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FROM LOSS TO PROFIT IN THREE MONTHS
BUSINESS TURNAROUND USING TOC

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Industrial Engineer and Supply Chain and Business Improvement Consultant. Masters Degree in Engineering and is TOCICO Certified.

Expert in business and enterprise modeling using various modeling software including CAST, Supply Chain Strategist, Enterprise Optimizer and ARENA.

Successfully implemented of a number of TOC projects with dramatic improvement results in all of them.

Been involved in identifying and implementing improvement opportunities in all types of businesses and has been involved in a number of successful projects, within both small and large companies in all aspects of business, from operations to finance to strategic management.

COMPANY BACKGROUND AND PROBLEM STATEMENT

Company Background

- A 17 year old multi-province supplier of world class plastic films in the plastics & packaging industry.

Problem Statement

- Business is not profitable, making a loss or just breaking even
- Low throughput, not enough to cover operating expenses
- Very busy, working overtime but not making money
- Lack of systems and visibility
- Poor employee attitudes
- Limited working capital and cashflow constraints
- New equipment is very expensive
- Competition drove prices down significantly

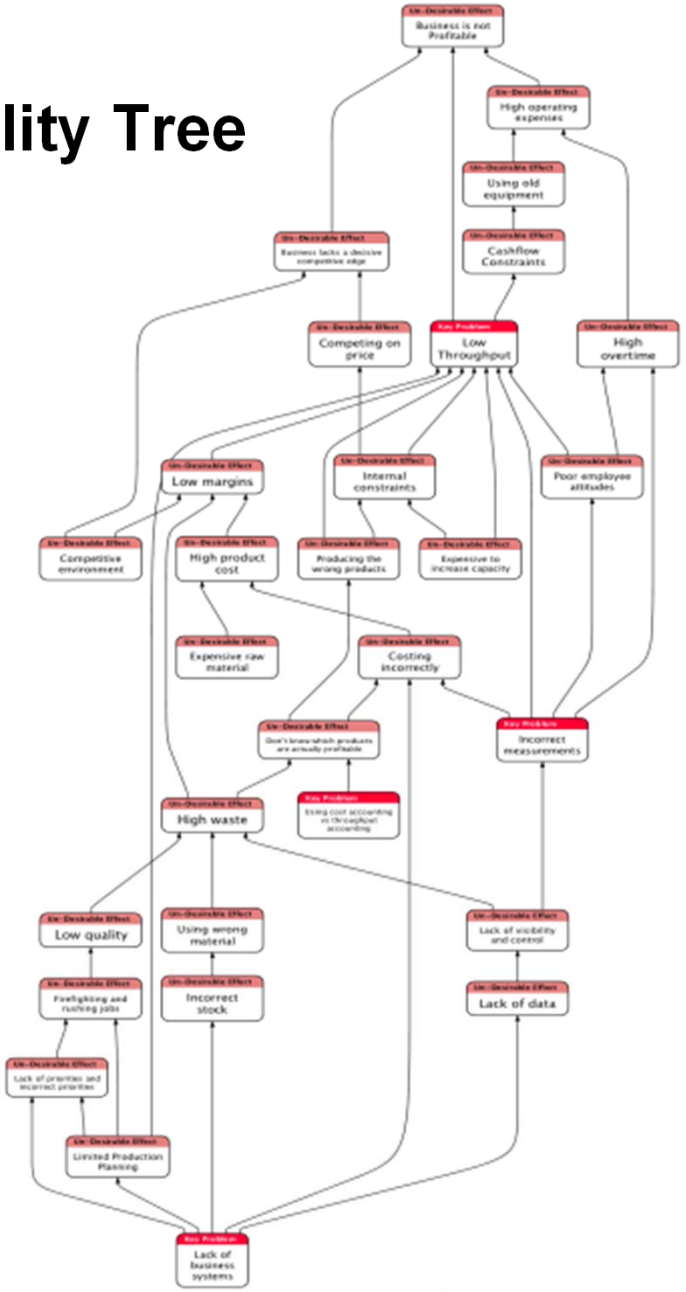
Measurements

PROJECT OVERVIEW

Project Approach

- Conducted interviews with CEO, Directors and employees
- Analised business and did a root cause analysis using the TOC thinking processes to develop a current reality tree
- Identified constraints and gaps within the business
- Developed a management information system to do reporting, production planning and scheduling, invoicing and costing
- Followed the TOC process for continuous improvement using the 5 focussing steps
- Implemented the correct measurements throughout the business
- Determined and maximised customer and product profitability

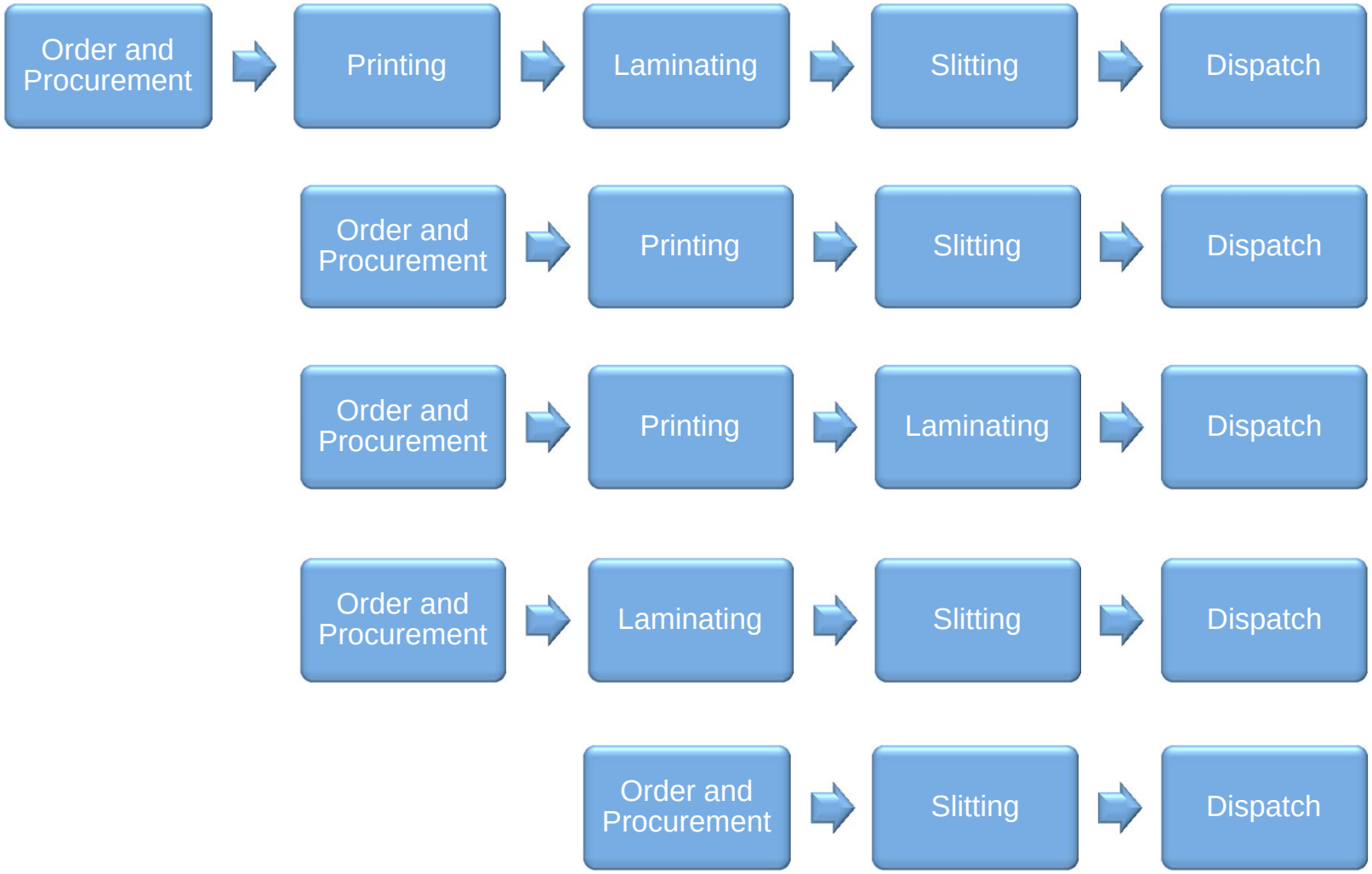
Current Reality Tree



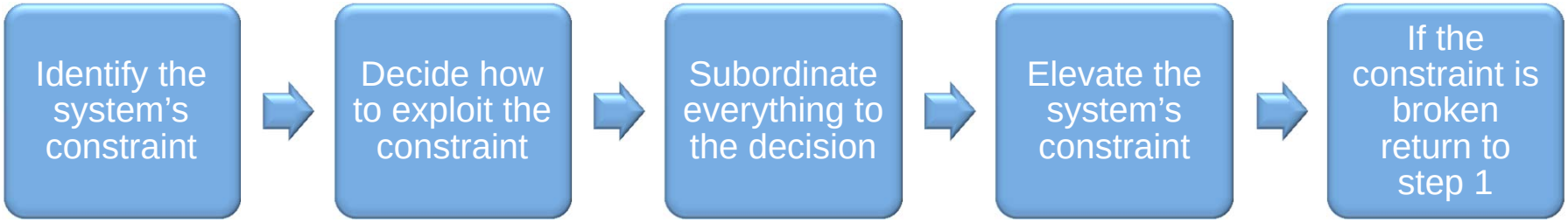
Key Problems Identified

- Incorrect measurements
- Lack of focus
- Limited production planning
- Physical constraint in production
- Lack of systems and visibility
- Lack of data
- Operating from a cost world mentality vs. a throughput world mentality

