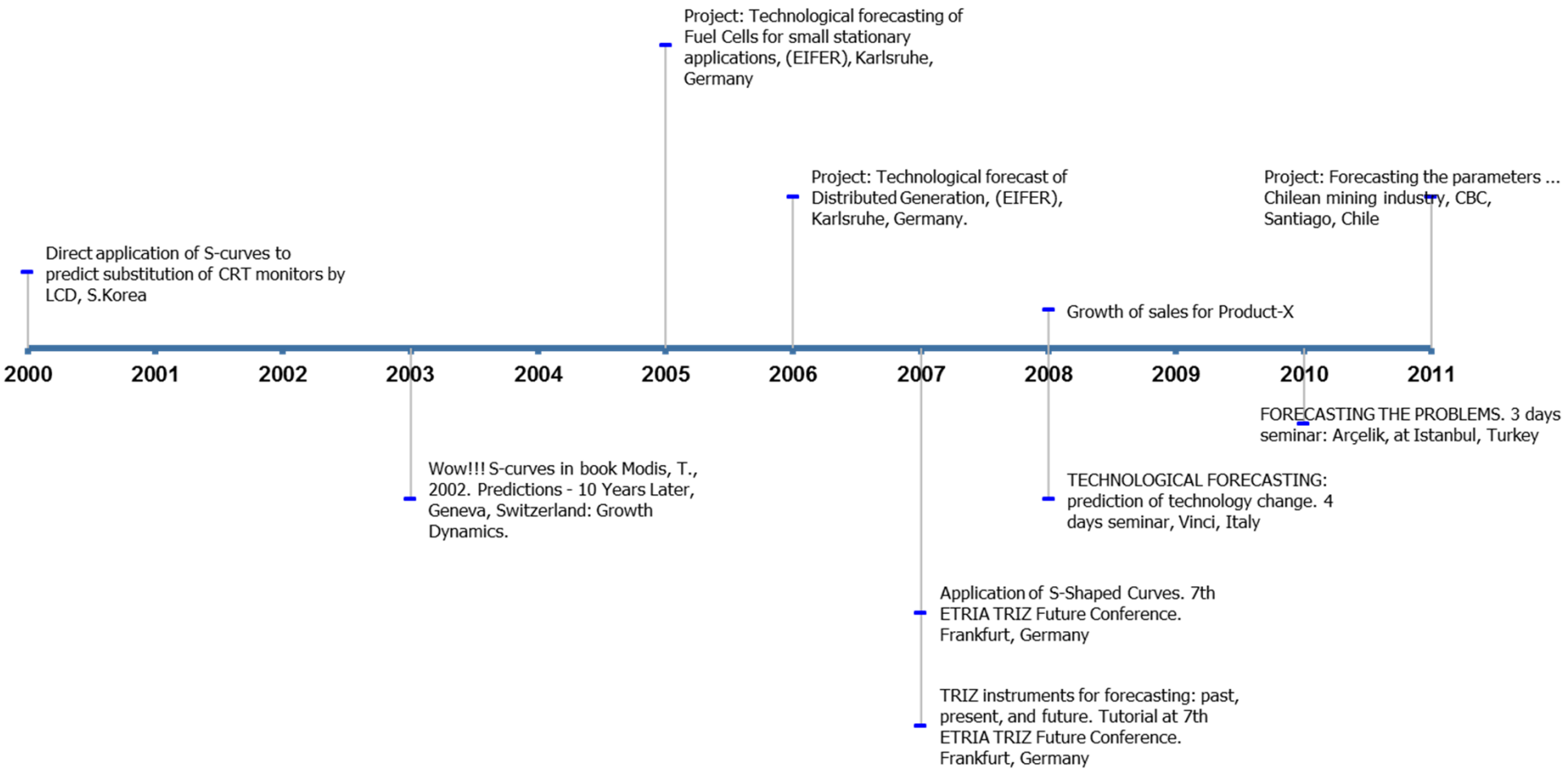
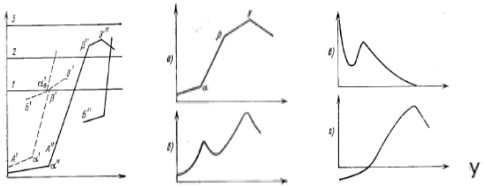
24 bd de la Victoire, 67084 STRASBOURG, France

