

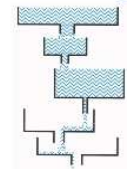
Managing by Constraints

Philip MARRIS

Friday 12th of March 2010, Issy-les-Moulineaux, France



19èmes journées des CPIM de France



The speaker: Philip MARRIS

- CEO of Marris Consulting: founded in Paris in 2005, 22 consultants, specialized in industrial performance.
- Worked for several years with Eliyahu Goldratt author of *The Goal* and founding father of the Theory Of Constraints.
- Over 25 years of industrial consulting experience in Europe.
- English but bilingual French/English.
- Currently finishing the new second edition of his book in French: *Le Management Par les Contraintes en gestion industrielle*. The second edition should be published in early 2010.



**Mea culpa:
I am not CPIM!**

Outline of this presentation

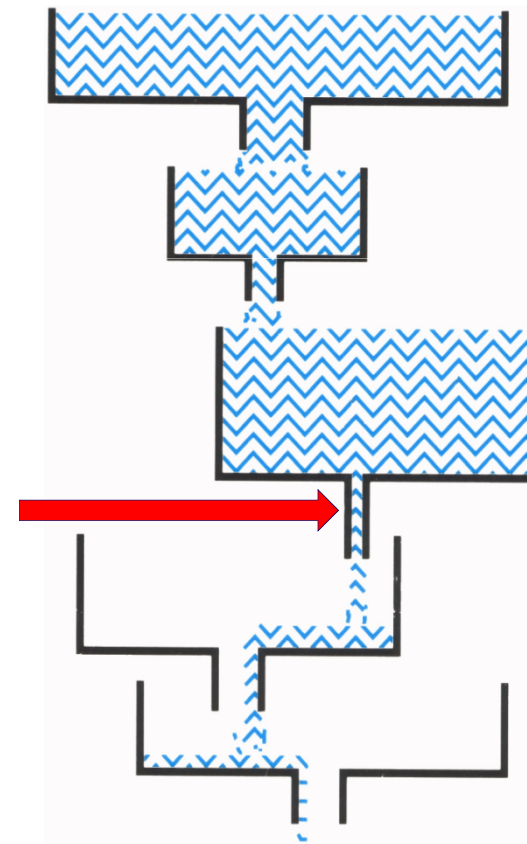
- The focus of this presentation is the Theory Of Constraints applied to Manufacturing, Operations and the Supply Chain.
- Presentation outline :
 - What is the basic underlying assumption of the Theory Of Constraints / Constraints Management?
 - How does it work? (the 5 minute executive summary)
 - TOC / Constraints Management an “Lean Manufacturing”: how do they fit together?
 - An example in a French automobile OEM

For this presentation you can consider that
Theory Of Constraints (TOC)
Constraints Management (CM)
“Management Par les Contraintes” (MPC)
are synonymous