Production Process

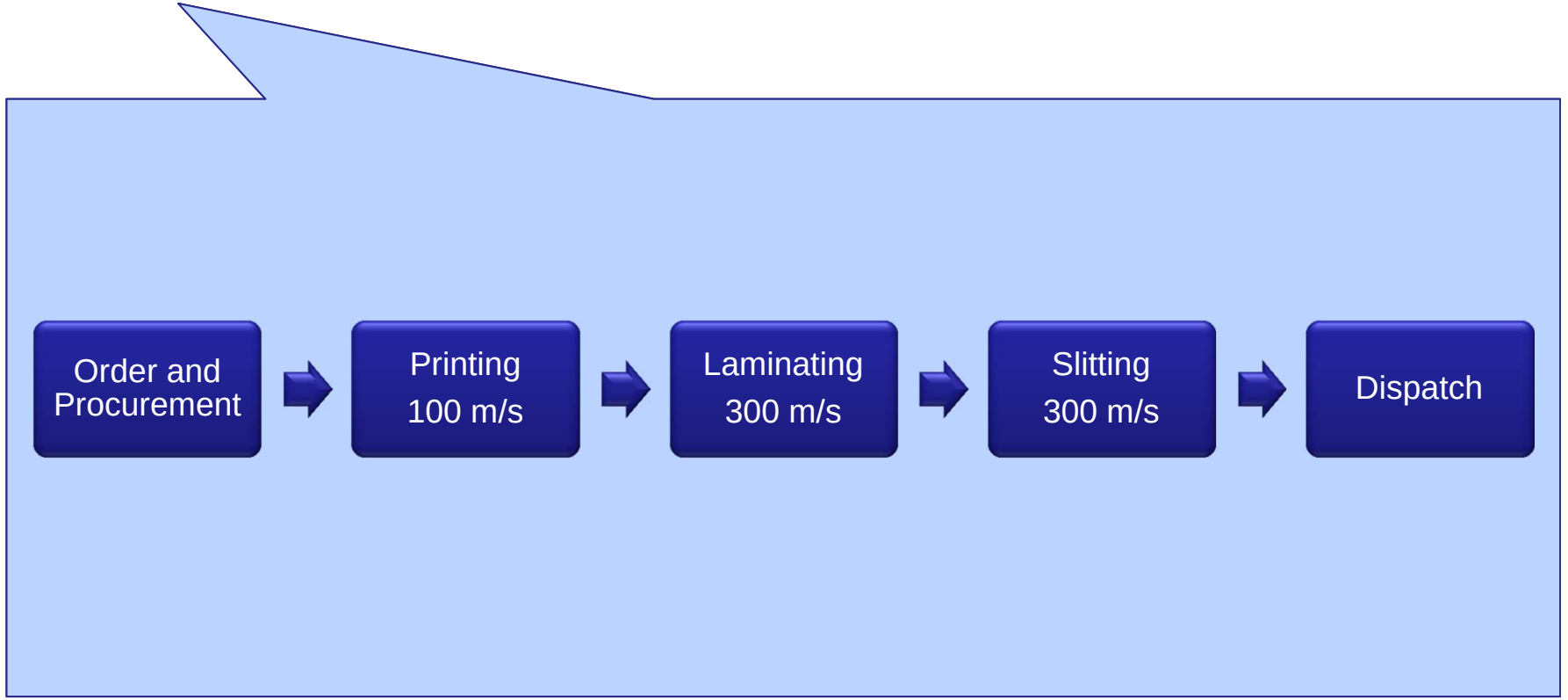


TOC 5 Focusing Steps



TOC 5 Focusing Steps

1. Identify the system's constraint
2. Decide how to exploit the constraint
3. Subordinate everything to the decision
4. Elevate the system's constraint
5. If the constraint is broken return to step 1



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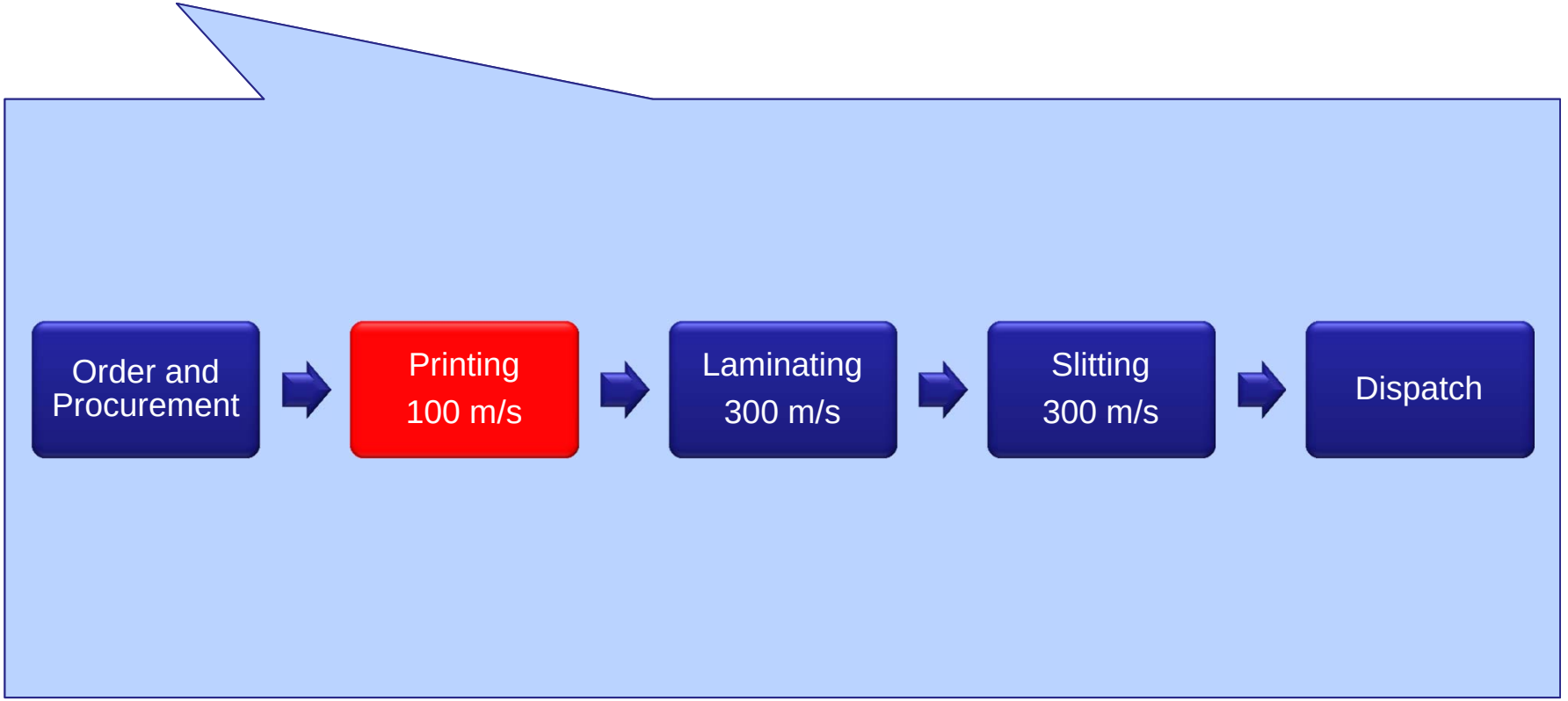

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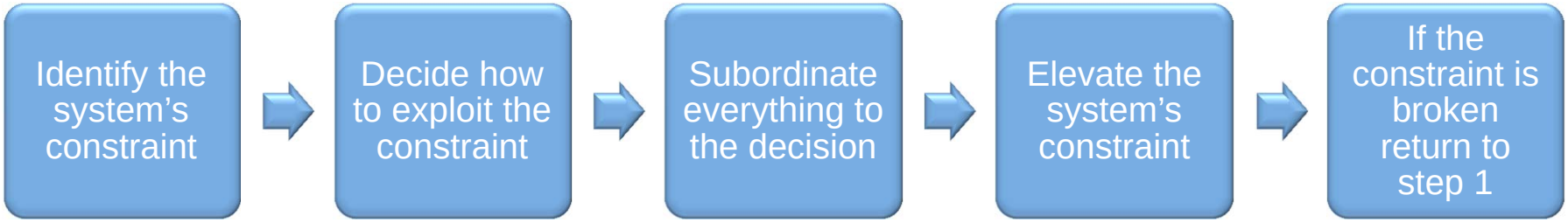
Identify the system's constraint → Decide how to exploit the constraint → Subordinate everything to the decision → Elevate the system's constraint → If the constraint is broken return to step 1

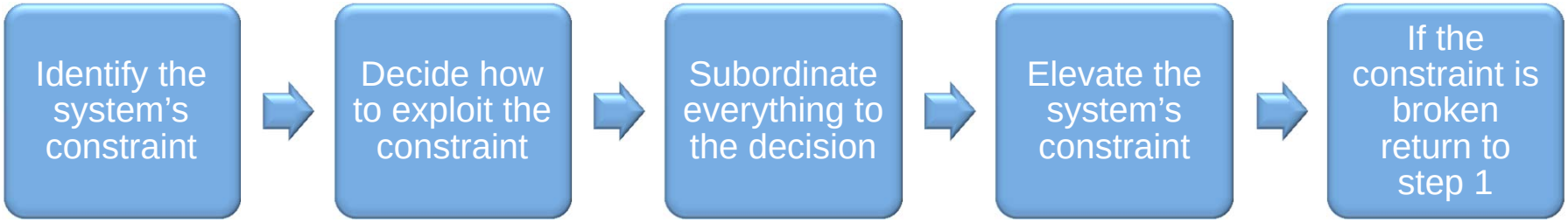
- Already working 24 hours a day 7 days a week so no extra shifts available
- Get the most throughput possible out of the constraint
- Focus on high throughput per constraint minute jobs
- Reduced setup time
  - Implemented make ready teams
  - Bought more equipment (shafts)

