

# Focused Management in a court system: Doing more with the existing resources

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**Abstract.** As in many countries, the court system in Israel suffers from long lead time, inadequate due date performance, and poor service quality. This paper shows that putting into practice the Focused Management techniques and philosophies can significantly improve the judicial system: It will achieve much more in terms of higher throughput, shorter lead time and better quality, while using the existing resources. The paper discusses the various components of the focused management philosophy adapted to the specific court environment, such as the Theory of Constraints, the global performance measures, the Just in Time concepts and other tools and techniques. The paper describes a methodology to improve the court system and analyzes the potential outcomes of the process as perceived by 94 presidents, vice presidents and senior judges who hold most of the managerial-judicial positions in the system.

**Keywords:** Focused Management, the Theory of Constraints (TOC), the complete kit concept, court system, lead time reduction, judges, judicial system



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## 1. Introduction

Many judicial systems are troubled by overload and excessive delays in processing cases [6, 30]. The long delays in resolving cases produce serious negative social-welfare outcomes and have led important judges [2] and academic scholars [17, 32] to relate to them as a crisis in the judicial system. These problems directly affect the litigants by imposing additional costs, creating uncertainty, and producing incentives for opportunistic behavior. They deter people from submitting disputes for resolution by the judicial system. When a dispute arises, they compel people to settle out of court, waiving part of their rights. Being aware of the phenomenon, ex-ante, legal entities internalize it into the structure of contracts and actions. Consequently, prices in markets suffering from poor judicial performance will reflect the extra costs it inflicts. Another important implication of the delays and backlog is the negative impact on the goodwill of the judiciary. Public trust in the judicial system is essential for its effectiveness, and without a radical improvement of backlog problems, this trust may further erode.

Like many other Western countries, Israel's judicial system suffers from rapidly increasing demand (filing of cases), long lead times, reduction of throughput, and decreasing service quality: The time period needed to

complete a case is on average too long and can be measured in months and years.

This paper suggests adapting the Focused Management philosophy [22] in order to improve the situation, by cutting the lead time substantially while increasing throughput and enhancing quality. The methodology suggested here will re-engineer the court's managerial processes, turning the system into a more effective and efficient one.

The Focused Management methodology will improve the system in both the strategic and tactical dimensions. It is an integrative approach consisting of well-established principles such as the Theory of Constraints (TOC), the LEAN/JIT systems, quality enhancement techniques and philosophies, and strategic value drivers that has been successfully implemented in manufacturing as well as in service organizations [23]. We will show that it is a novel approach to managing the judicial system that the senior judges whom we surveyed view as applicable and useful. Moreover, we prove that implementing it will significantly improve the system without the need for any substantial budget increase.

Section 2 of the paper describes the components of the Focused Management philosophy and surveys the relevant literature. Section 3 suggests how to modify and adapt the Focused Management components in the adjudication system. Section 4 presents and analyzes a survey of judges' opinions on the potential of the implementation of the Focused Management techniques and philosophies. Section 5 concludes the paper and calls for further research.

## 2. The Focused Management philosophy and tools

Focused Management is a philosophy aiming at increasing the value of organizations that has been successfully implemented in dozens of industrial, high-tech, and service organizations worldwide [22, 23]. It combines innovative managerial approaches such as the following:

- *The Theory of Constraints* (TOC), developed by Goldratt [10], claims that the attention of management should be focused on the few constraints which prevent the organization from achieving its goal. We will elaborate on TOC later in this paper.
- *The Just In Time* (JIT)/LEAN philosophy was originated in Japan [25]. It can be summarized in three

main principles: Prepare only the required items, at the exact time and according to the specifications; use appropriate clever small lots; eliminate waste and non-value-adding activities.

- *The Complete Kit (CK) concept* asserts that work on an assignment should begin only when all the items required for its completion are available. Applying this concept results in shorter lead times, better quality, increased throughput and cost savings [14, 19].
- *The Global Decision-Making Methodology (GDM)* is a simple, practical method for organizational decision-making. It supports decisions on issues like pricing, make-or-buy, capital investments, product mix and more [8].

