



Flow on the Shop Floor

The TOC Journey of Bruns





Table of Contents

Introduction	3
Bruns Projects	4
Key Stakeholders	5
Exhibit Process	6
Challenges and Issues	8
Starting the TOC Journey	9
TOC Journey Continued	10
Managing Work with Flow	11
Change in management style	13
Results & Conclusion	14

Introduction

PAGE 3

What you can expect from this document.



The leading developer and producer of exhibitions and exhibits

Since its establishment in 1963, Bruns has been actively engaged in the museum industry, specializing in the creation of exhibitions, installations, and inventive methods of transforming stories into interactive experiences.

Over the years, Bruns has evolved into a renowned family business with a strong presence both within the Netherlands and internationally. Now, Bruns is involved in the development and production of exhibitions for museums, science centers, visitor and information centers, as well as brand experiences.

In a significant milestone in 2021, Jan and Tinie Burgmans, who had been at the helm for over 22 years, handed over the reins of Bruns to Bo and Pim Burgmans. This transition signaled a shift in the company's approach, eventually incorporating the Theory of Constraints (TOC).

Within the pages of this document, we embark on a journey alongside Bruns as they embrace TOC and explore its impact on their operations.



Bruns Projects

PAGE 4

Let's get to know the work of Bruns a little better.



LEGO house, Billund

LEGO® House in Billund, Denmark is the unique 12,000m² creative playground. Or the world's most fun playdate for the whole family. The large building, visualized in 21 LEGO bricks, is the 'Home of the Brick'.



Experimenta – Das Science Center

Experimenta has reopened as Germany's most innovative and largest science center. Bruns, in cooperation with NorthernLight and YiPP, has fully developed two of the three floors.



Rijksmuseum de Gevangendoor

Rijksmuseum de Gevangendoor tells the story of crime and punishment from the 15th to the 19th century. Visitors are challenged to think about the relationship between crime, trial, and punishment.

[Click here to learn more about Bruns Projects](#)

Key Stakeholders

The stakeholders for Bruns projects.

PAGE 5



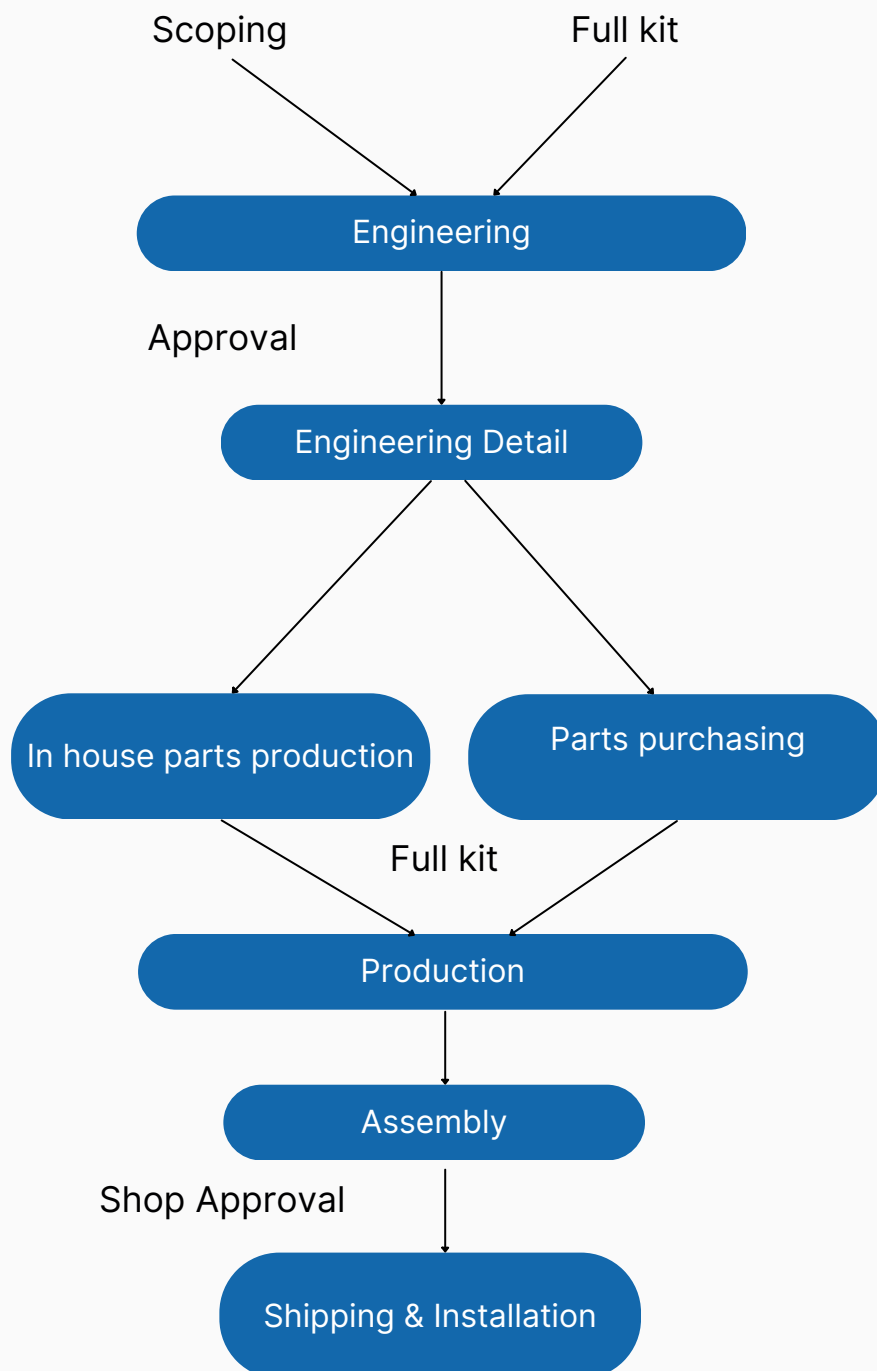
Collaborating to create innovative exhibitions