TOC 5 Focusing Steps



- Reduce downtime
- Speed up process
- Improve quality
- Reduce waste

TOC 5 Focusing Steps



- Changed the measurements to a single measurement throughut the business – **Throughput**
- **Moved from a cost world mentality to a throughput world mentality**
- Nothing should delay the printing process
- No jobs released unless all required raw materials are available
- Only work on jobs that will count as throughput i.e. jobs that are needed

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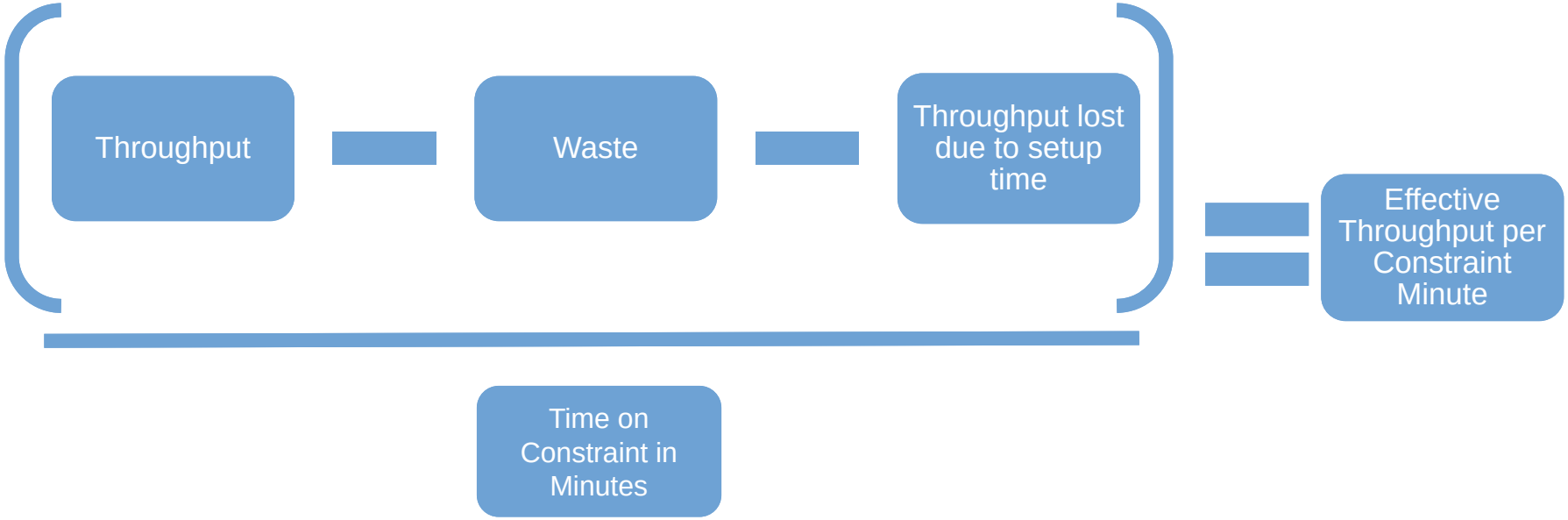
- Focus on selling high throughput per constrait minute jobs / products
  - Drop customers that are not profitable or adjust pricing and quantities
- Sell products that don't go through the constraint
- Implemented incentive program based on throughput

Effective Throughput per Constraint Minute



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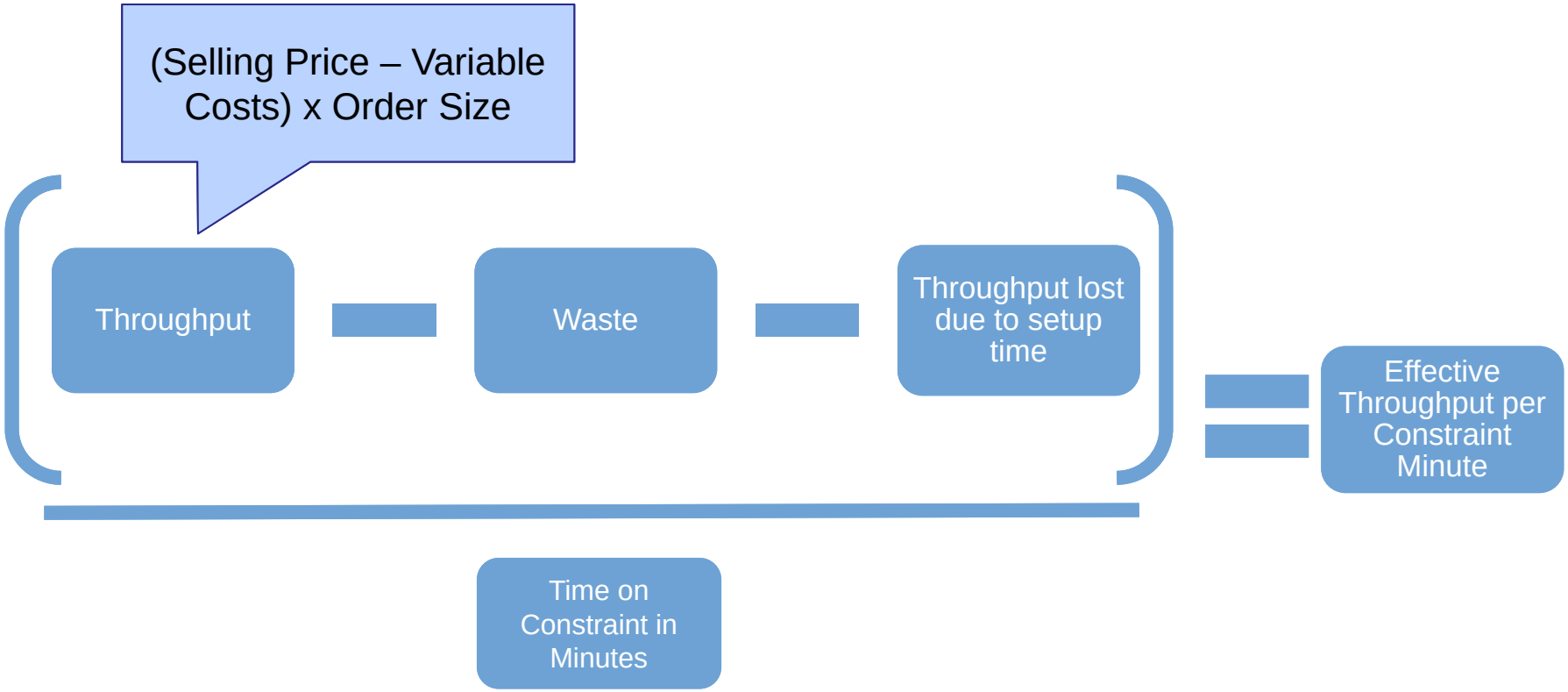

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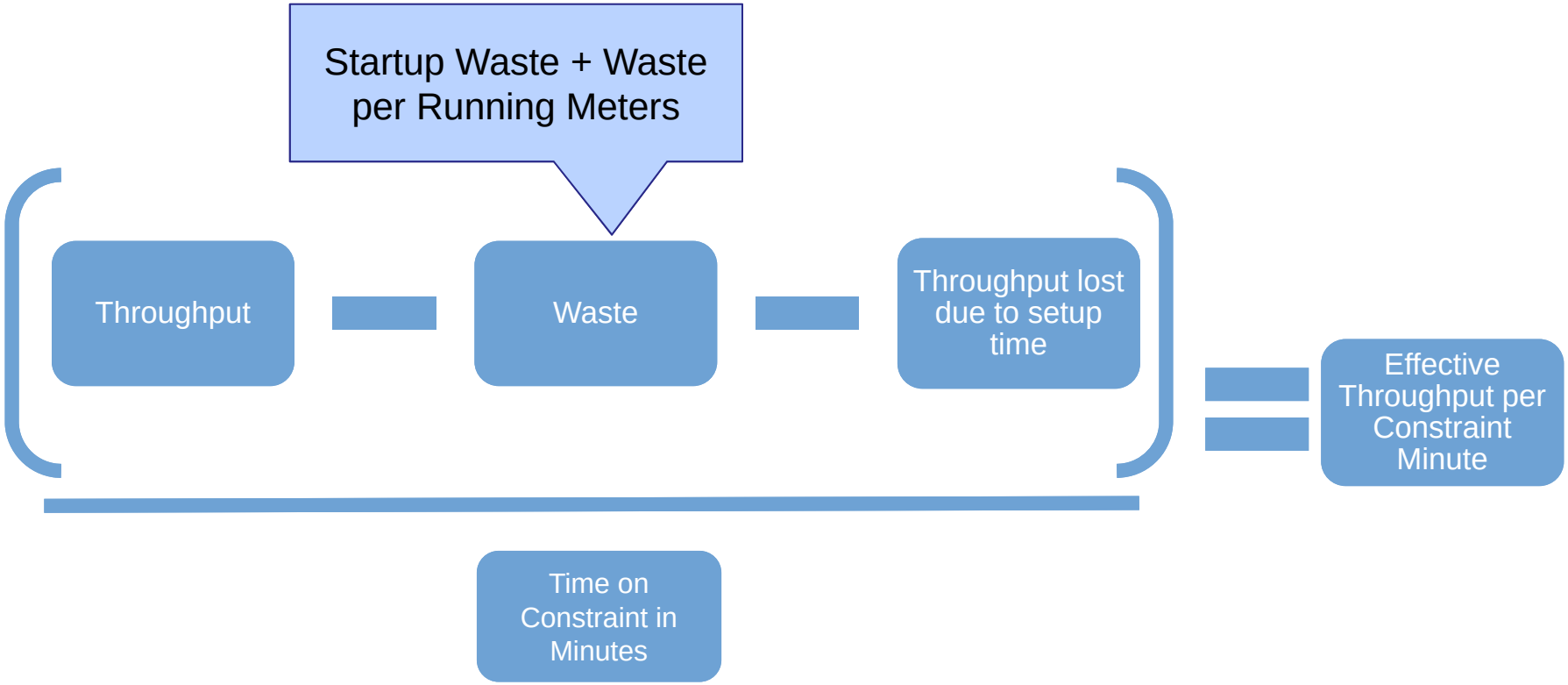