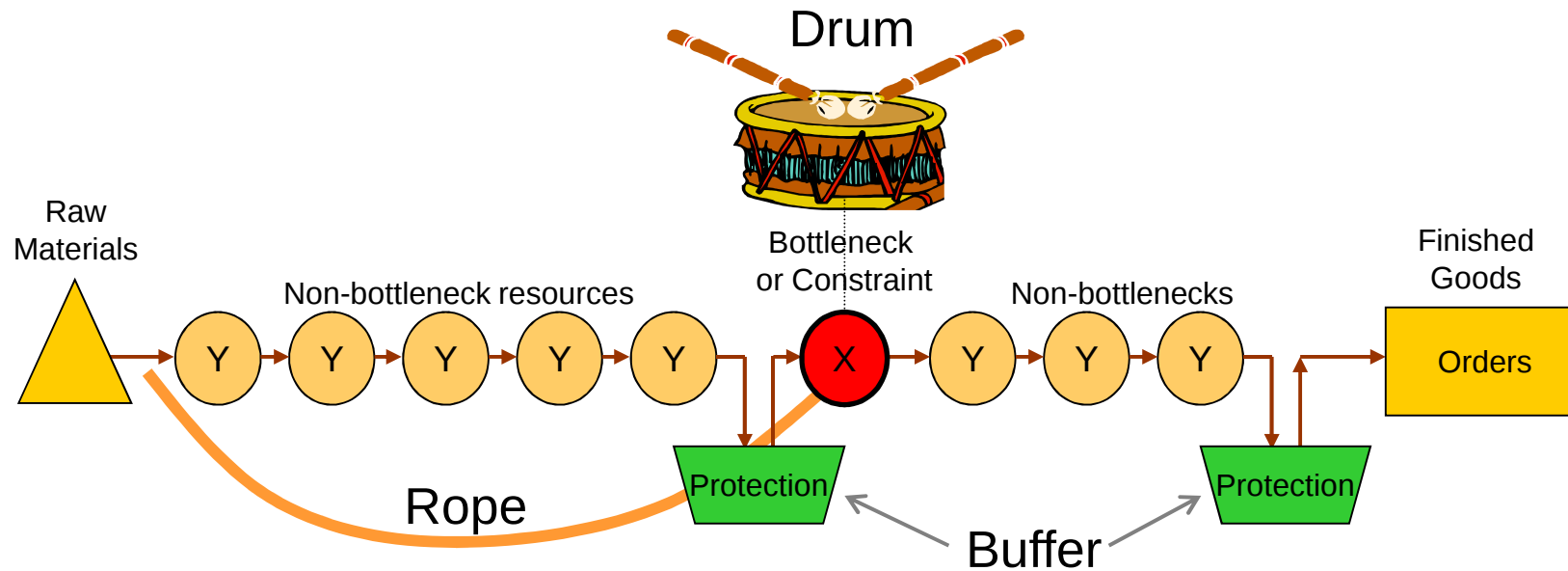
- Who has read the book *The Goal (Le But)*?
- Who enjoyed the book?
- Who implemented the ideas!?

TOC/CM considers that you cannot balance the capacity of resources

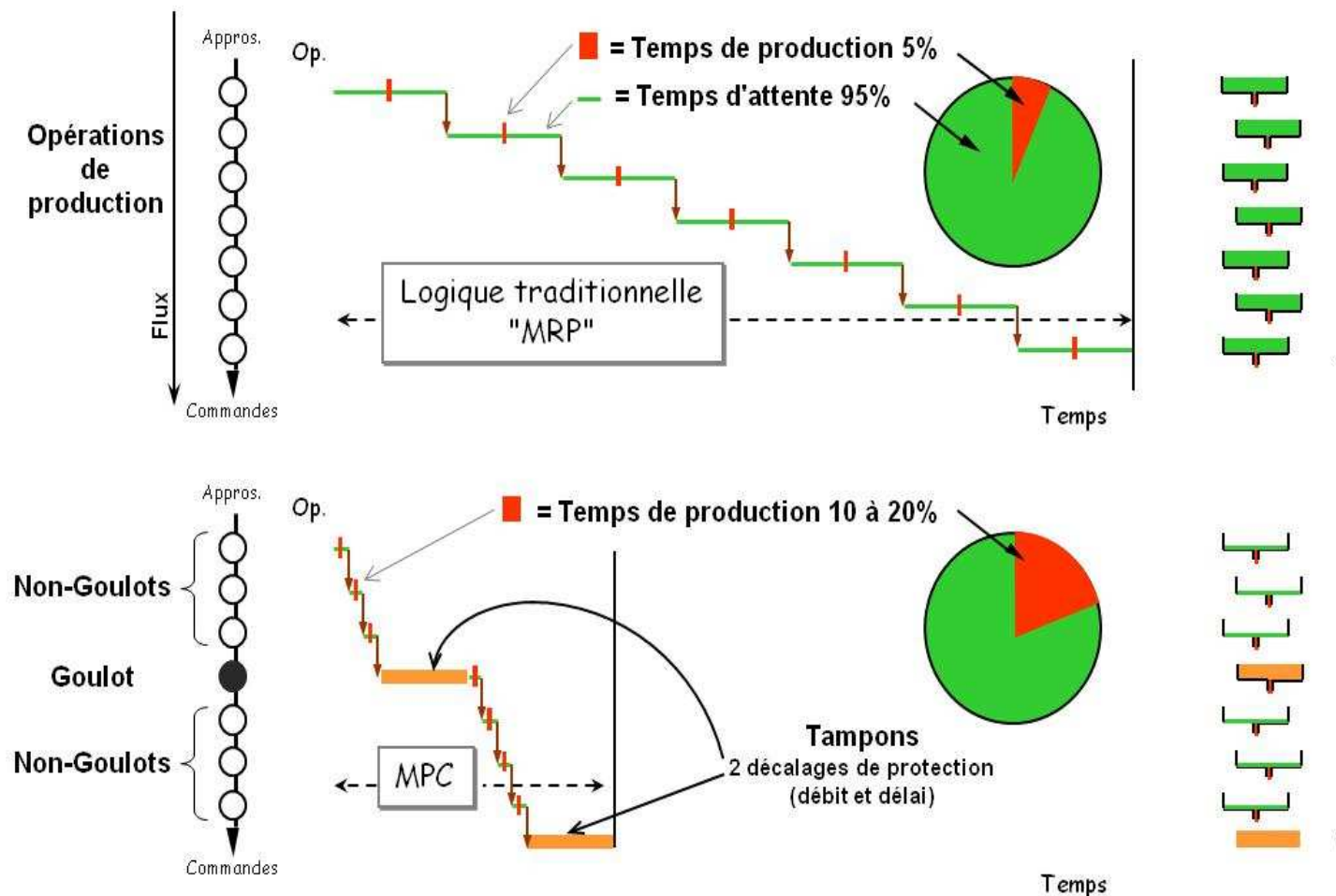
- The outside world (clients, products, competitors, legislation, ...) changes much too fast these days. We no longer have the time to adjust the capacity of our resources so that everyone and all our machines have just the right amount of work.
- Resources have either too much work, they are **bottlenecks** or **constraints**. Or they don't have enough work and they are non-bottlenecks.