The creation of exhibits is a collaborative process. Thereby, there are usually 3 stakeholders involved in each project:

- **Clients** decide what story needs to be told and as well as a fixed budget and timeline to work within.
- **Bruns** brings the client's vision to life and ensures everything works technically and within budget.
- **Design agencies** look at the aesthetics and interactions of the exhibits.

Exhibit Process

A look at how an exhibition is brought to life



Explanation on the next page.

Exhibit Process

Scoping: Bruns collaborates with the client to develop the initial project concept, establish budgetary constraints, and define timelines.

Full Kit 1: Bruns ensures they have all the necessary engineering resources to kickstart the project.

Engineering: Bruns creates an approval drawing, meticulously outlining the exhibit's finer details for client review and discussion.

Detail Engineering: With the approved drawing in hand, Bruns finalizes all the required parts for exhibit creation.

In-house production: Bruns undertakes in-house production, employing various techniques like glass manufacturing, CNC, 3D printing, and shaping.

Parts purchasing: Bruns procures external steelworks and other essential components needed for the exhibit.

Full Kit 2: Another comprehensive round of acquiring all the required materials to proceed with the next production phase.

Production: This stage encompasses a range of tasks, including carpentry, spray painting, electronics, mechanics, 3D printing, and graphic design, tailored to the specific project.

Assembly: Bruns skillfully assembles the exhibit, utilizing the components they have prepared or sourced in their factory.

Shop Approval: The client personally visits the shop floor to examine and provide feedback or approval for the exhibit.

Shipping installation: Bruns then ships the exhibition to the designated display site and carries out the on-site installation to ensure a seamless experience.

Challenges & Issues

The problems Bruns faced before implementing TOC

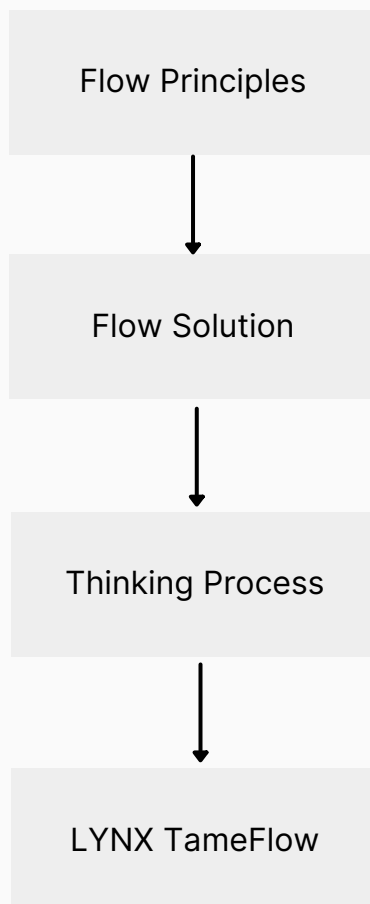
Project management at Bruns presents a complex challenge. With approximately 110 employees from diverse disciplines such as interior design, mechatronics & robotics, glass manufacturing, lighting, audiovisual, and multimedia, the company possesses a wide range of expertise.