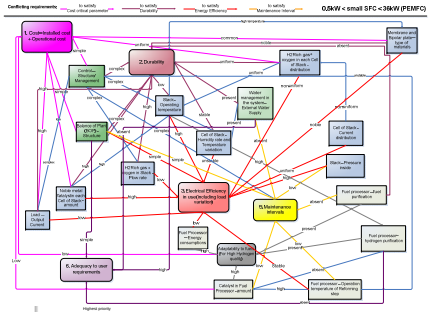
October, 2012

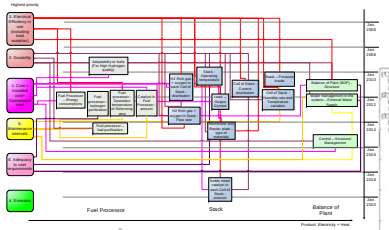
a story of subject

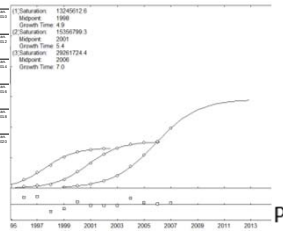


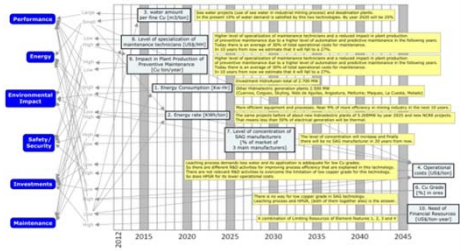
a story of subject

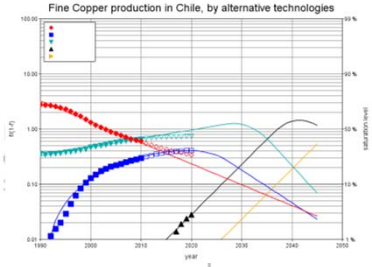






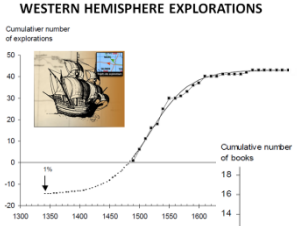


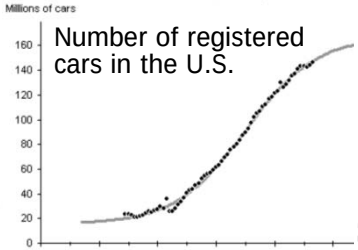


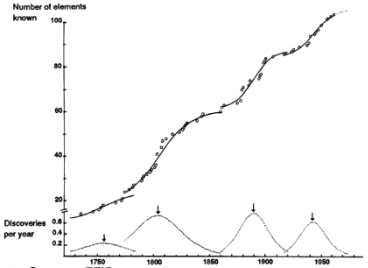


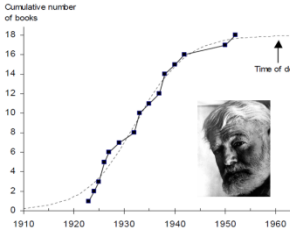
Product-X

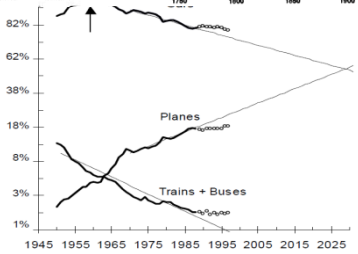
2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011