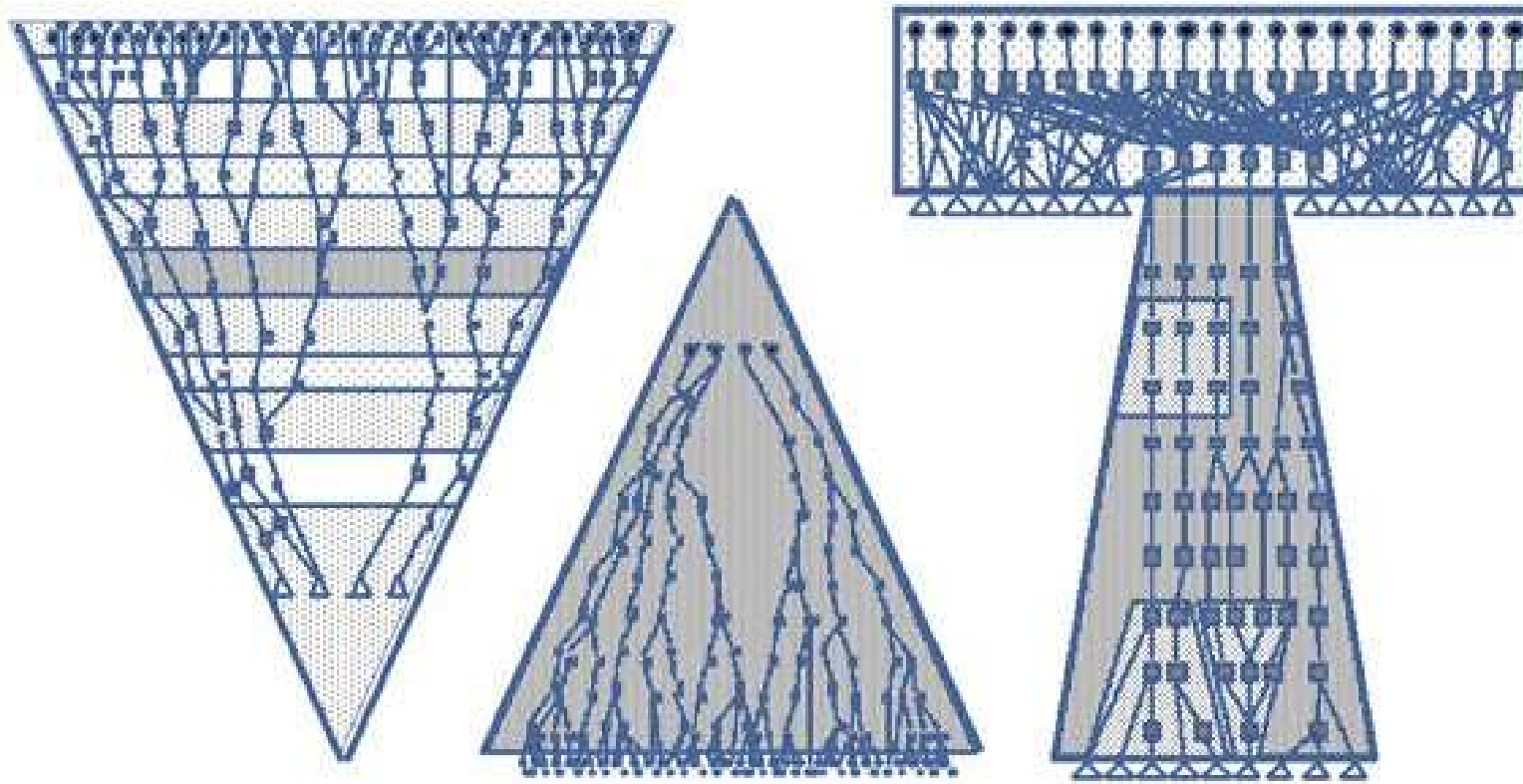
Managing the product flow using the “Drum – Buffer – Rope” system



