



# Overview and Dissemination Status of ISO 14051(MFCA)

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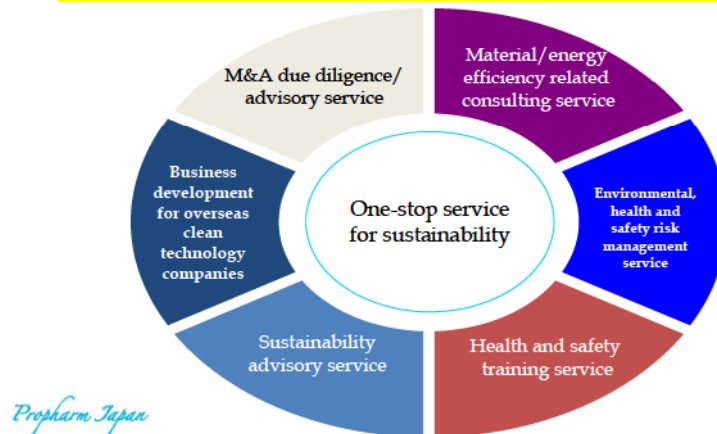
Hiroshi Tachikawa  
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## Our Mission and service

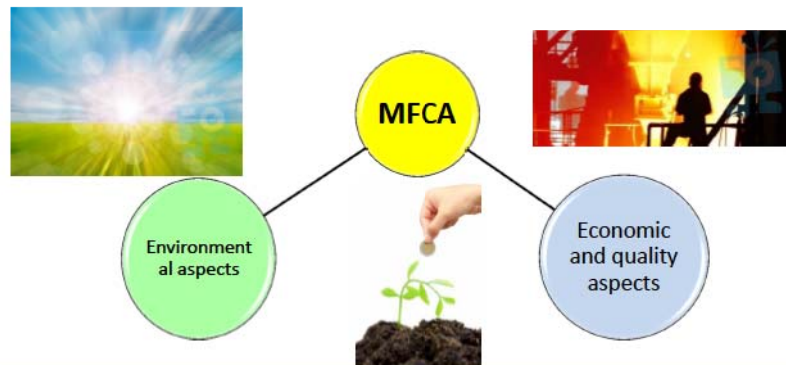
We provide practical consulting/advisory services with a specific focus on environmental and social fields mainly in Japan and Asia; aiming to build momentum toward a sustainable path for the world from Asia.

***Build momentum from ASIA toward a sustainable path for the world.***



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## Role of MFCA



**MFCA fulfills gaps between economic/quality aspects and environmental aspects, assisting business turn to green business.**

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# What is MFCA? –Triple impacts



## ISO TC207 WG8

### WG 8 overview

- Secretariat team
  - Convenor: **Katsuhiko Kokubu (Japan)**
  - Co-Convenor: Marcelo Kos (Brazil)
  - Secretary: Yoshikuni Furukawa (Japan)
  - Assistant secretary (technical expert): **Hiroshi Tachikawa (Japan)**
- Expert: 58 experts from 27 countries
- Participating countries: Austria, Argentina, Belgium, Brazil, Canada, China, Colombia, and Denmark, Finland, France, Germany, Ghana, Italy, Japan, South Korea, Malaysia, Mexico, Portugal, Singapore, Sri Lanka, South Africa, Sweden, Switzerland, Thailand, Britain, The Czech Republic, and The United States



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## History of MFCA International Standardization

Date	Action
2000 -	Originally from Germany but fully developed to be MFCA
2007	Submission of NWIP by Japanese Industrial Standards Committee
June 2008	1st WG 8 meeting in Bogotá, Colombia
Nov. 2008	2nd WG 8 meeting in Tokyo, Japan
June 2009	3rd WG 8 meeting in Cairo, Egypt
Sep.-Dec. 2009	CD circulation for voting and approved
Jan. 2010	4th WG 8 meeting in Praha, Czech Republic
May-Oct. 2010	DIS circulation for voting and approved
Jan 2011	5th WG 8 meeting in Berlin, Germany
July 2011	FDIS circulation for voting and approved (100% Positive Votes!)
September 2011	ISO 14051 standardization
As of August 2012	Next standard for MFCA under discussion

## Rapid dissemination of MFCA (ISO 14051) in Asia

### Key reason for dissemination:

1. Tangible impacts of MFCA is recognized in a number of Southeast Asian countries (e.g., Malaysia).
2. Systematic approach for conducting Kaizen and reducing environmental impacts
3. Simple but very powerful method to achieve cost reduction, less environmental impacts (e.g., Malaysia – Approximately USD 572,000 only with 5 SMEs)



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## Structure of ISO 14051

Items	Contents
Title	Environmental management – Material flow cost accounting – General framework
Content	1. Scope 2. Normative references 3. Terms and definitions 4. Objective and principles of MFCA 5. Fundamental elements of MFCA 6. Implementation steps of MFCA Annex A (informative) Difference between MFCA and conventional cost accounting Annex B (informative) Cost calculation and allocation in MFCA Annex C (informative) Case examples of MFCA

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## Why is MFCA-related international standard important?