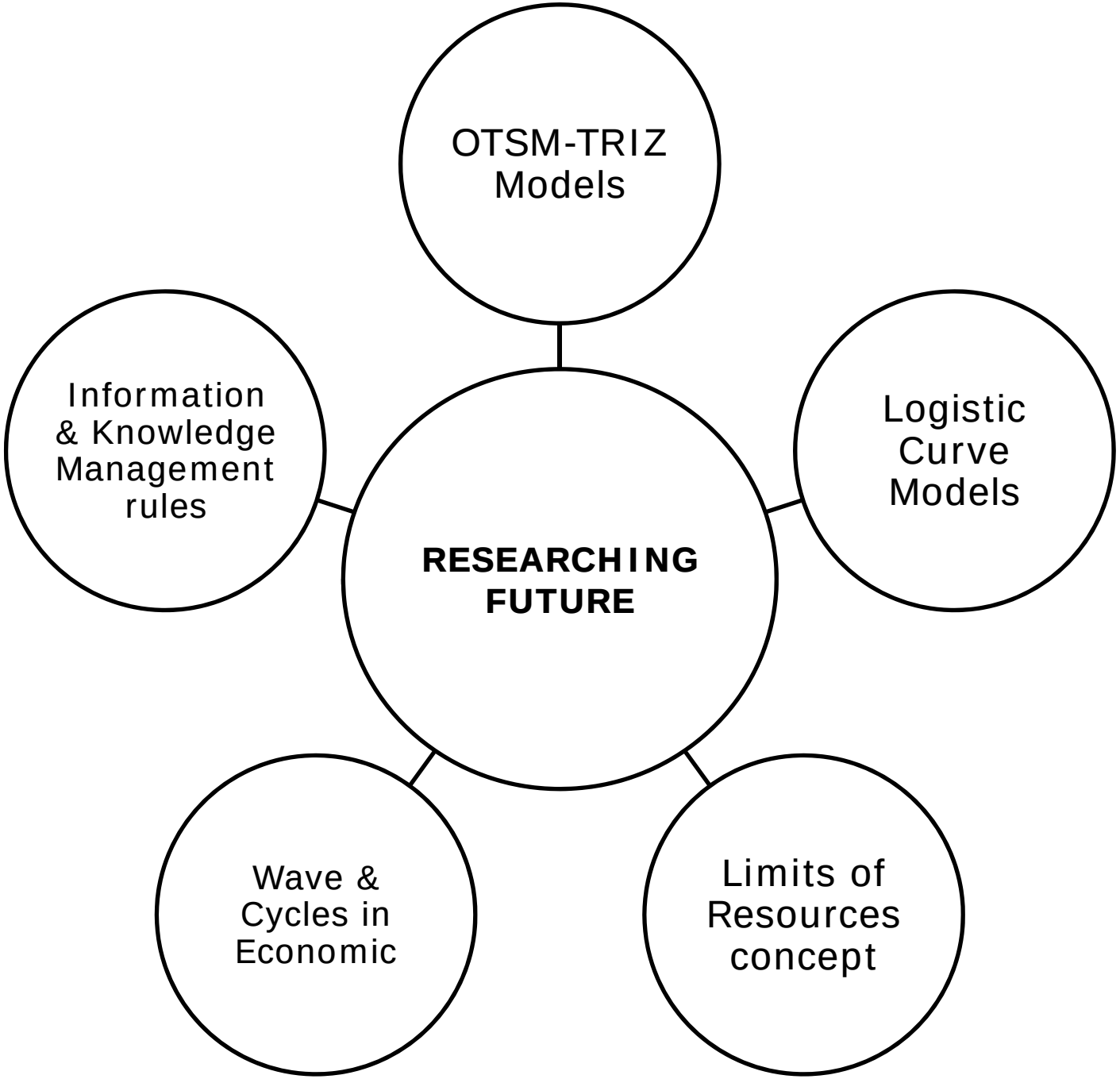


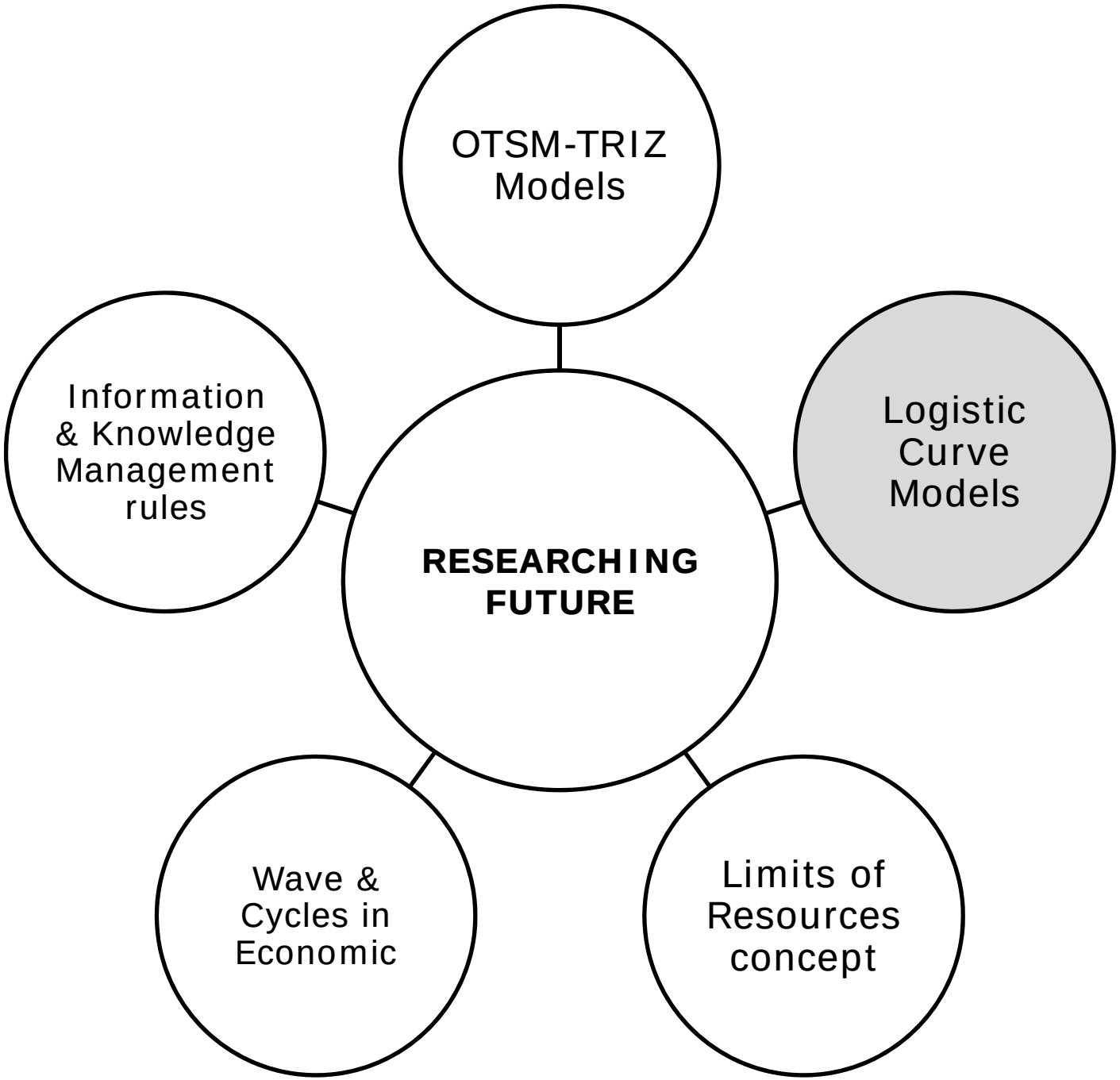




Appli
ETRIA
Frank

TRIZ
prese
ETRIA TRIZ Future Conference.
Frankfurt, Germany


OTSM-TRIZ Models
Information & Knowledge Management rules
RESEARCHING FUTURE
Logistic Curve Models