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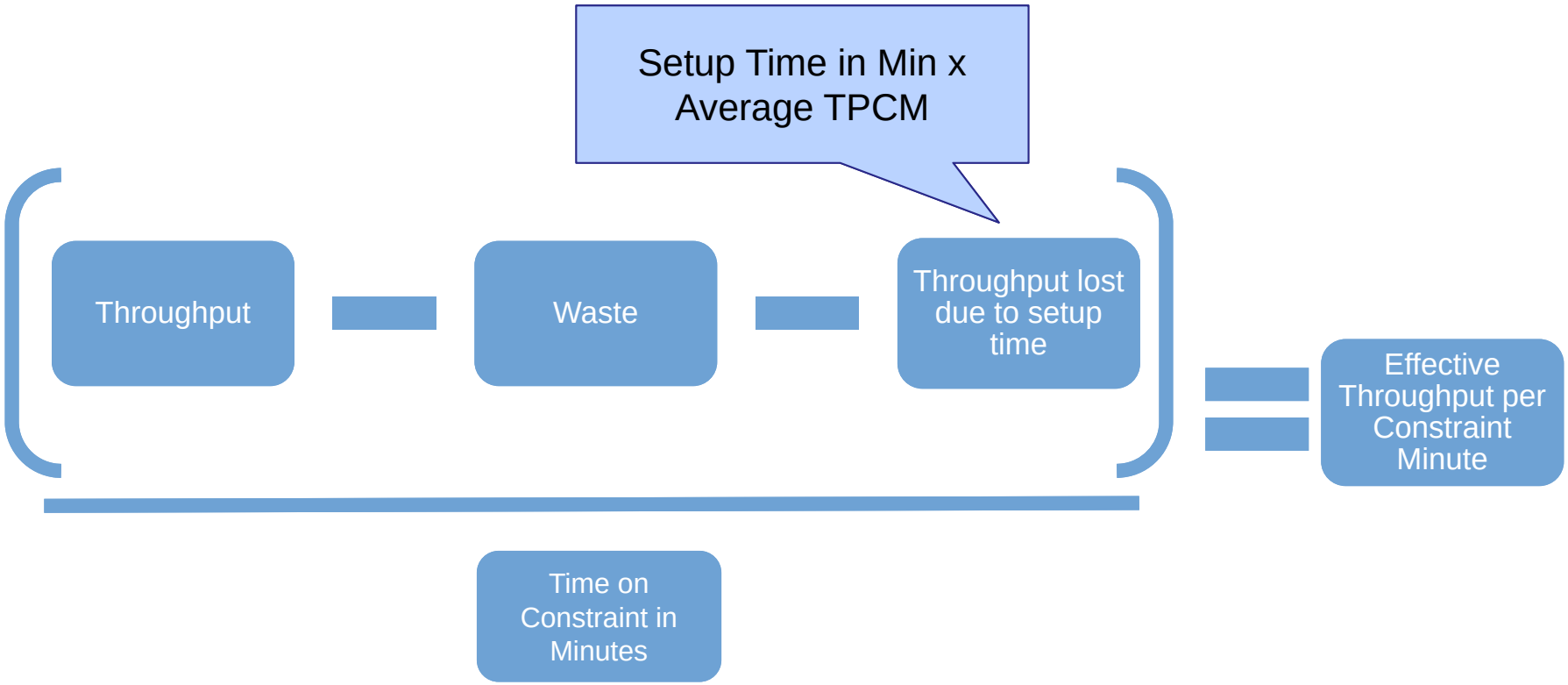

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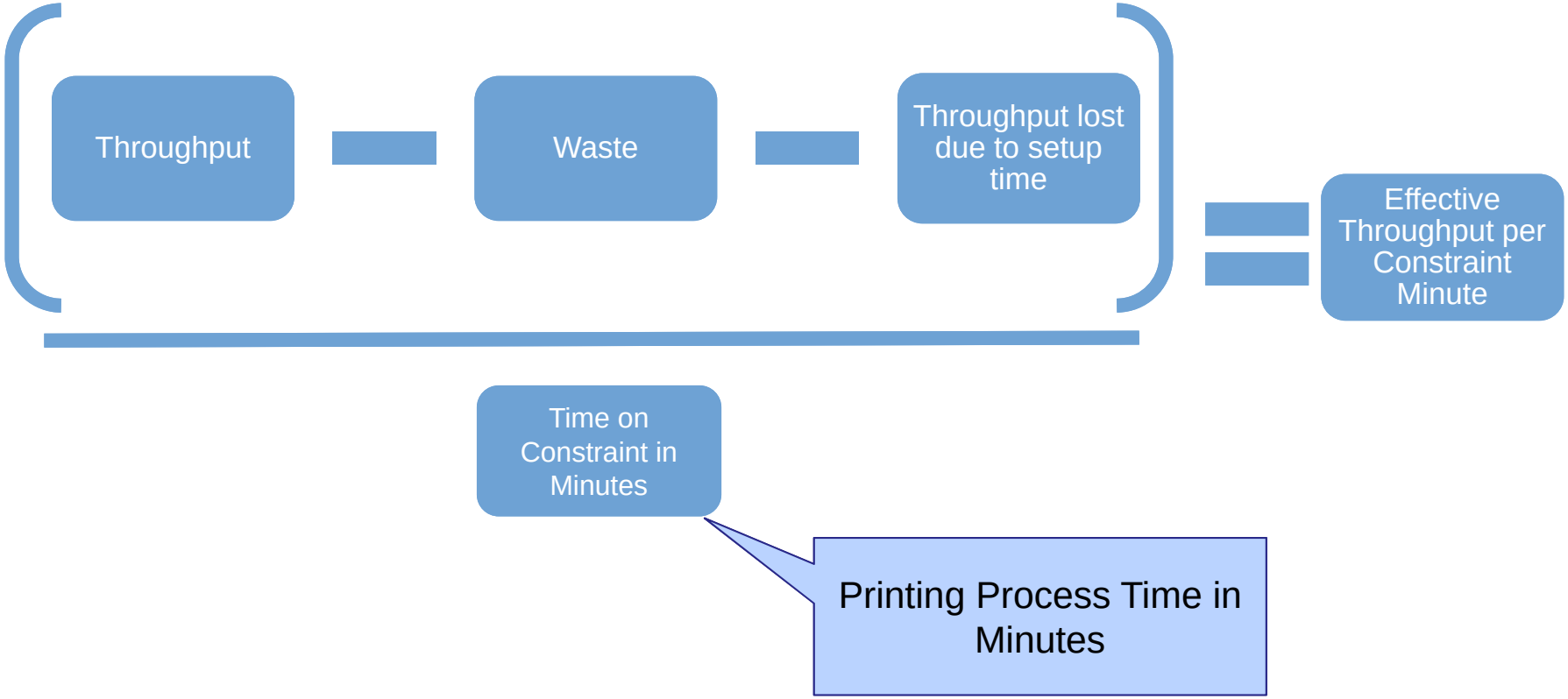