In this paper, we will concentrate on all aspects of Focused Management and on TOC in particular. TOC is gaining increasing acceptance among practitioners as well as academics [11, 18], and its application has provided hundreds of organizations worldwide with significant performance improvements, such as increased throughput, reduced inventory levels and shorter lead time [15, 20]. While reports of successful TOC implementation come mainly from manufacturing – especially aerospace, apparel, automotive, electronics, furniture, semiconductor, steel and heavy engineering [16] – TOC has also been implemented in diverse non-manufacturing industries, including financial institutions [29], enterprise software [13], health services [23], and also in the public sector [28]. Schragenheim, Cox and Ronen [26] apply TOC in the process flow industry and adjust the drum-buffer-rope methodology to the needs of this environment. However, there are no academic reports on any adjudication process application.

Goldratt [9] initially defined the five focusing steps of TOC that lead to maximizing the performance of a system (see steps 3–7 below). Ronen and Spector [24] enhanced the process by adding two preliminary steps (see steps 1, 2 below). These two steps are particularly important in non-profit organizations, as demonstrated in this paper. Thus, the seven focusing steps are [21]:

1. Define the system's goal.
2. Determine global performance measures.
3. Identify the system's constraint.
4. Decide how to exploit the system's constraint.
5. Subordinate the system to the constraint.
6. Elevate the system's constraint.
7. If, in the previous steps, the constraint has been broken, go back to step 3. Do not let inertia become the system's constraint.

Although the principles of the seven focusing steps seem straightforward and practical, their implementation requires a significant effort, since it fundamentally involves transformation of all the organizational processes. Hence, it is crucial for top management to lead the change. The seven focusing steps are further demonstrated in the paper.

The understanding of a resource constraint is especially important in the context of this study: A *resource constraint*, or bottleneck, is any resource whose capacity is equal to or less than the demand placed upon it [10]. It is termed an internal constraint because it is under the organization's control.

Organizations that operate in a dynamic environment, such as the court system described in the following sections, face major challenges in applying TOC, since they contain a huge resource constraint.

### 3. The adaptation of Focused Management to the adjudication system

By following the seven steps of TOC, we can diagnose, analyze and suggest improvements to the court system.

#### 3.1. Define the system's goal

The goal of the adjudication system is twofold: To provide a mechanism for the settlement or decision in disputes, and to provide information regarding the interpretation of legal rules.

#### 3.2. Determine global performance measures

The measures of performance should be the Focused Management six metrics [22, chapter 13]:

##### 3.2.1. *T* – Throughput

Throughput is the effective output of the organization. In the adjudication system, throughput is the number of closed cases per period. Since not all cases have the same impact or input, the number of cases should be classified according to their types (for instance – small, medium or large).

##### 3.2.2. *OE* – Operating expenses

Operating expenses is the sum of all fixed expenses of the organization during the measurement period. These expenses include:

- Direct labor
- Indirect labor
- Rent and other fixed expenses

In the adjudication system, the actual operating expenses of each court will include only the manpower costs, i.e., judges, paralegals, and administrative labor, and will be measured monthly.

### 3.2.3. *I – Inventory*

Inventory is measured in the court system by the amount of work-in-process (WIP) inventory, which is the number of open cases.

### 3.2.4. *LT – Lead time*

Lead time is a general term for various time measures that include cycle time, time-to-market (TTM), and response time. For more accurate definitions, see the APICS Dictionary [4] and the book by Cox and Spencer [5]. We will relate to system response times using one term: “lead time” (LT). The organization must identify its main processes and measure their response times.

An appropriate measure of response times is one that looks at the process from the perspective of the customer. For example, a plaintiff is concerned with the total time his or her case spends in the system, including various waiting periods, and does not care who is responsible for a longer than usual waiting period.

### 3.2.5. *Q – Quality*

Measures of quality contribute to organizational enhancement. The court system should define its relevant quality measures. For example:

- Percentage of verdicts achieved “correctly” the first time – without an appeal
- Costs of “non-quality” (size of the “garbage plant”)
- Customer satisfaction
- Service quality
- Number of customer complaints
- Percentage of continuances

In the court system, these measures should correspond both to the service quality and the professional-legal quality.