Wave & Cycles in Economic
Limits of Resources concept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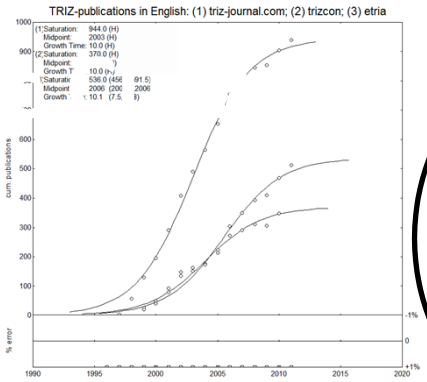
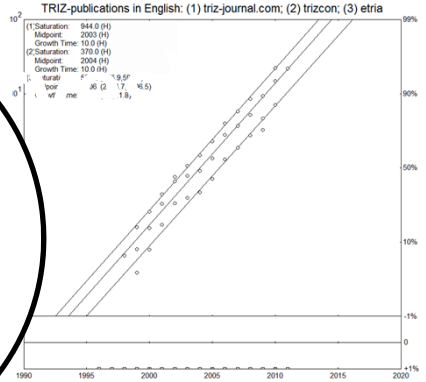
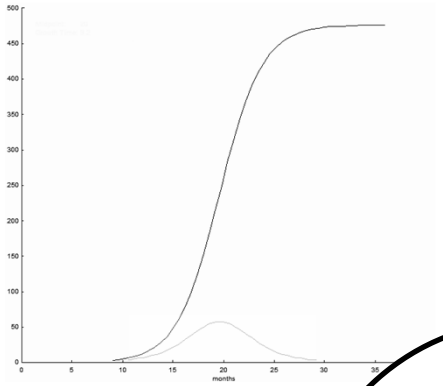
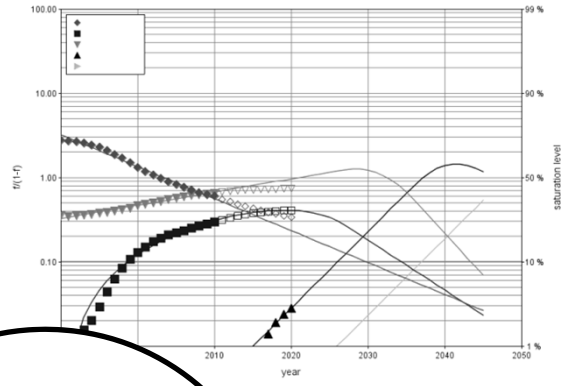