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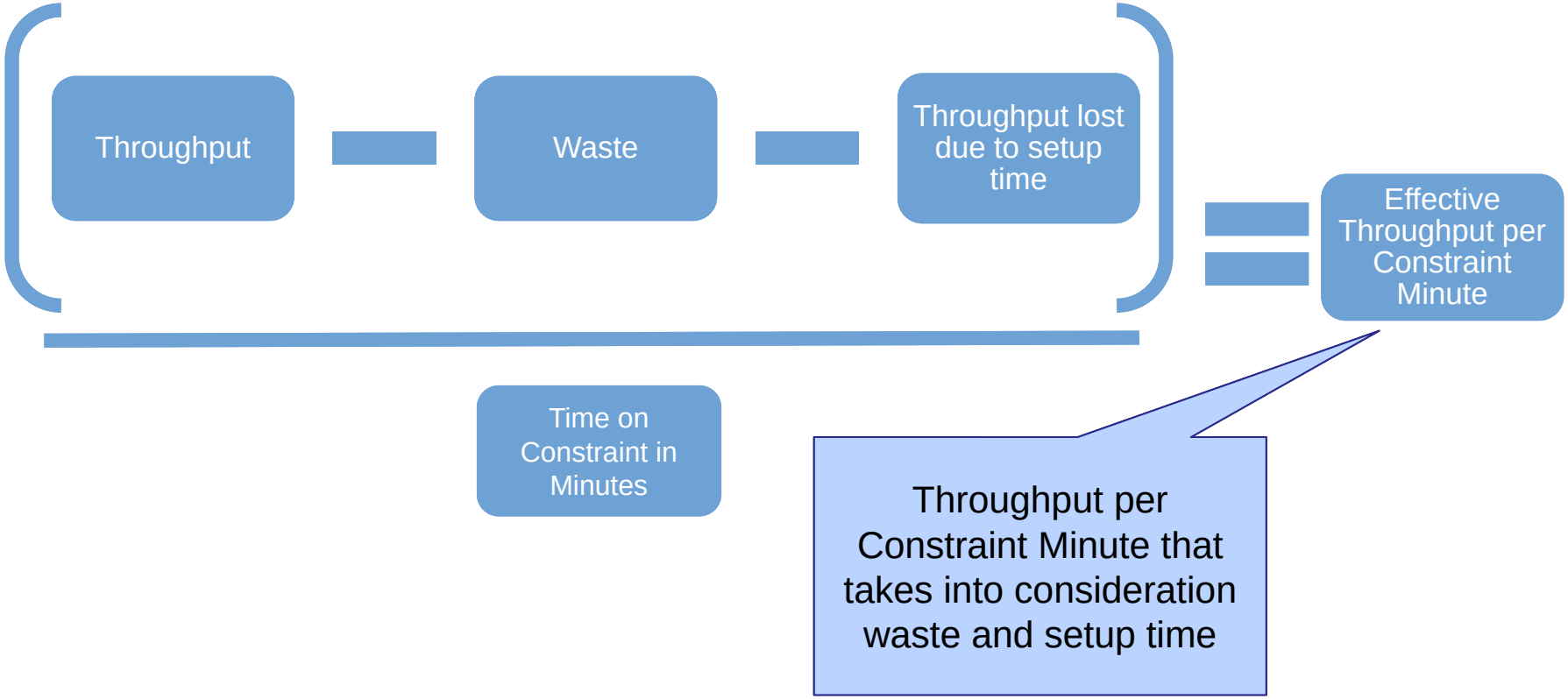
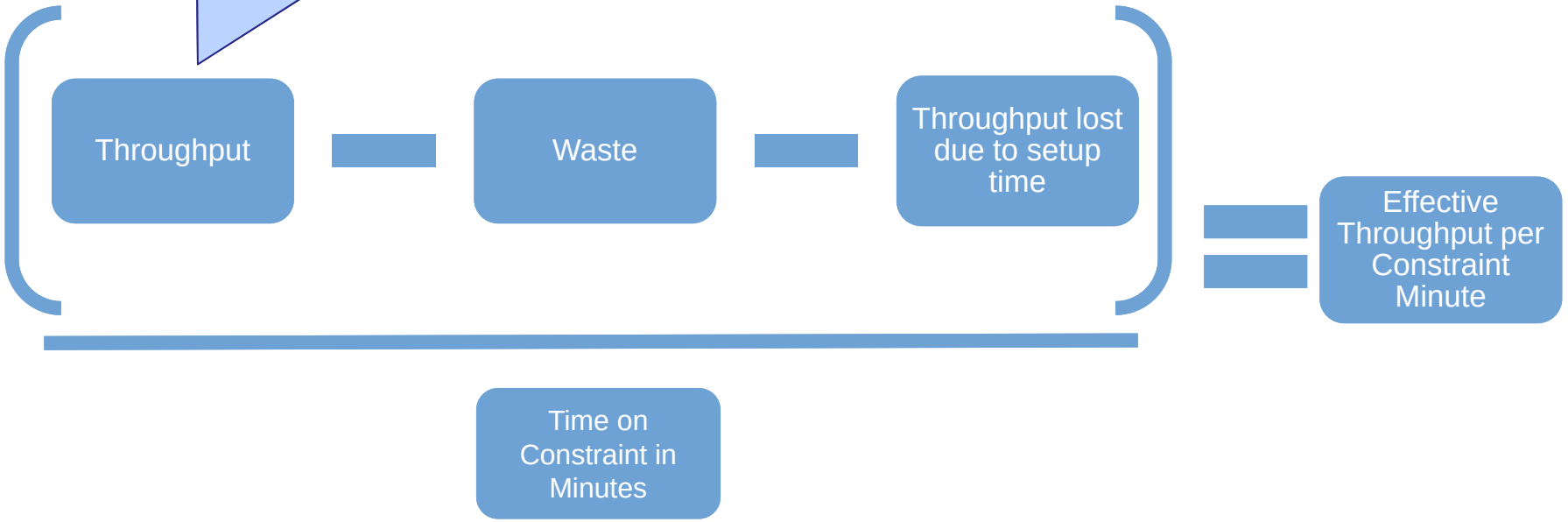


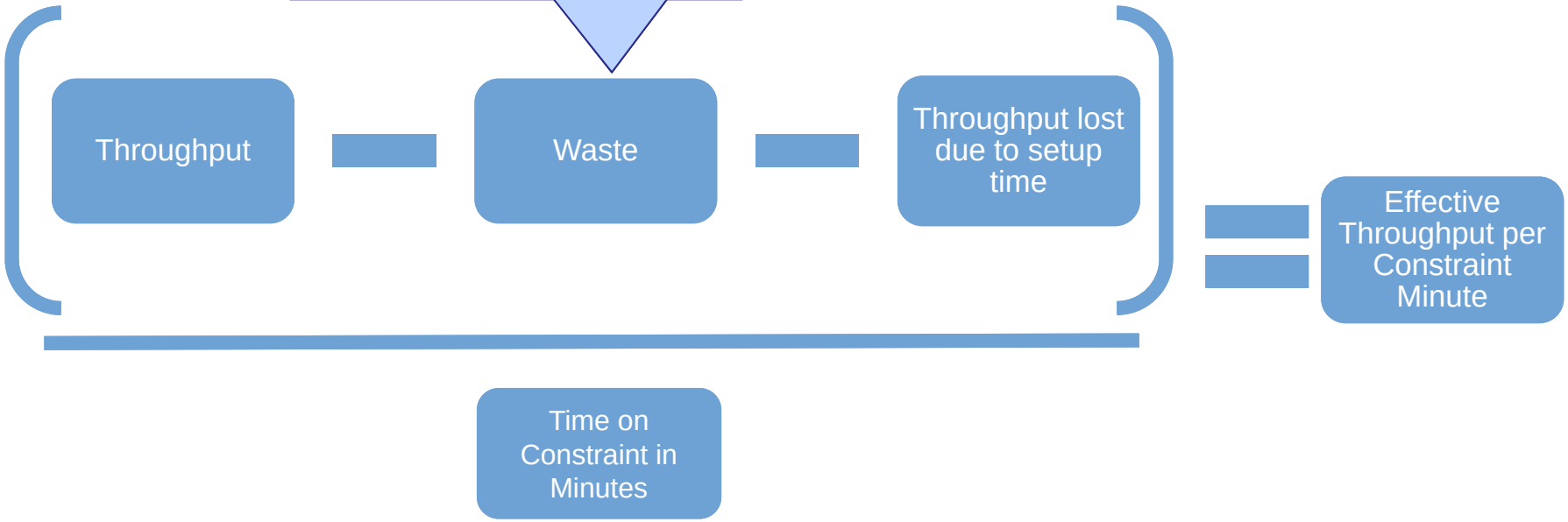
Increasing Effective Throughput per Constraint Minute

- Increase Selling Price
- Reduce Variable Costs
- Increase Order Size



Increasing Effective Throughput per Constraint Minute

- Focus on Quality
- Employ Better People
- Improve Skills
- Measure Waste



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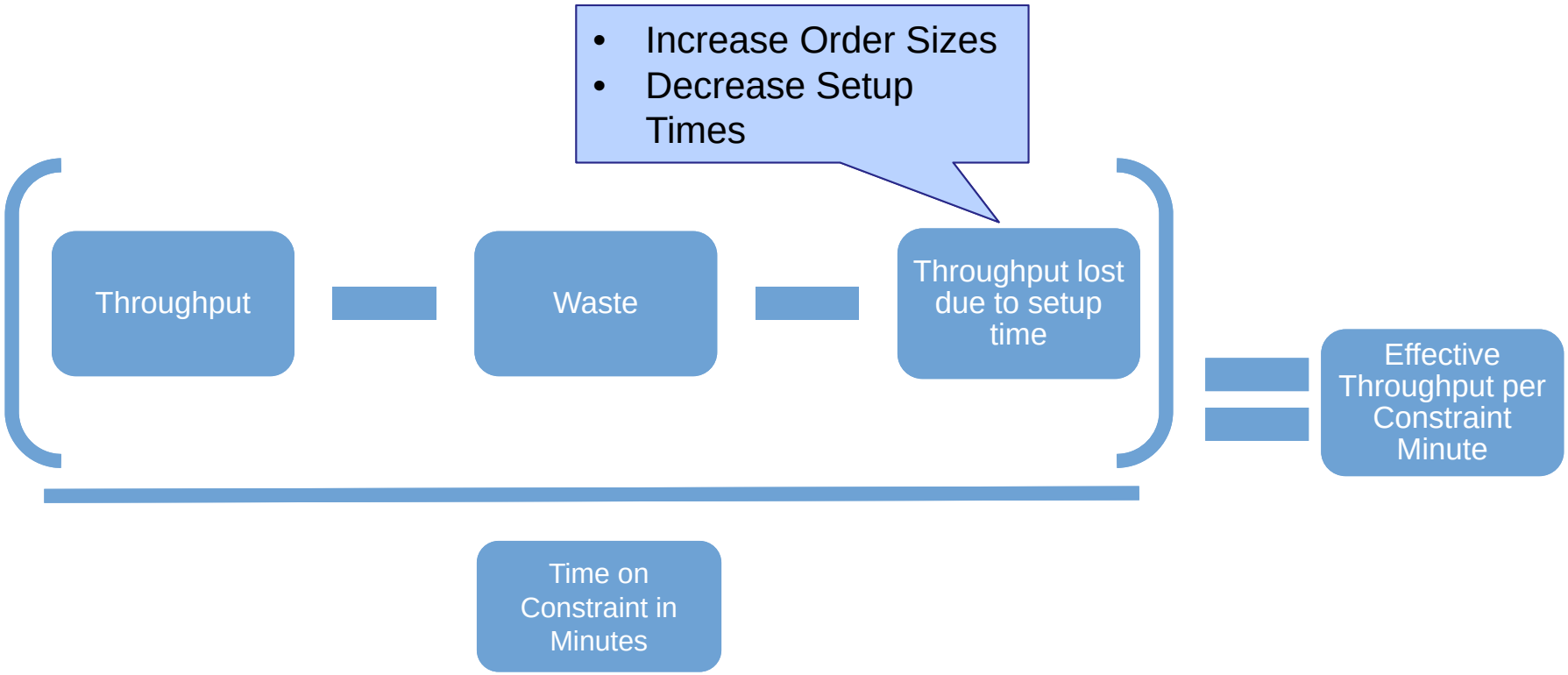