Furthermore, Bruns handles an average of 100 projects per month, indicating a high volume of ongoing work. As the organization has grown, it has encountered an array of issues, including:

- Stress and burnout
- Disengagement of team members
- High employment in a freelance capacity
- High Work In Progress (WIP)
- Exceeding installation budgets
- Inefficient planning processes
- The loudest shouters win the resources
- Peaks and lags
- Excessive use of angle grinders

Starting the TOC Journey

PAGE 9



Theory of Constraints Training

To address the challenges faced by Bruns, the decision was made to implement the Theory of Constraints (TOC) in collaboration with Mr. Gijs Andrea and Mr. Richard Wentzel from the Better Results Group. They devised a comprehensive TOC and Flow training program to guide the implementation process.

The training program included introducing flow principles and TOC methodologies to the employees. Training sessions utilized engaging games and the books *The Goal*, *Critical Chain (CCPM)* and *The Haystack Syndrome (Throughput Accounting)* by Dr. Eliyahu M. Goldratt, Steve Tendon's *Tame the Flow* as well as "*De Dienstenfabiek*" by Gijs Andrea, Marianne Schram, Hans Steenpoorte, and Michel Stijlen. These resources served as valuable references for applying the Flow Principles within Bruns.

Furthermore, the training also focused on developing thinking processes within the organization, empowering employees to enhance their problem-solving and decision-making skills.

To facilitate the implementation of TOC, Bruns employees received training on **LYNX CCPM software** by A-dato. This training encompassed the planning module and the utilization of the Kanban board for managing daily operations.

TOC Journey Continued

PAGE 10



Applying Flow Principles

After the completion of the training sessions, Bruns commenced the practical application of Flow principles, bringing about significant changes in their operations.

Uniform Prioritization: Using LYNX software, Bruns adopted a uniform prioritization approach. This helped eliminate the issues associated with multitasking and excessive work-in-progress (WIP).

WIP Management: To enhance throughput and decrease WIP, Bruns implemented effective WIP management strategies. This allowed them to minimize multitasking and improve overall productivity.

Full Kit Implementation: Bruns embraced the concept of implementing a full kit approach. They adopted the practice of waiting until all the necessary components and resources were available before initiating a task.

Task Completion Focus: A key shift in Bruns' work philosophy was their commitment to task completion. Employees were encouraged to start a task and see it through to the finish without getting distracted by other tasks.

By applying these Flow principles, Bruns experienced improved prioritization, reduced multitasking, enhanced workflow management, and a greater emphasis on task completion, resulting in increased productivity and smoother operations.

Managing Work with Flow

PAGE 11

How Bruns used Flow to manage work on a daily basis.

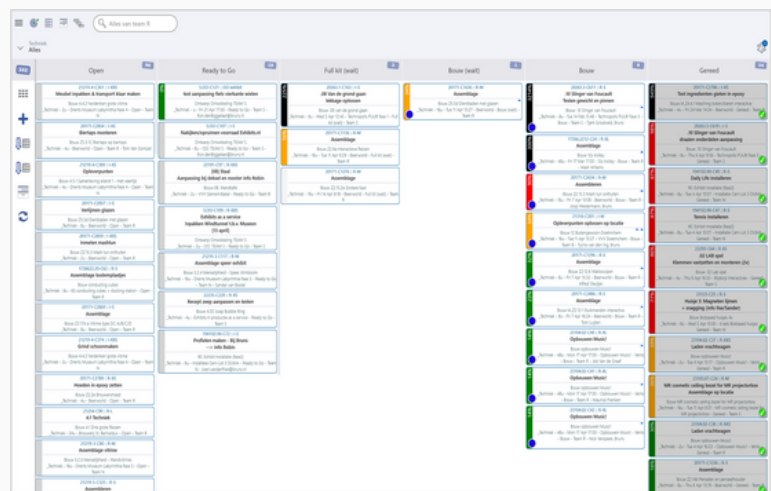
Daily Management

Bruns implemented a system of daily stand-up meetings for each of the 11 disciplines within the organization. These meetings serve as a platform for each discipline to gather and discuss their respective priorities using the Kanban board.

Through the Kanban board, every worker is empowered with the freedom to make informed decisions based on the visual representation of tasks and their status. This promotes transparency and allows for efficient task allocation.