Component Logistic Models





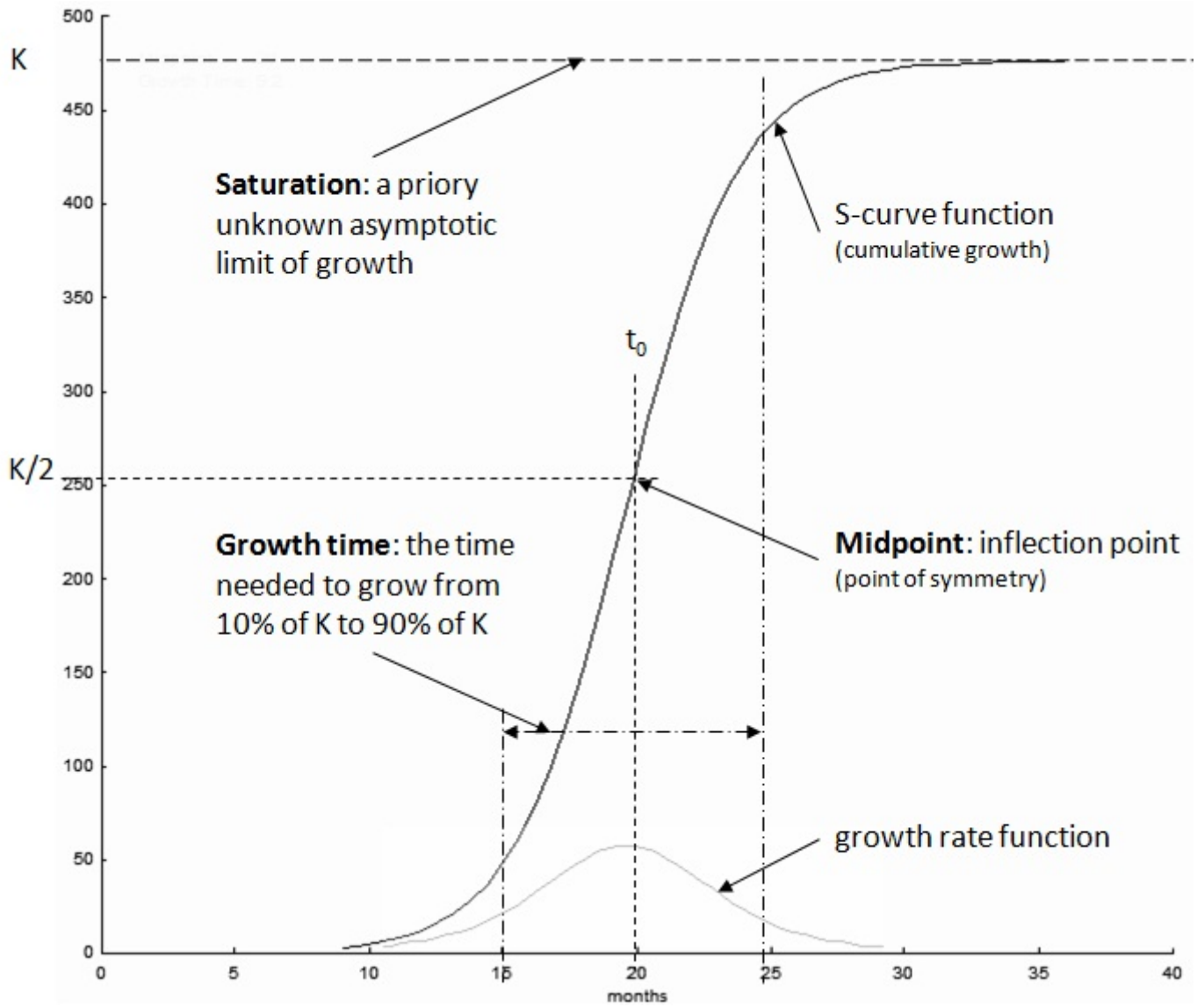
Logistic Curve Models (S-Curves)