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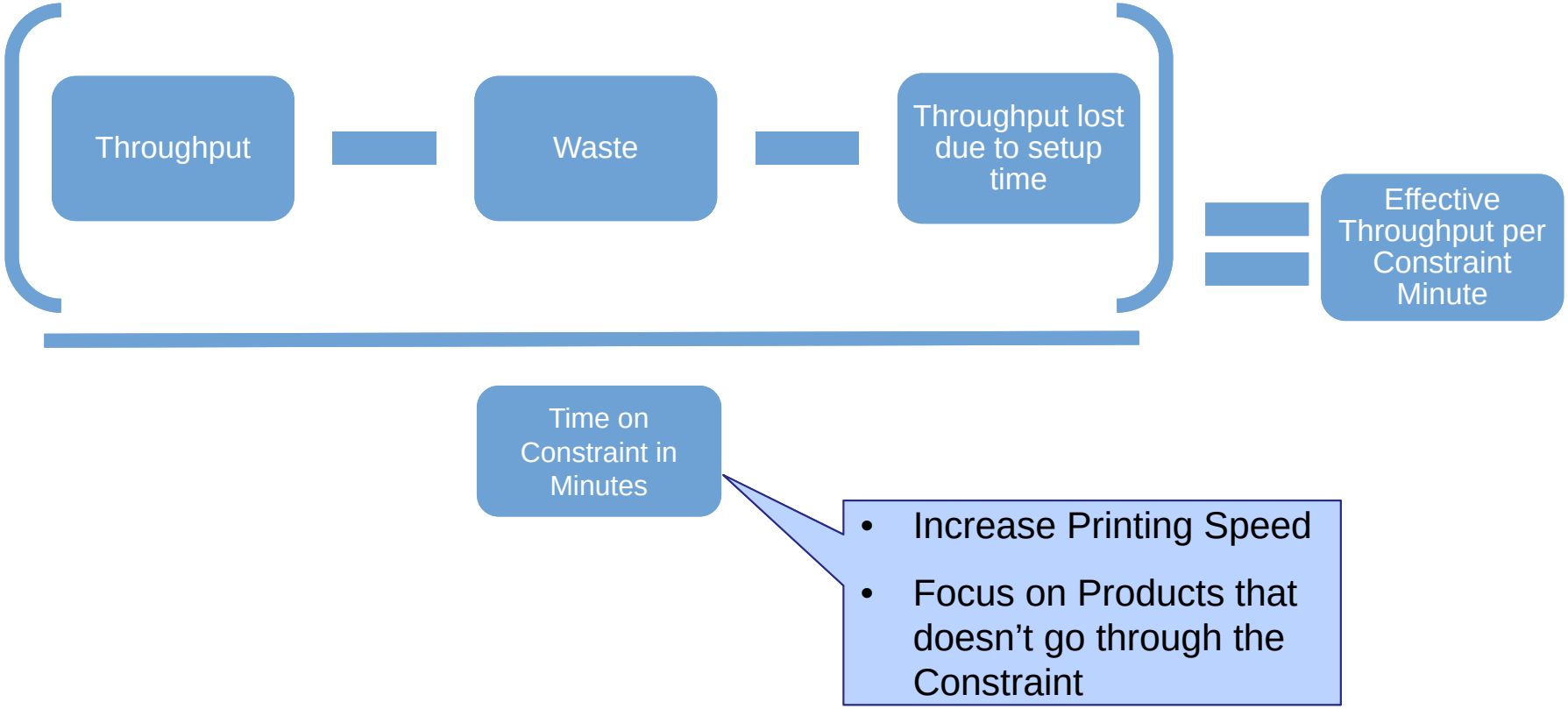