Another (engineer's) presentation of the Drum – Buffer – Rope system

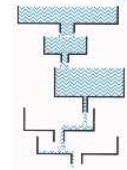


The 3 basic types of flow as viewed by TOC: V, A & T plants

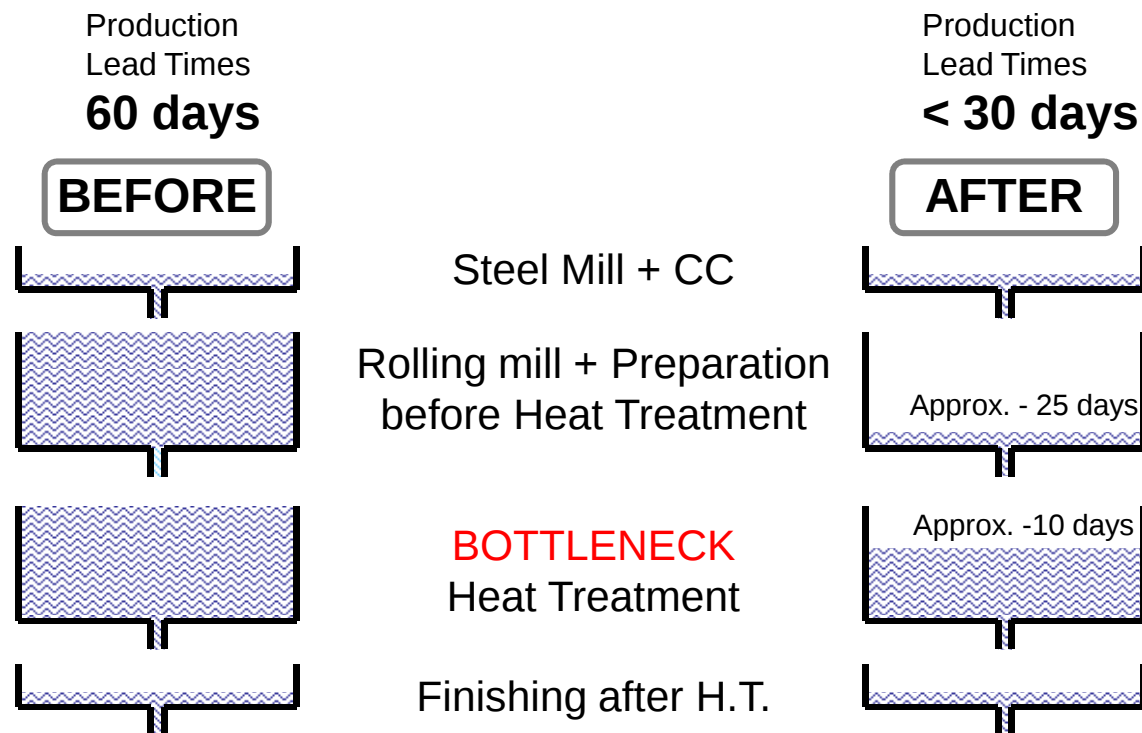


The combination of TOC and Lean is a very powerful approach to improving operational performance