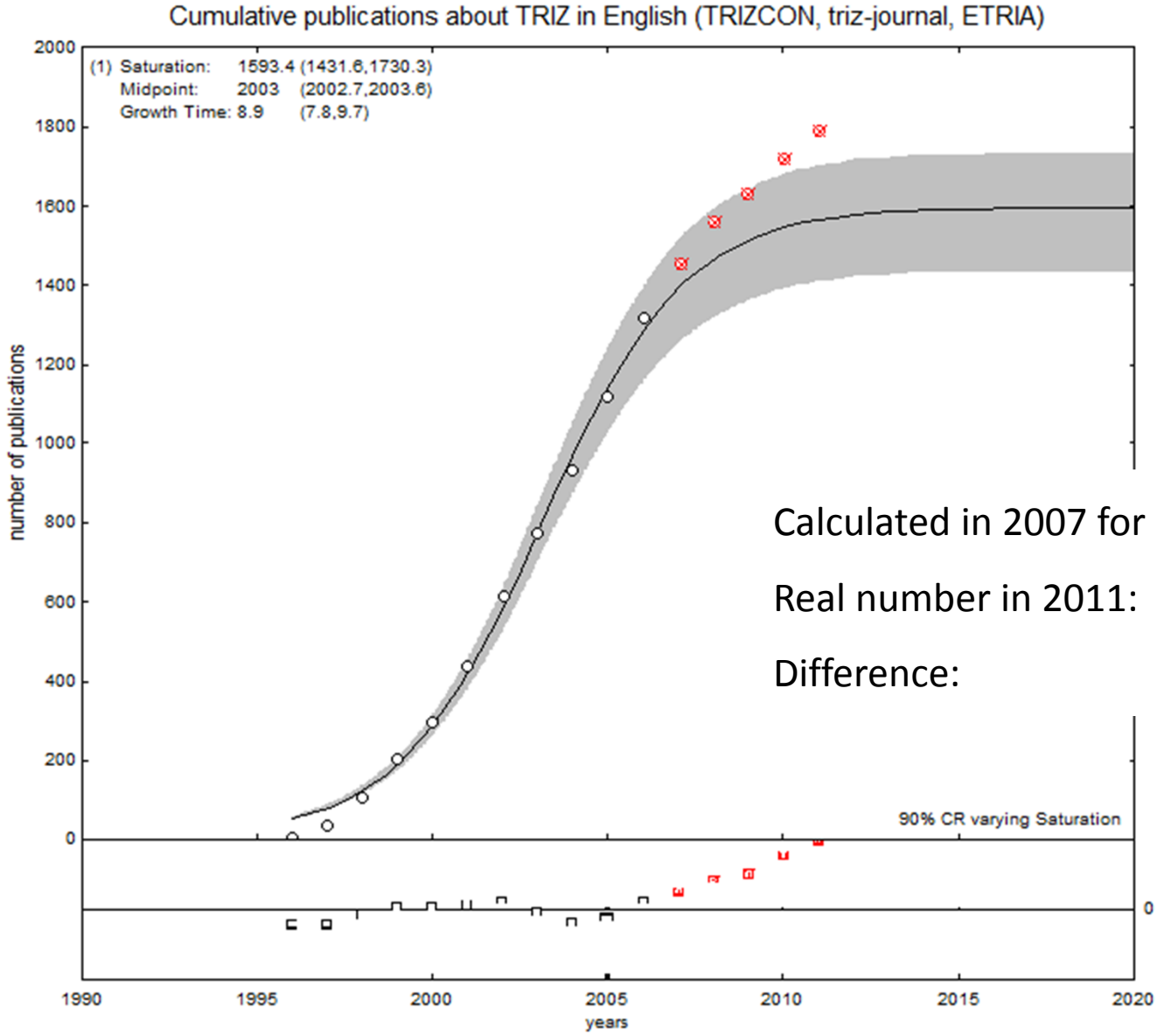
Simple Logistic Model

Logistic Substituti on Model

schematic diagram of a simple logistic S-curve



cumulative number of TRIZ publications (2007)



Confidence interval ~298

Calculated in 2007 for 2011: 1600

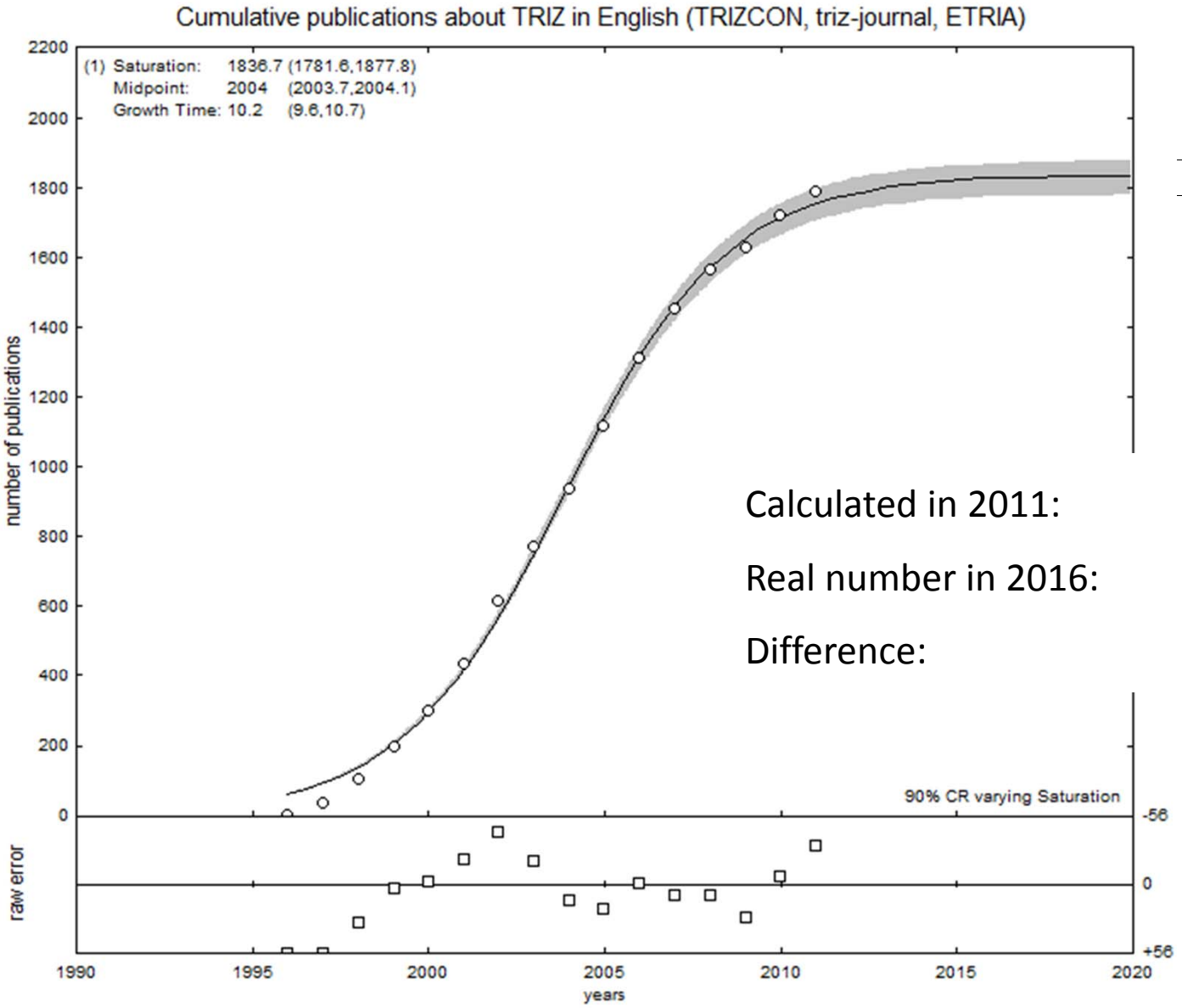
Real number in 2011: 1788

Difference: 11%

"The ultimate test of the forecaster is an accurate and reliable forecast not the elegant or easily applied method."