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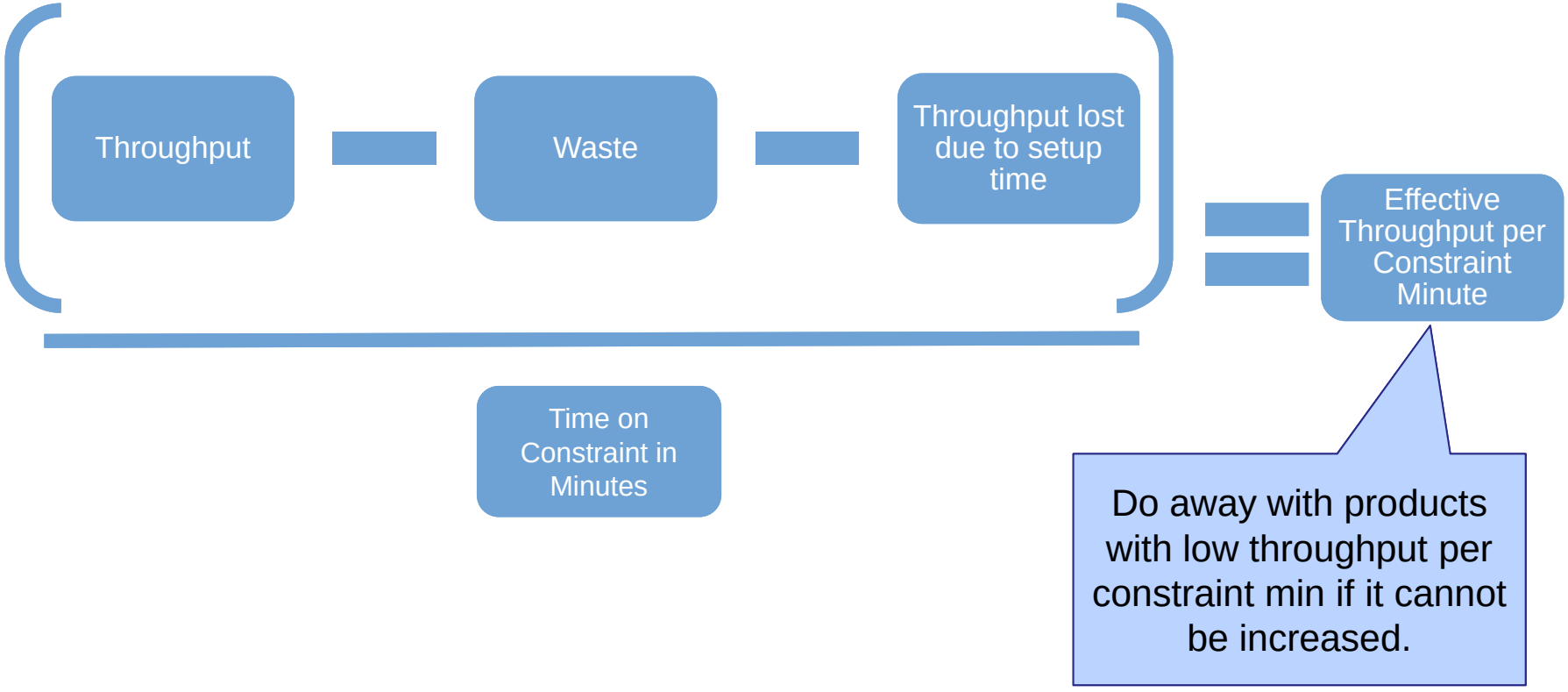
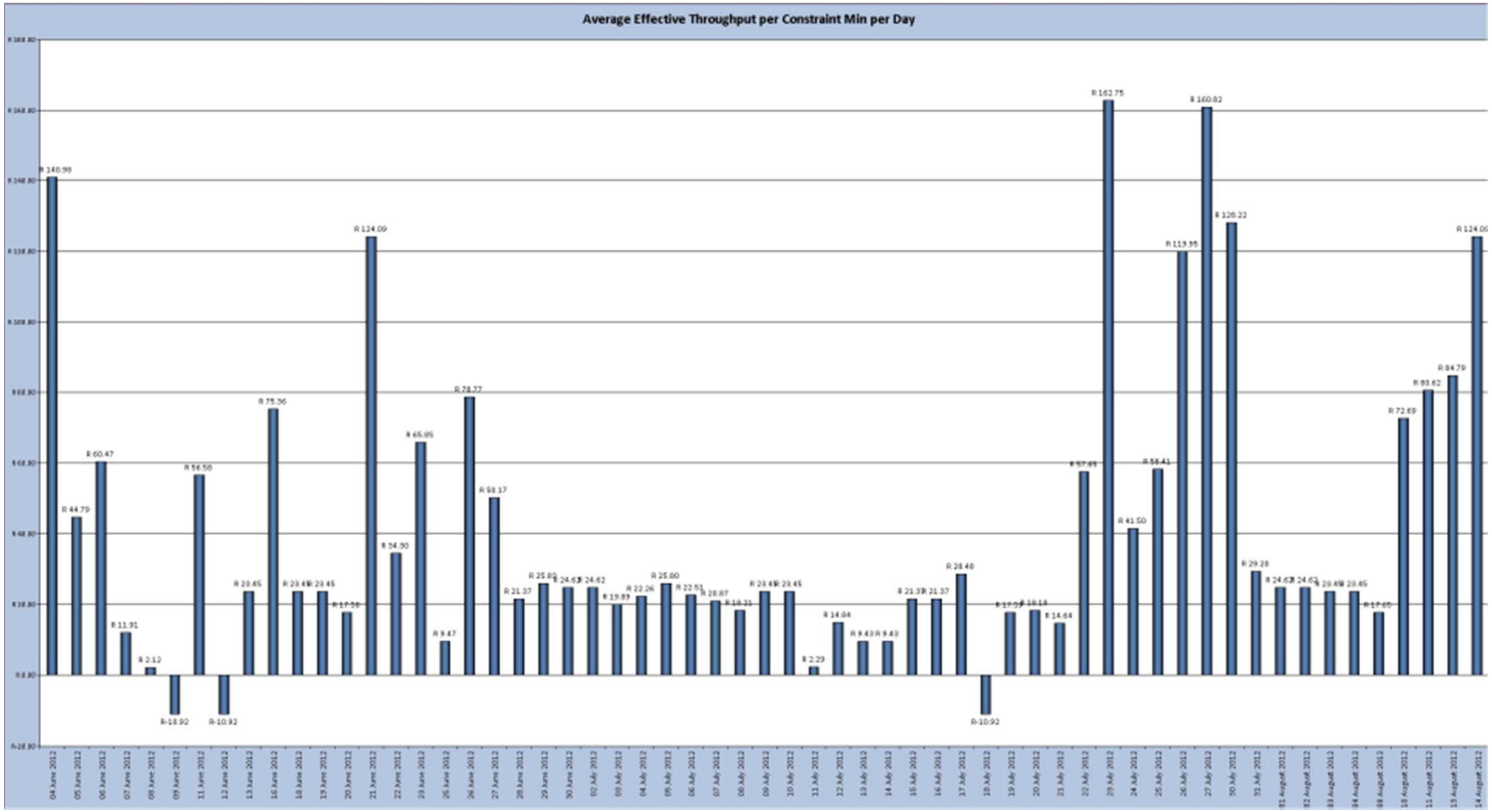
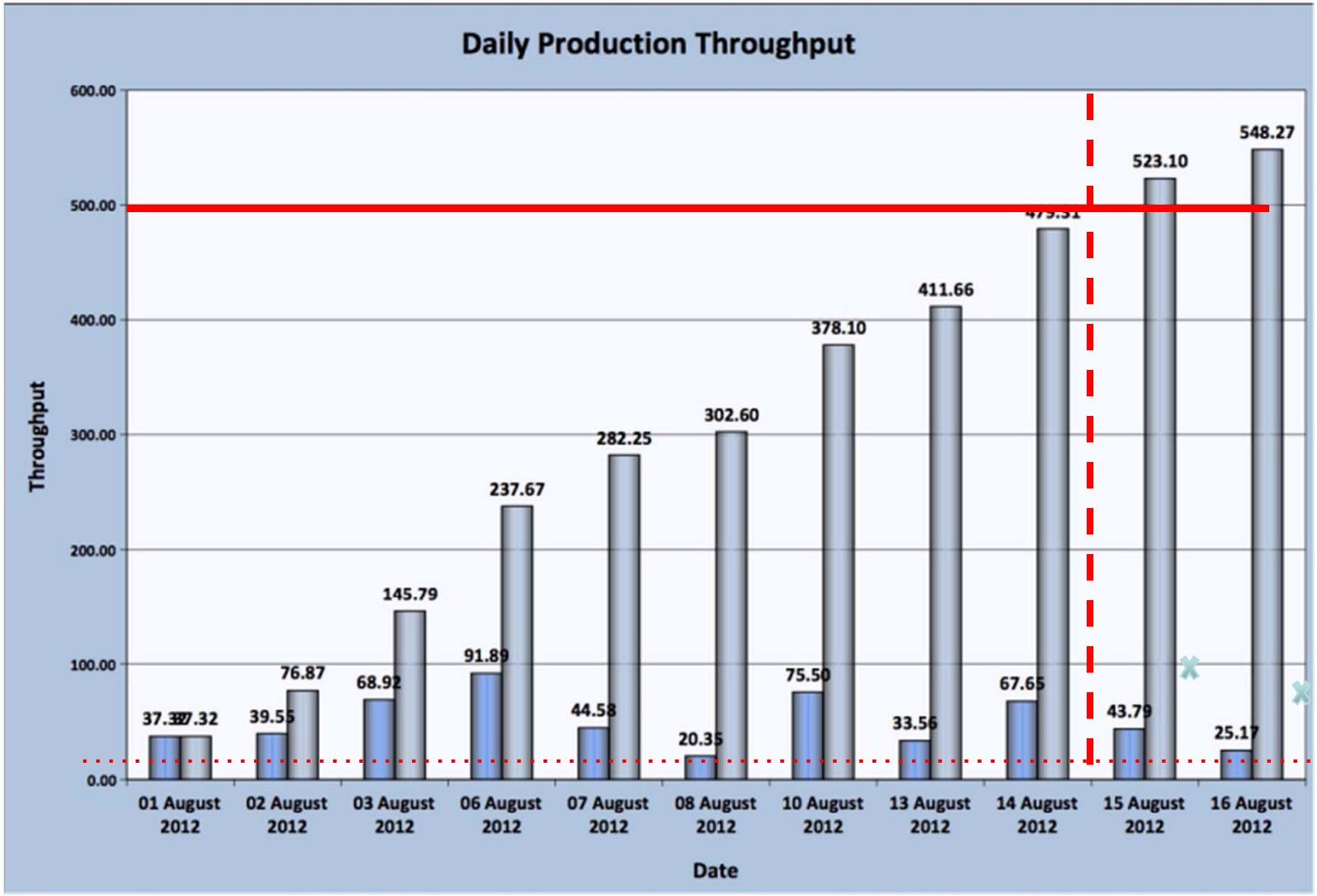


Throughput per Constraint Minute



Throughput Incentive



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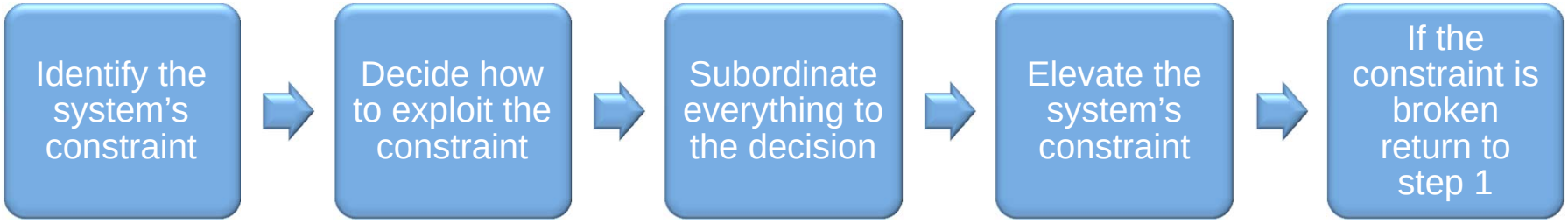
- Planning to buy a new printing press this will elevate the constraint to such a level that the constraint is broken.