### 3.2.6. *DDP – Due date performance*

The vision is that every case entering the court will get a due date for completion. Due date performance reflects the organization’s reliability in meeting these

deadlines. It will measure the percentage of cases completed on time. In the court system, where we face high variability of cases, it can distort reality by encouraging the treatment of the easy cases. Thus, the cases should be classified into families, and DDP should be measured separately for each family. For example, for cases of no-fault vehicle insurance regime for bodily injuries, where no liability is determined, the due date will be 15 months, and achieving 90% DDP means that 90% of the cases were closed within 15 months.

## 3.3. *Identify the system’s constraint*

A constraint is any important factor that prevents an organization from reaching its goal. The philosophy of TOC is based on identifying the causes that halt the system and prevent it from achieving the goal. The relevant question is “what stops the system?” or “what prevents the system from achieving the goal?” Every system has a constraint. If there were no constraints, the system would achieve unbounded performance. Systems have a small number of constraints – a few factors that prevent them from achieving the goal [22].

There are four types of constraints in a managerial system:

- Resource constraint
- Market constraint
- Policy constraint
- Dummy constraint

### 3.3.1. *Resource constraint*

A resource constraint (or bottleneck) is the resource that is most heavily utilized, such that it cannot perform all its assigned tasks. This is the resource that constrains the performance of the entire system. Fig. 1 presents a simplified illustration of the adjudication system process.

In the general process depicted in Fig. 1, every case must be processed at each of the three departments, “Administration”, “Judges” and “Legal aides”. This is just a schematic diagram, and does not necessarily reflect the sequence of the process. The judges are the resource that is the system constraint, as they can process only 50 cases per month while the demand is for 300 cases per month.

In the example of Fig. 1, we say that:

- The system has a resource constraint
- The judges are the system bottleneck

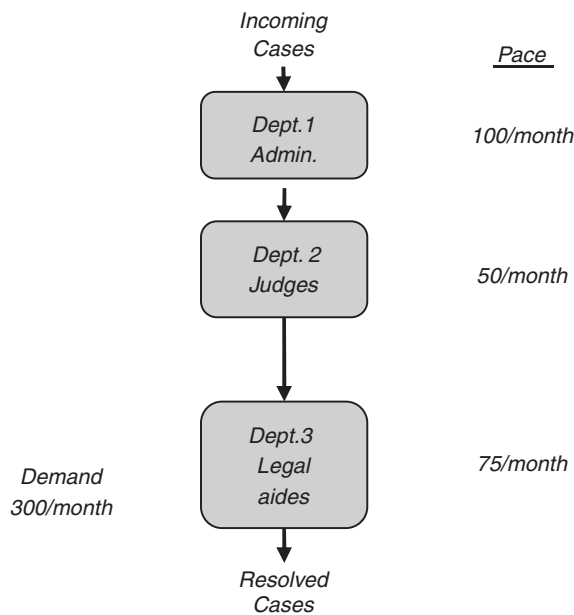


Fig. 1. An example of the adjudication system processes.

It should be noted that if we increase the daily capacity of the other departments of the adjudication system without increasing the capacity of the judges to handle the caseload, the throughput of the whole system will not change. On the other hand, increasing the number of cases handled by judges (either by appointing more judges or managing the cases more efficiently) will increase system throughput. The bottleneck, the judges, dictates the throughput for the whole system and should be treated as the organizational “goose that lays golden eggs”. An hour lost in the bottleneck is an hour lost for the entire system [10].

In the court system, the judges are permanent bottlenecks [23, chapter 4]. There will always be more demand for their services than they can supply. They are a scarce and expensive resource, sometimes having unique expertise and knowledge. Furthermore, adding judges to a judicial system is quite complicated. It is not just a budgetary constraint; sometimes it requires amendments to legislation, which are difficult to achieve.

### 3.3.2. Market constraint

A market constraint arises in a situation where the market demand is less than the output capacity of each resource. This is not the case here. As indicated above, the judicial system typically suffers from an overflow of cases.