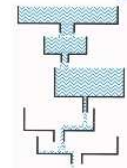
- The Theory Of Constraints will help you to identify the best places to focus your improvement actions:
 - If you improve the performance of the bottleneck you will improve the performance of the whole system;
 - If you improve a non-bottleneck you are unlikely to impact throughput (sales).
- « Lean Manufacturing » – or rather the toolbox of improvement techniques used in Lean Manufacturing – can then be used to improve the performance.
- If you combine the two:
 - You will obtain results a lot faster (weeks instead of months);
 - You will probably get results that you did not think were possible.



An example of a TOC/MPC implementation in the steel industry



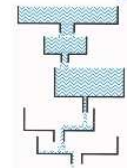
A reduction in production lead times of more than 50 %
An increase in throughput of over 20%



An example in a factory in France producing auto electronic components

- The factory :
 - A worldwide leader in its field, based in France, the factory is one of over 70 distributed all over the world. Over 400 people.
 - It had implemented its own version of the Toyota Production several years ago.
- In June 2009 its performance was considered no longer sufficient and it searched for a way to boost its lean manufacturing system. It decided to add TOC/MPC to its production system.

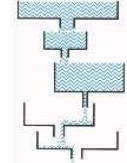




This resulted in a 20% increase in productivity in 2 months

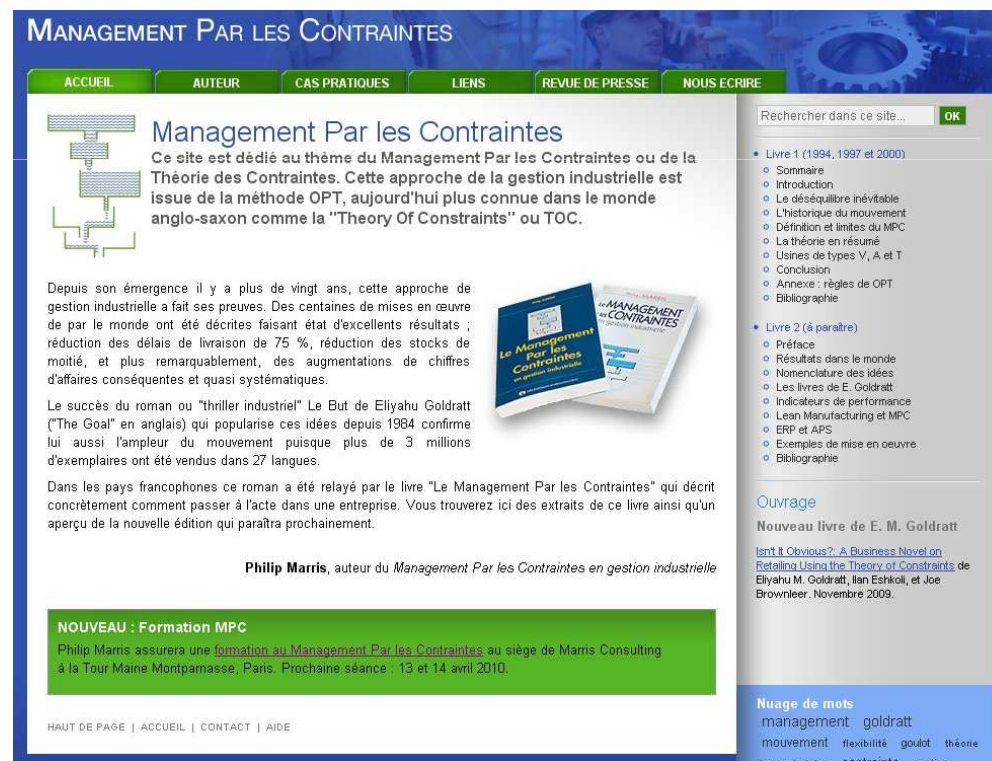
- The pilot increased its productivity by 20% in less than 2 months (20% more production using the same number of machines and people). The approach is now being rolled out in the rest of the plant and they are obtaining the same sorts of results.
- What is also very significant is that everybody – from the shop floor to the management committee – insist on how TOC is helping them focus their improvement efforts on the most critical issues, those that will improve the overall performance of the firm.
- One of their “problems” is that the average OEE of the factory has decreased and that this has triggered questions from headquarters.