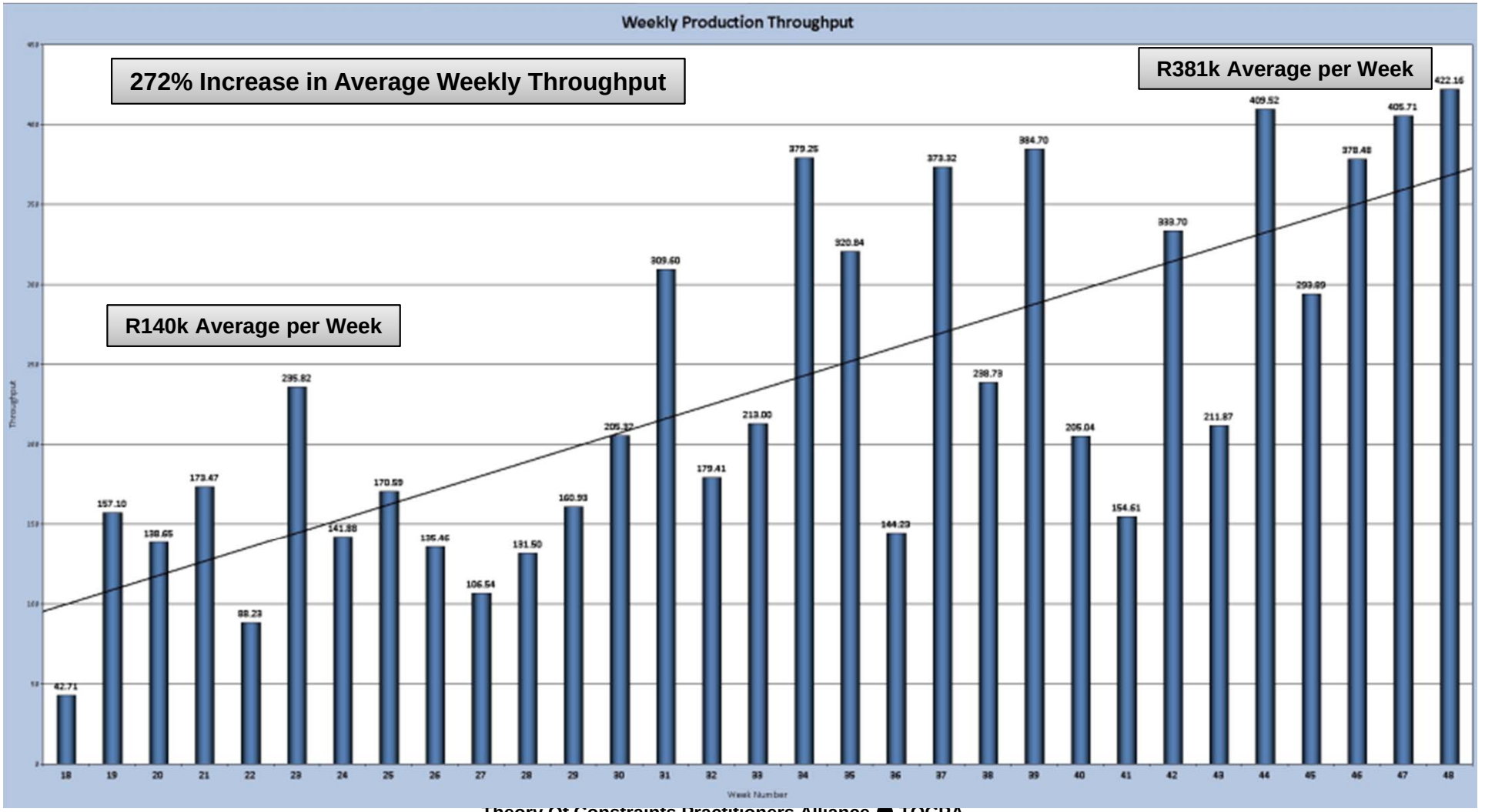
TOC 5 Focusing Steps



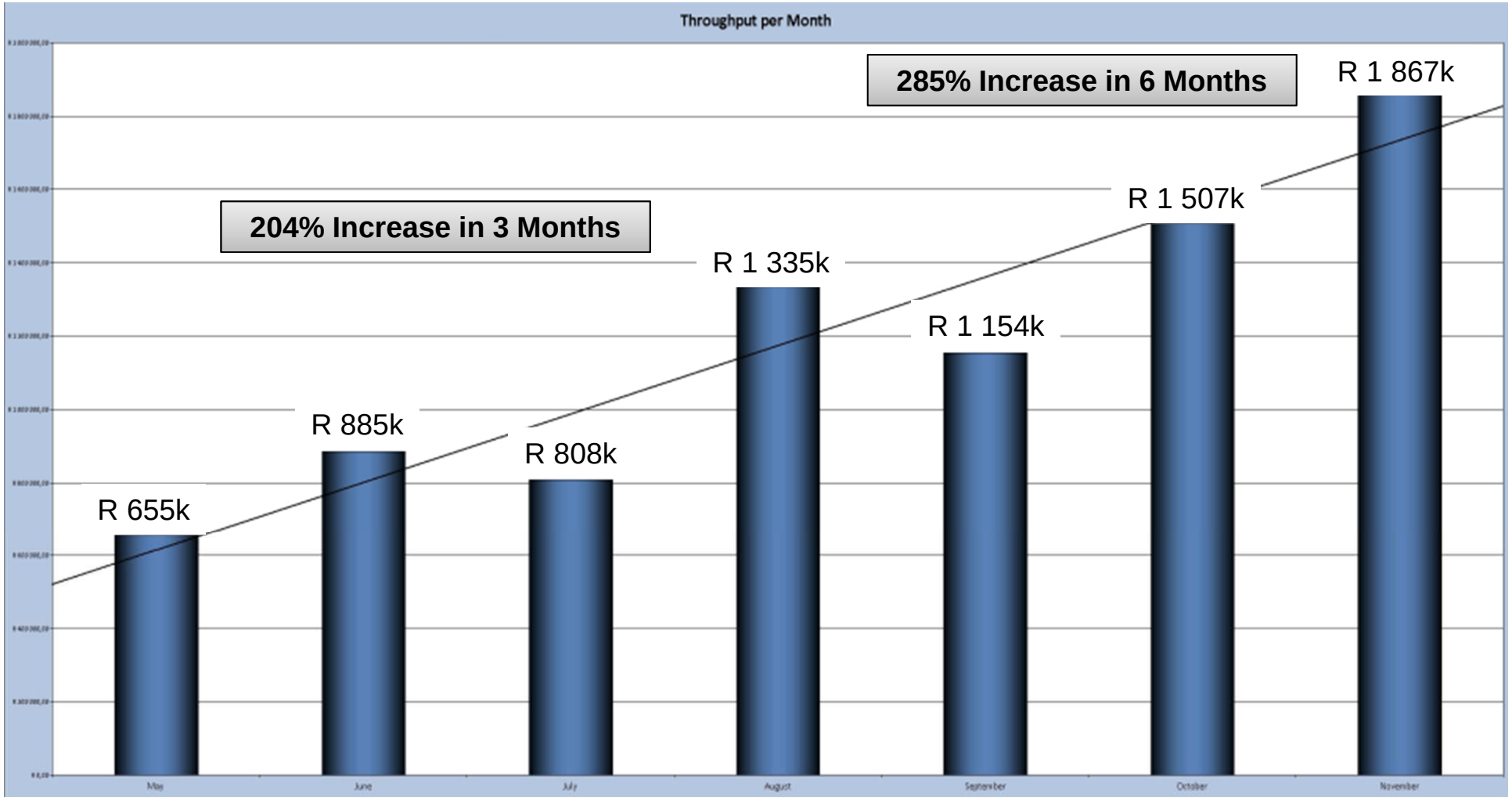
- Once the constraint is broken by buying a new printing press the constraint will definitely move to one of the other processes either laminating or slitting.
- Product profitability will change
- Priorities will change
- Eventually the constraint will move to the market in that case their production capabilities and reliability will be their competitive edge
  - Short lead times
  - Reduced inventory for customers

RESULTS

Throughput per Week - System



Throughput per Month



Measurements

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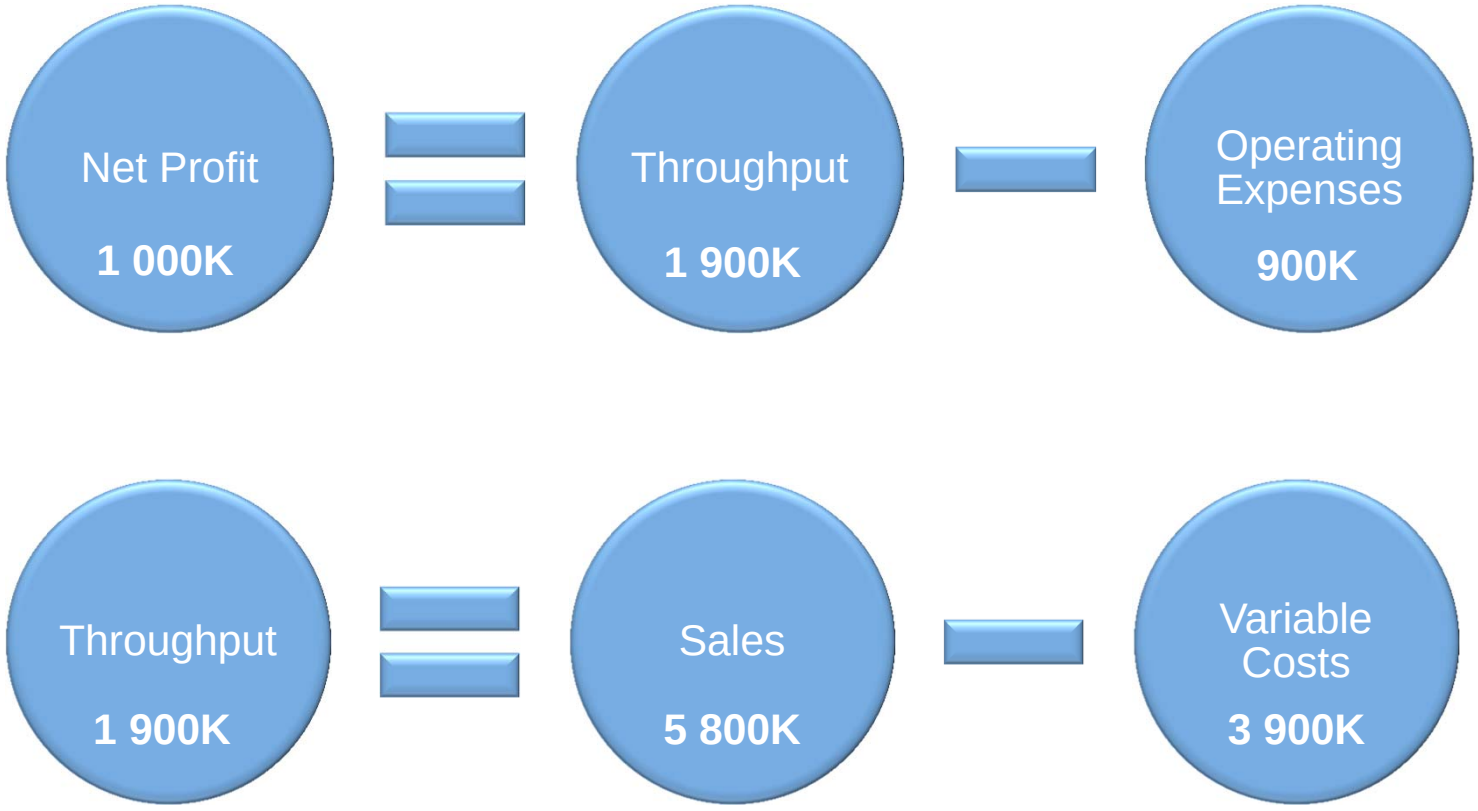

Conclusion

- Project has been a massive success
- Impact of increasing throughput per constraint minute is massive
- Impact of throughput incentive on throughput and attitudes has been great. “Show me how you measure me and I will show you how I will behave”
- Took the company from making a loss to making a profit without any major capital expenses
- There is still massive inherent potential to be unlocked
- TOC is now fully embedded n in the company
- Company moved from cost-world to throughput-world
- Theory of Constraints is a very powerfull systems thinking tool
- Massive improvements in a very short time because you focus on the constraint
- It is not just a theory it works!