In cases where dilemmas or problems arise, Bruns has established an escalation schedule. Within 72 hours, these issues are addressed and resolved through the designated escalation process. If necessary, the problems are escalated to higher management for their attention and resolution.

This structured approach ensures that daily stands facilitate effective communication, empower workers to make informed decisions, and provide a mechanism for prompt problem-solving, ultimately contributing to improved operational efficiency at Bruns.



Managing Work with Flow

PAGE 12

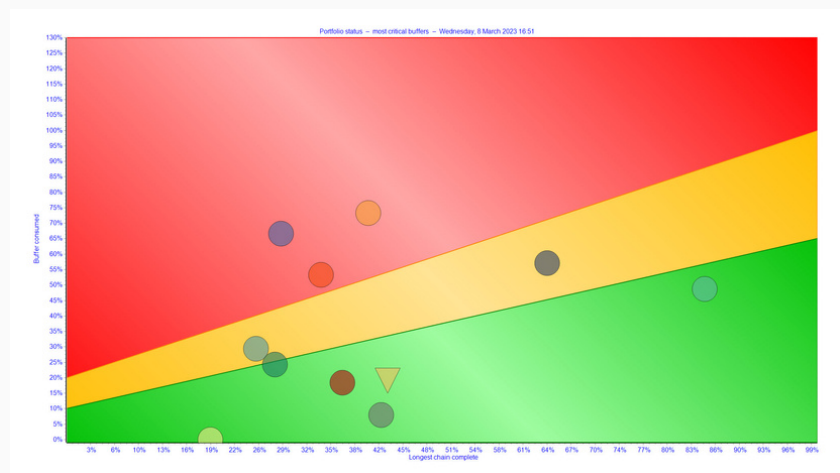
How Bruns used Flow to manage work on a weekly basis.

Weekly Management

On a weekly basis, teams at Bruns come together to examine the overall flow within the factory. This collective review involves utilizing the Fever Chart, which serves as a visual tool for assessing the status of ongoing projects.

During these sessions, the teams analyze various key metrics such as The throughput, the lead time and the touch time, and the delivery reliability. By scrutinizing these factors, they effectively manage the flow of work across the entire factory, ensuring a smooth and efficient production process.

Recognizing the significance of management in maintaining optimal operations, Bruns places a strong emphasis on effective leadership within the factory. Through these weekly reviews and data-driven discussions, management plays a vital role in driving productivity, identifying areas for improvement, and fostering a culture of continuous enhancement within the organization.



Change in management style

Applying Flow Principles

Bruns faced the challenge of transforming a workforce of 100 individuals who were accustomed to a different management style. To introduce structure and improve processes, Bruns implemented Critical Chain Project Management (CCPM) and introduced new methodologies. However, the organization also recognized the need for behavioral changes and a shift in its culture.

To initiate this change, Bruns began by convening a diverse group of employees from various disciplines to collectively define the core values that would guide the organization. These core values were then translated into specific behaviors that Bruns expected to observe within its workforce. The process of defining core values was also supervised by Better Results Group, in particular by Mr. Richard Wentzel to create better assurance of the flow principles.


By emphasizing these behaviors, Bruns fostered a sense of community and built a foundation of trust among its employees. This focus on values and behaviors created a unified purpose and facilitated effective collaboration at all levels within the company.

Results & Conclusion

PAGE 14


Exhibiting Success


Bruns undertook a comprehensive transformation effort, implementing TOC and new processes while also driving behavioral changes and cultivating a new organizational culture. By defining core values, translating them into behaviors, and building a community of trust, Bruns achieved unity of purpose across all levels of the company. Collaborating with A-dato further facilitated this alignment, paving the way for Bruns' successful evolution.

 **Minimized their need for extra capacity significantly.**

 **Reduction of installation budget from 150% to 90%**

 **High engagement with employees**

 **Bring autonomy to the shop floor with clear prioritization**

 **Minimize the need for external freelance capacity**



"The beauty of working with A-dato is that we can have a unity of purpose on each level within the company. "

Bo Burgmans
Managing Director, Bruns B.V.

Bring Flow to your Projects and Portfolio with LYNX



For close to 2 decades, A-dato has helped customers such as Bruns, Zeiss, Bosch, Airbus, and many more to put their projects and portfolios into motion with our flagship software, **LYNX**.

LYNX is a software that combines the ideas and methods of Critical Chain Project Management (CCPM), TOC, Scrum, Kanban, and Lean Essential Flow into one integrated solution.

If you would like to get to know more about LYNX, get in touch!