Internet links

www.management-par-les-contraintes.com



MANAGEMENT PAR LES CONTRAINTES

ACCUEIL | AUTEUR | CAS PRATIQUES | LIENS | REVUE DE PRESSE | NOUS ECRIRE

Rechercher dans ce site...

Management Par les Contraintes
Ce site est dédié au thème du Management Par les Contraintes ou de la Théorie des Contraintes. Cette approche de la gestion industrielle est issue de la méthode OPT, aujourd'hui plus connue dans le monde anglo-saxon comme la "Theory Of Constraints" ou TOC.

Depuis son émergence il y a plus de vingt ans, cette approche de gestion industrielle a fait ses preuves. Des centaines de mises en œuvre de par le monde ont été décrites faisant état d'excellents résultats : réduction des délais de livraison de 75 %, réduction des stocks de moitié, et plus remarquablement, des augmentations de chiffres d'affaires conséquentes et quasi systématiques.

Le succès du roman ou "thriller industriel" Le But de Eliyahu Goldratt ("The Goal" en anglais) qui popularise ces idées depuis 1984 confirme lui aussi l'ampleur du mouvement puisque plus de 3 millions d'exemplaires ont été vendus dans 27 langues.

Dans les pays francophones ce roman a été relayé par le livre "Le Management Par les Contraintes" qui décrit concrètement comment passer à l'acte dans une entreprise. Vous trouverez ici des extraits de ce livre ainsi qu'un aperçu de la nouvelle édition qui paraîtra prochainement.

Philip Marris, auteur du Management Par les Contraintes en gestion industrielle

NOUVEAU : Formation MPC
Philip Marris assurera une formation au Management Par les Contraintes au siège de Marris Consulting à la Tour Maine Montparnasse, Paris. Prochaine séance : 13 et 14 avril 2010.

HAUT DE PAGE | ACCUEIL | CONTACT | AIDE

Livre 1 (1994, 1997 et 2000)

- Sommaire
- Introduction
- Le déséquilibre inévitable
- L'historique du mouvement
- Définition et limites du MPC
- La théorie en résumé
- Usines de types V, A et T
- Conclusion
- Annexe : règles de OPT
- Bibliographie

Livre 2 (à paraître)

- Préface
- Résultats dans le monde
- Nomenclature des idées
- Les livres de E. Goldratt
- Indicateurs de performance
- Lean Manufacturing et MPC
- ERP et APS
- Exemples de mise en œuvre
- Bibliographie

Ouvrage
Nouveau livre de E. M. Goldratt
[Isn't It Obvious? A Business Novel on Retelling Using the Theory of Constraints](#) de Eliyahu M. Goldratt, Ilan Eshkoli, et Joe Brownlee. Novembre 2009.

Nuage de mots
management goldratt
mouvement flexibilité goulot théorie
des contraintes contrainte gestion

Upcoming training session

- For those that are interested there is a 2 day training session in French dedicated to « Le Management Par les Contraintes » on the 12th and 13th of April 2010.
 - See: marris-consulting.com
 - Location : Paris, France.



Marris Consulting
Des Usines, des Hommes & des Résultats

Rechercher... **GO**

Accueil Qui sommes-nous ? Nos savoir-faire Nos points de vue **Nos formations** Nous rejoindre Nous contacter

Formation "Découpler la performance de l'entreprise en appliquant le MPC"

[Accueil](#) / [Nos formations](#) / [MPC](#)

OBJECTIFS DE LA FORMATION

- Permettre aux participants d'améliorer durablement et fortement les performances opérationnelles et financières de leur entreprise
- Comprendre les grands principes des approches du Management Par les Contraintes & de la Théorie des Contraintes (TOC), et leurs applications en milieu industriel
- Être en mesure de faire cohabiter l'approche MPC avec les autres modèles de pilotage industriels (MRP, Juste A Temps, Lean)