Theodor Modis
author of "Predictions", 1992

cumulative number of TRIZ publications (2012)



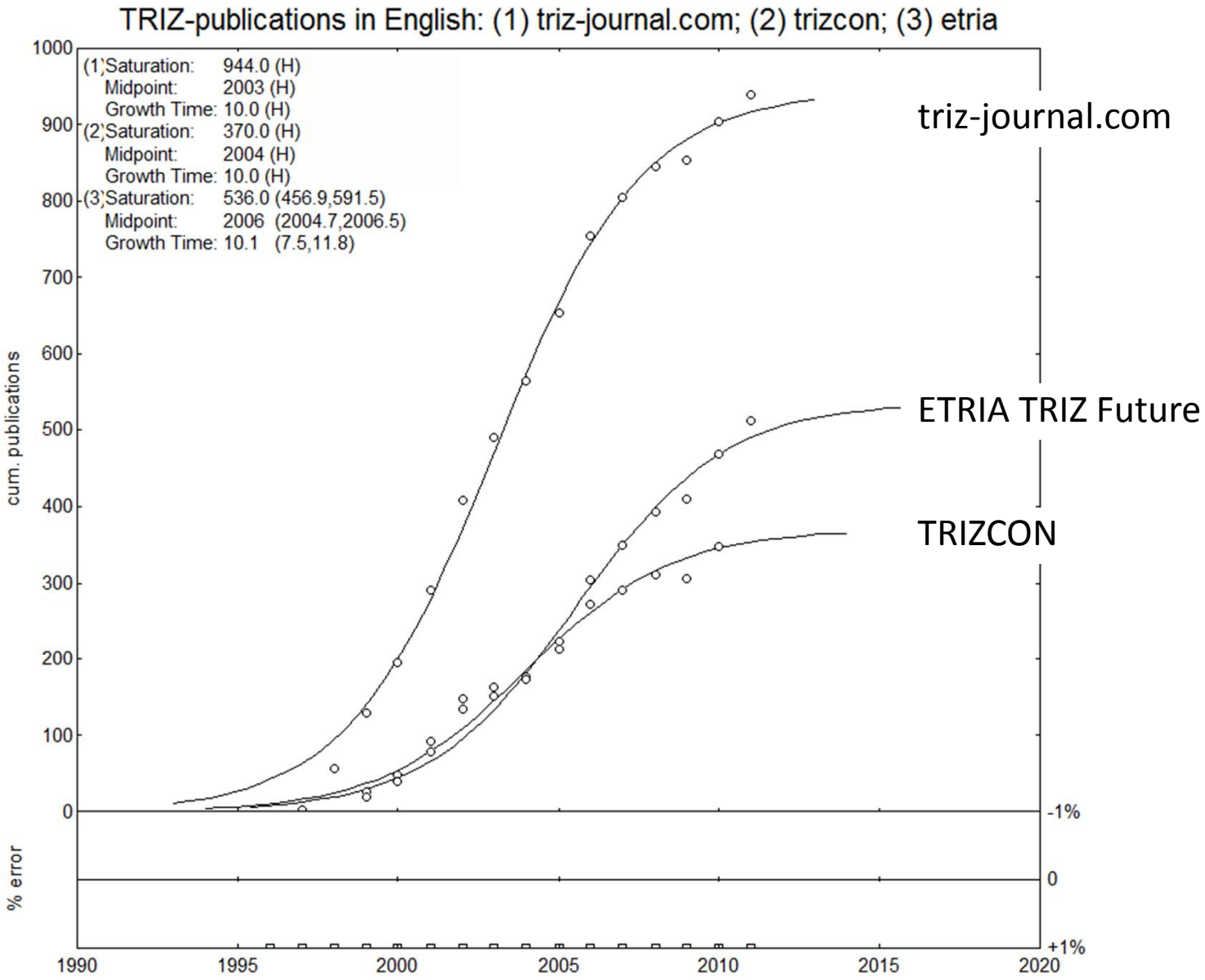
Confidence interval ~96

Calculated in 2011: 1840

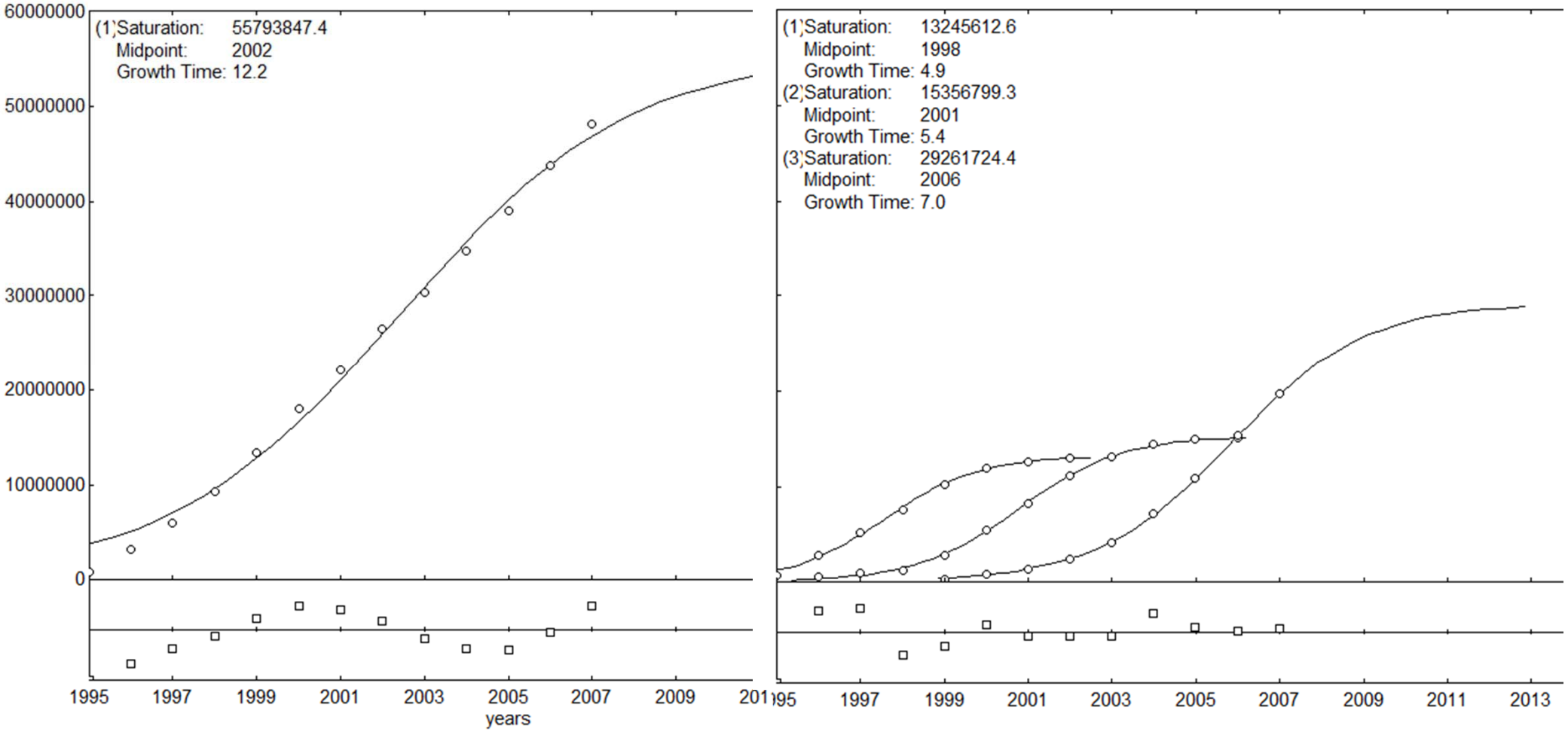
Real number in 2016:

Difference:

component logistic model



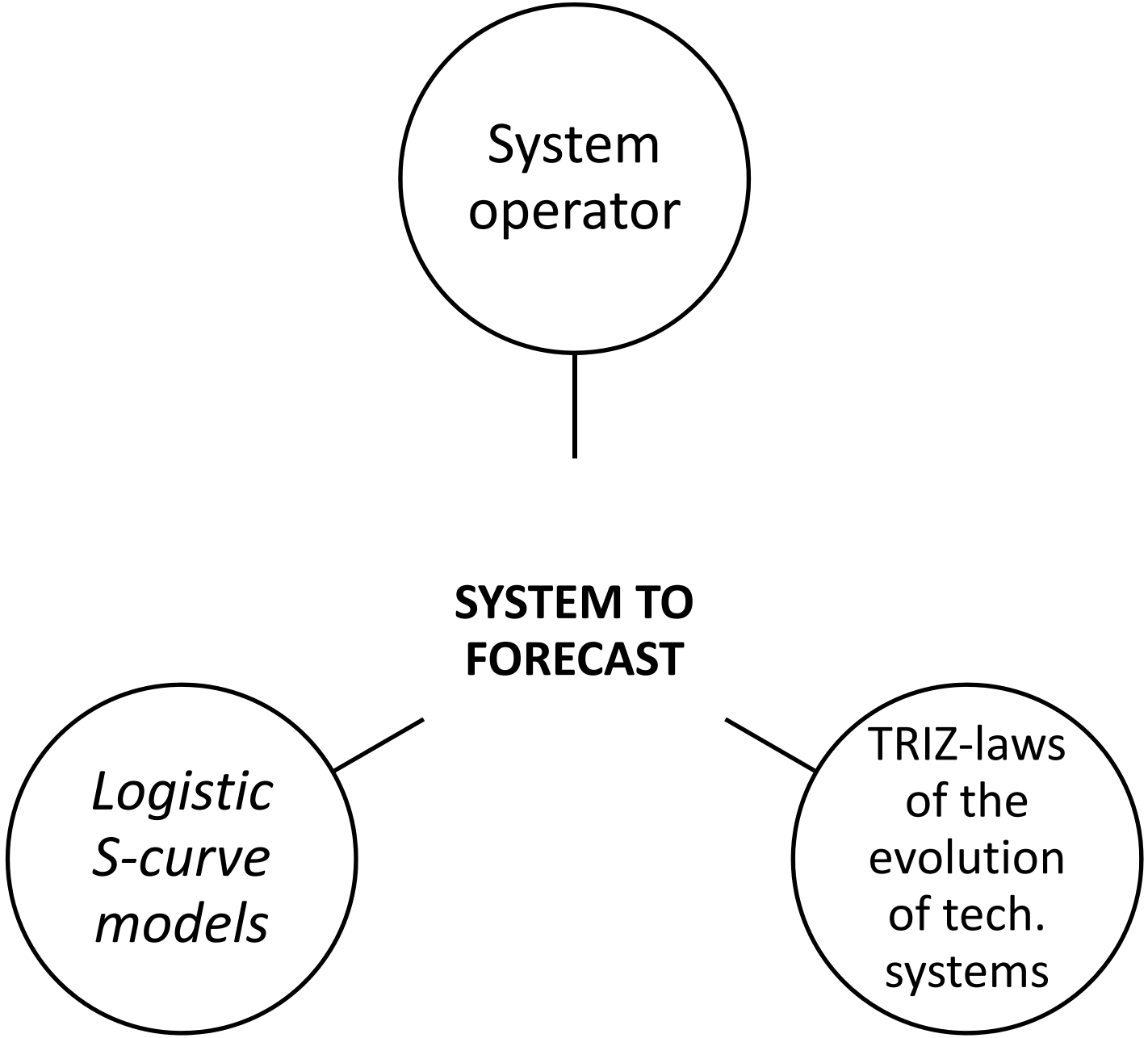
growth of sales for product-X

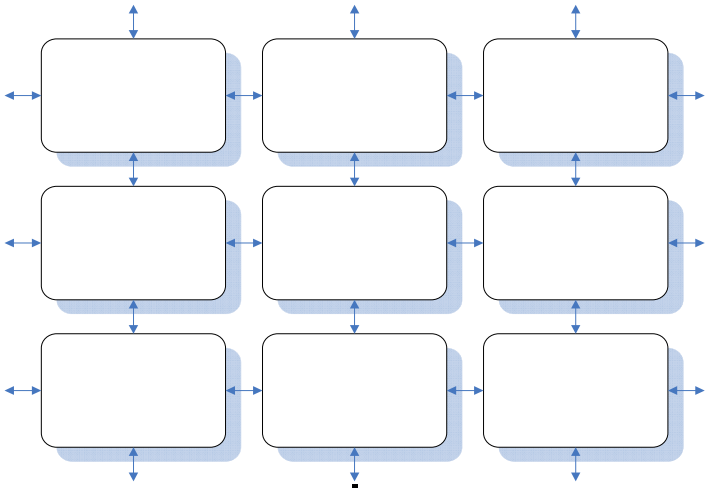


intuitive projection

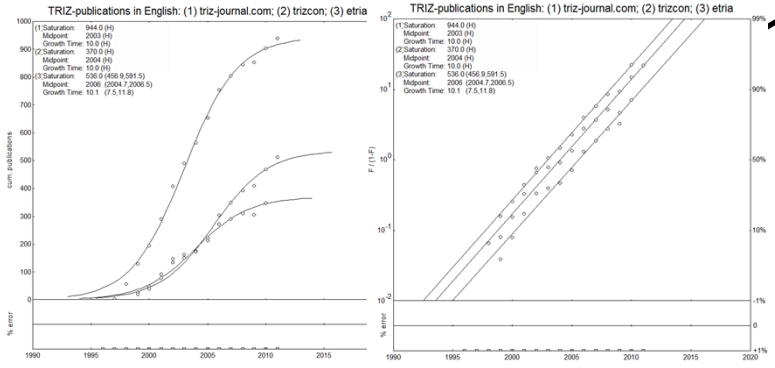
component logistic model

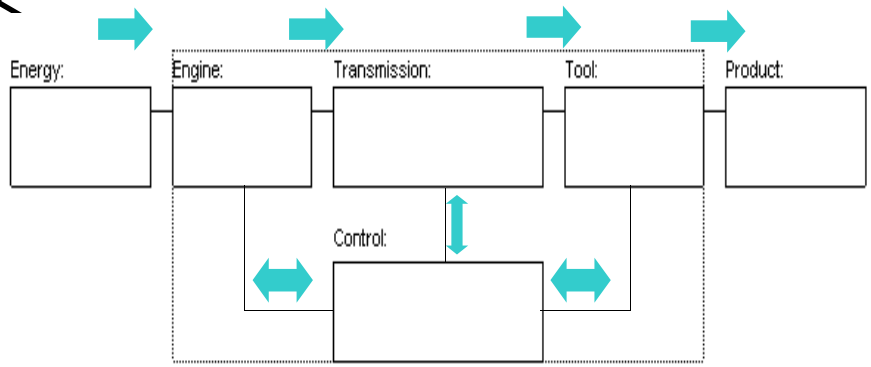
How to define the system to forecast?


System operator
SYSTEM TO FORECAST
Logistic S-curve models
TRIZ-laws of the evolution of tech. systems



SYSTEM TO FORECAST





"Like any powerful tool,

it [method] can create marvels in the hands of the knowledgeable, but it may prove deceptive to the inexperienced."

Theodor Modis
author of "Predictions - 10 Years Later", 2002

conclusions

- The new concept of application the *component logistic models* for unambiguous **definition of system** is suggested.
- To present the suggested approach two case examples from completely different areas: *number of publications* and *mass production* are offered.
- The strongest point of simple logistic S-curve application is that the model is based on **rigorously proved law of Nature**.
  - **S-curve model** represents the growth or decline of a system in interaction with an environment.

- *Are we designing for the world that WE WANT?*
- *Are we designing for the world that WE HAVE?*
- *Are we designing for the world THAT'S COMING, whether we're ready or not?*

source: Timothy Prestero: Design for people, not awards, http://www.ted.com/talks/timothy_prestero_design_for_people_not_awards.html

THANK YOU !

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About 20 years experience in TRIZ as engineer, researcher, consultant, and instructor

1987-1988: the first acquaintance with TRIZ;

1989-1993: research engineer at IMLab, Minsk, Belarus;

1994-1998: freelance TRIZ-consultant, entrepreneur;

1997-1998: invited instructor in SADT, IDEF0, and TRIZ at Belarusian state and private universities;

1998-2001: professional TRIZ consultant & instructor at LG-Production and Research Center (LG-PRC, Pyeongtaek, S.Korea);

2001 - : research engineer, instructor, adviser and consultant at LGECO, INSA Strasbourg, France.

2003 - : restart of research for method of Reliable Technological Forecasting...

- Project_1 (2004 – 2005) Technological forecasting of Fuel Cells for small stationary applications
- Project_2 (2005-2006) Technological forecast of Distributed Generation (DG)
- 4 days course (2008) Vinci, Italy
- 3 days course (2010) Istanbul, Archelik, Turkey
- Project_3 (2011 – 2012) Forecasting the parameters of the technological dynamics of a technological core area of Chilean mining industry (BHP Billiton)
- Project_4 (2012 – 2015) FOrecast and Roadmapping for MAnufacturing Technologies (FORMAT)

discussion

1. What is it?

Technique to recognize and describe system in dynamics of changes

2. How is it made?

Application of time series data and S-cuve model to preliminary defined system.

3. Why was it made?

To improve reliability of definition the system under study.

4. How is it used?

As a means to perform System Thinking in practice: problem solving and/or forecasting of changes.

RESEARCHING FUTURE (flowchart v.1.0)