- Various industrial activities in different country, different background
- Technical terminology
- Guidance for fundamental elements – least elements to achieve tangible benefits from MFCA
- Is intermediate tool for ISO 9001 (QMS) and ISO 14011 (EMS)

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## Scope

- ISO 14051 provides:
  - general framework
- ISO 14051 (MFCA) can be:
  - widely applied regardless of their products, size, etc.
  - extended to supply chain
- ISO 14051 is:
  - not intended for the purpose of third party certification

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## Terms and definitions

Term	Definition
Terms quoted from other standard/source	From IFAC document: Environmental management accounting From ISO 14040: 2006:process, product, and waste
Terms defined in ISO 14051	Cost accounting, cost allocation, energy cost, energy loss, environmental management accounting, input, inventory, material, material balance, material distribution percentage, material cost, material flow, material flow cost accounting, material loss, output, quantity centre, system cost, waste management cost

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## Objective and Principle of MFCA

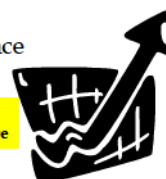
Objective of MFCA is:

- to motivate and support organizations' efforts
- to enhance both environmental and financial performance through improved material and energy use practices

Objective of MFCA is accomplished by:

- increasing the transparency;
- supporting organizational decisions in realms; and
- improving coordination and communication on material and energy use practices.

Financial performance



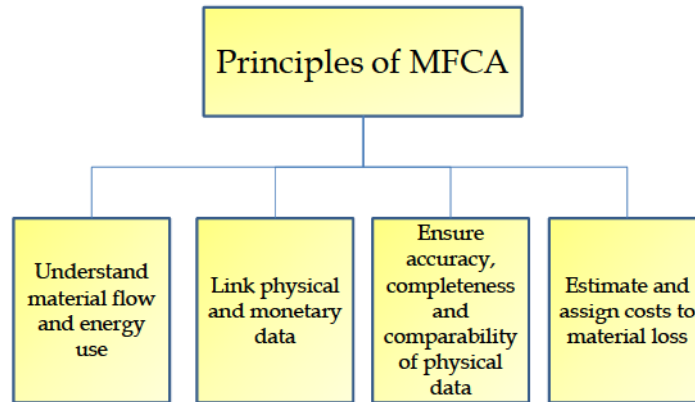
Environmental performance

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ISO 14051  
**Principles of MFCA**

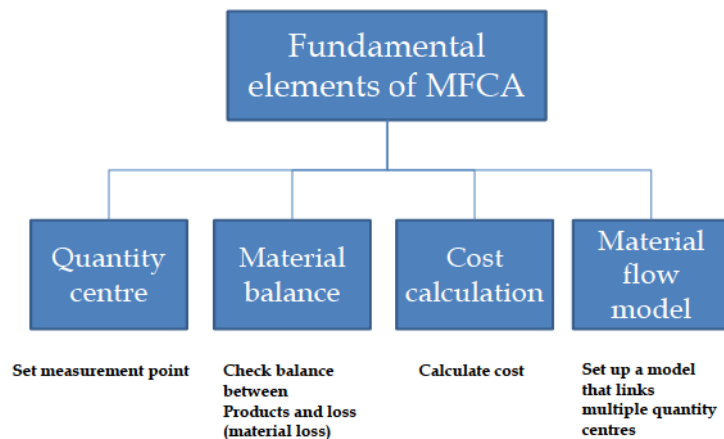


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ISO 14051  
**Fundamental Elements of MFCA**

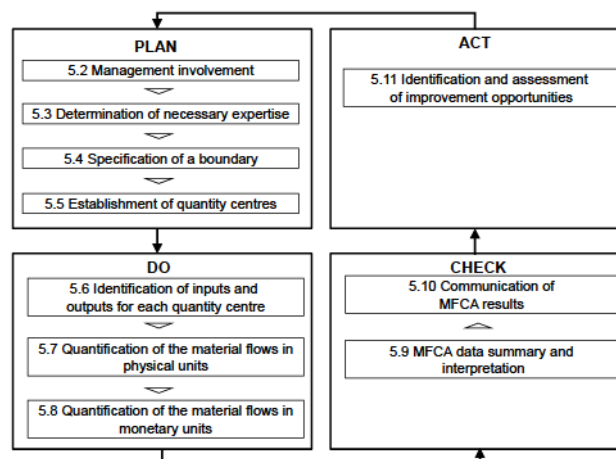


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ISO 14051  
**5. Implementation steps of MFCA**



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## Conclusion

1. MFCA became international standard (ISO 14051) in 2011.
2. MFCA is being widely employed in many countries especially in southeast Asian countries. Tangible benefits (cost reduction and less environmental impact) through support by technical expert.
3. MFCA complements your existing management activity especially in ISO 9001 and ISO 14001.

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## Reference

- ISO 14051 (2011) *Environmental Management – Material Flow Cost Accounting – General Framework*. International Organization for Standardization.
- Nakajima, M. and Kokubu, K. (2008) *Materials Flow Cost Accounting 2nd edition*, Nihon Keizai Shinbunsha. (available only in Japanese and Korean).
- Kokubu, K, and Kitada H (2011) "Introducing MFCA into the Supply Chain: A New Possibility," A Paper presented at The 10<sup>th</sup> Northeast Asia Management and economics Joint Conference, Chungnam National University, November 2011.

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Hiroshi Tachikawa  
Managing director  
Expert/ Assistant secretary of ISO TC 207 WG8  
Propharm Japan Co., Ltd.  
[hiroshi.tachikawa@propharm.jp](mailto:hiroshi.tachikawa@propharm.jp)

*Propharm Japan*

#702 Stella Heim, 5-8 Kamiyamacho,  
Shibuya-ku, Tokyo, 150-0047, Japan  
TEL: +81-(0)3-5731-8439  
FAX: +81-(0)3-6368-5523  
URL: <http://www.propharm.co.jp/english>

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