UTILISATION DE LA FORMATION

- L'analyse de ses flux, l'identification du goulot, et le pilotage de l'usine (PDP, planification...)
- La réduction des encours et des délais de fabrication associée à une augmentation du débit des ventes
- L'identification et le lancement des bonnes actions de progrès

CONTENU DU PROGRAMME

11 Les origines du MPC

Dates de la formation
13 et 14 avril 2010
5 et 6 octobre 2010

Lieu de la formation
Tour Maine Montparnasse,
27^e étage, Paris
[Plan d'accès](#)

Intervenant
Philip Marris
Fondateur de Marris Consulting

Vive le CPIM de France !

- French industry (and “operations” as a whole) needs a very strong associative movement.
- I wish CPIM de France all the best. The bigger and stronger it gets, the stronger it’s industry and it’s operations will be.
- We are all (from the small firms to the big multinationals) striving to become « world class »; CPIM de France can and should be one of the main catalyst of this permanent effort.

Nota: This is an Englishman speaking, not an American!

- If you would like a copy of this presentation (including annexes) please leave me your business card.
- If you would like a copy of the manuscript of the second edition of the book *Le Management Par les Contraintes* please ask.

Thank you for your attention

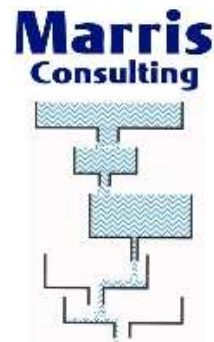
Are there any questions ?

Don't forget to fill out your evaluation form and
give it to us as you exit the conference

To contact us

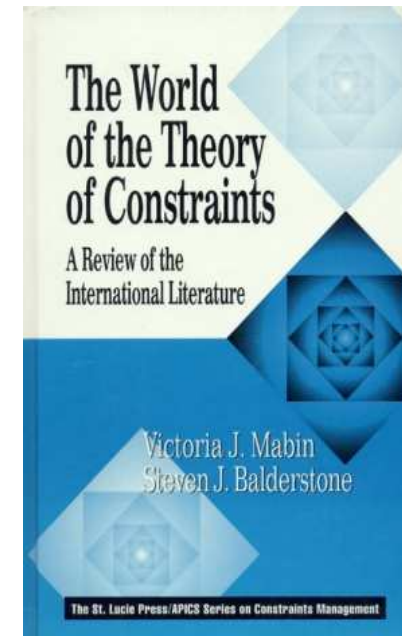
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Annexes



The results obtained with TOC throughout the world are very impressive...

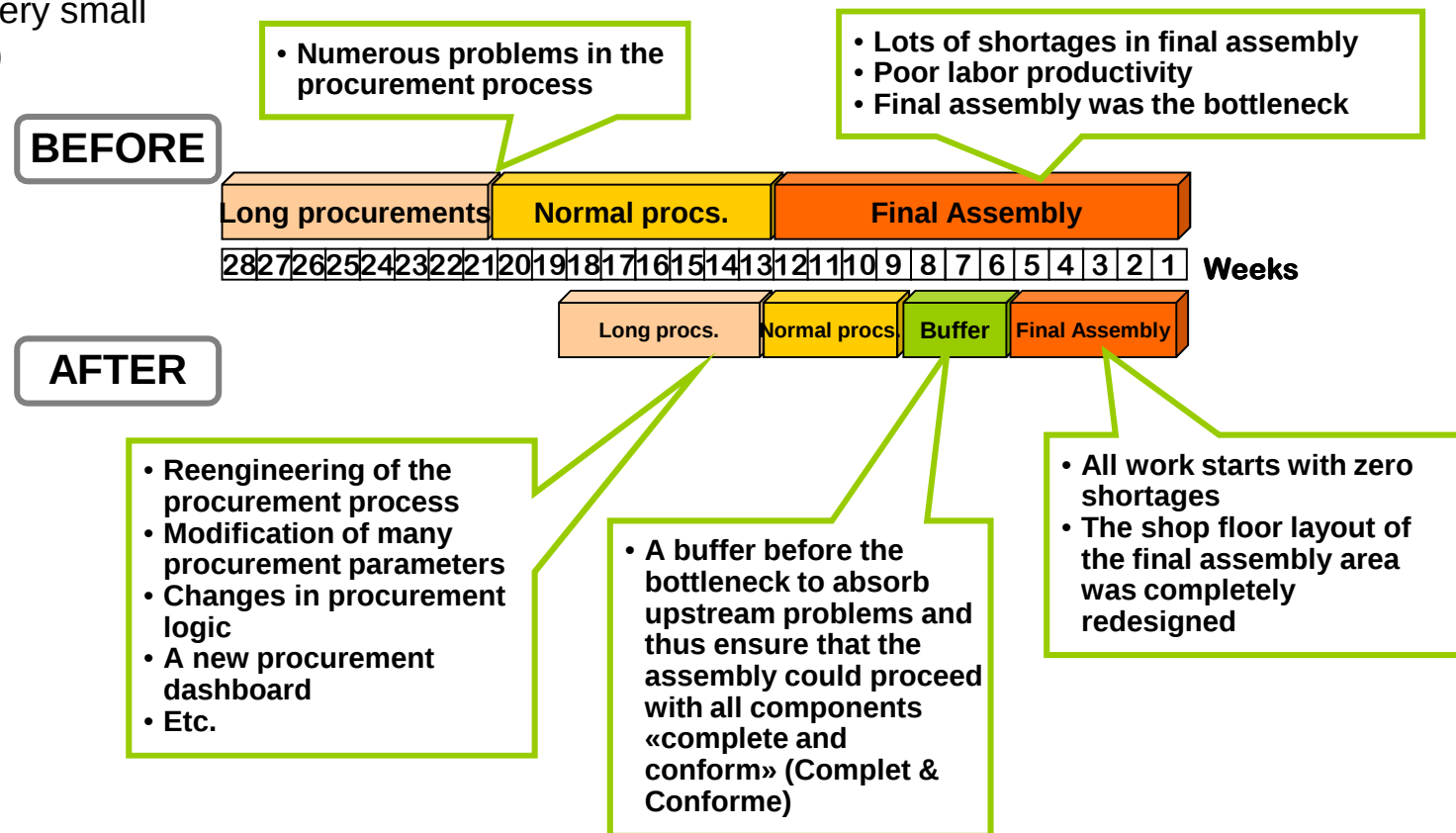
- An independent study carried out in 2000 by par Dr. V.J. Mabin et S.J. Balderstone on a sample of 83 cases obtained the following results:
 - A reduction in lead time of 70%
 - An improvement in due date performance of 44%
 - A reduction in inventory of 49%
 - An increase in throughput (sales) of 63%
- The last point – the increase in throughput – is noteworthy and probably very specific to the TOC approach.

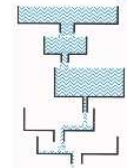


...but these are probably not the average results but more likely the results of only the **successful** implementations of the Theory Of Constraints

An example in which sales and productivity were increased by 100%...

A manufacturer of machines
(non repetitive / very small
batches)





Website (in French) dedicated to the Critical Chain



LA CHAÎNE CRITIQUE

Rechercher... OK

Accueil Chaîne Critique | La méthode en action | Notre point de vue | Cas pratiques | Bibliothèque | Liens internet | Nous contacter

La Chaîne Critique : une méthode innovante de construction et de gestion de projet.

Cette démarche, inspirée de la Théorie des Contraintes (TOC), permet aux chefs de projet de répondre à 2 questions récurrentes :

- Comment réussir un projet en respectant les délais impartis, dans le cadre du budget fixé tout en conservant les spécifications définies par le client ?
- Comment, plus globalement, accélérer les processus de développement et de production ?

RATIONALISER LA DURÉE DES TÂCHES

- ANTICIPER LES CONFLITS DE RESSOURCES
- PROTÉGER LE PROJET CONTRE LES ALÉAS
- PILOTER AVEC PERTINENCE LE PROJET
- GÉRER LES MULTI-PROJETS

LA MÉTHODE EN ACTION

Accéder à l'animation pour découvrir la démarche

La Chaîne Critique : Cas pratiques

La mise en oeuvre de la Chaîne Critique chez E2V est expliquée sur ce site.