### 3.3.3. Policy constraint

A policy constraint is the adoption of an inappropriate policy that limits system performance and goal achievement and that may even act to counter the organizational goal. This is also known as “policy failure”.

A policy constraint prevents the system from achieving its goal. The inappropriate policy is a system constraint. For example, we found that some judges tend to write unnecessarily long opinions. When asked about the grounds for this, they claimed that in the promotion process, their judgments are reviewed, and experience apparently showed that long and extensive judgments were given higher evaluations. It should be noted that lengthy reasoned opinions are, historically, a phenomenon inherent in the Anglo-American (Common Law) systems. Adjudication systems based upon the European-Continental systems are much shorter and at times even quite concise, yet this does not affect the effectiveness of the courts.

### 3.3.4. Dummy constraint

A dummy constraint is a situation where the system bottleneck is a very cheap resource relative to other resources in the system. This is a situation where system throughput is constrained because of a resource whose cost is marginal. In the court system we found that a very cheap resource – a typist, for example – may cause, in many cases, a severe reduction of throughput. Judges are then required to type their opinions, a very time consuming activity for most judges, in particular since they are not experienced and fast typists. Other dummy constraints are the limitation on the administrative assistance to judges, such as secretarial assistance.

Shortages of phone lines, fax machines, copying paper, printers, etc., are all dummy constraints of the system. These are relatively cheap resources compared to the costs of other resources and compared to the potential effect of decreased throughput.

## 3.4. Decide how to exploit the system's constraint

The step of exploiting and utilizing the constraint means doing much more with the existing resources. That is, extracting significant additional throughput by focused management of the bottleneck resources: In our case – the judges.

Improvement through exploitation can be achieved relatively quickly and is, therefore, the most realistic improvement for the short term. Exploitation is performed in two dimensions: Efficiency and effectiveness.

In parallel, we must eliminate policy and dummy constraints.

- **Efficiency** means increasing bottleneck utilization to as close to 100% as possible
- **Effectiveness** means that, as the bottleneck cannot supply the entire demand, one must decide on the product or service mix of the bottleneck.

#### 3.4.1. *Efficiency – increasing constraint utilization*

The bottleneck determines system throughput. Thus we must make sure that it operates to the maximal possible utilization – as close as possible to 100% of its time.

Experience gained in hundreds of organizations shows that we can significantly increase bottleneck throughput in sales, marketing, development and operations without adding resources by better focused management of their resources [15].

In our case, for the bottleneck to work more efficiently, one can reduce the bottleneck's ineffective ("garbage") time.

"Garbage time" is the time when the bottleneck is devoted to activities that do not add the particular value that it uniquely adds to the service or the product, or the time allocated to activities it should not perform. This is the ineffective time of the bottleneck.

Usually, the garbage time of knowledge workers, engineers, computer scientists, marketing and sales people are estimated at 50% [22, chapter 4].

As observed in the judges' survey (see below), judges have a similar rate of ineffective time. The ineffective time consists of the time wasted due to postponement of sessions, missing hearings, incomplete and lengthier hearings due to incomplete kits, time spent on administrative tasks that can be performed by the secretarial staff, etc.

The causes of ineffective ("garbage") time should be analyzed using the Pareto analysis. Later, the causes that contribute most to the ineffective time should be decreased to a minimum [23].

#### 3.4.2. *Effectiveness*

As the bottleneck (the judges) cannot supply the entire demand, one must decide what tasks are to be allocated to the bottleneck, and create a strategic gating process.

Strategic gating is a process of prioritization that defines the value of the different tasks and missions to the organization and determines which will be carried out and with which priority, and which will not be carried out at all.

Thus a strategic gating process should be a part of the court system strategy. For the various prioritization methods see [22, chapter 4].

#### 3.5. *Subordinate the system to the constraint*

Once we focus on the constraint (bottleneck) and improve its management, we need to create a policy for managing and operating the non-critical resources. The remaining resources – administrative staff, legal aides, apprentices, lawyers etc. – should assist the bottleneck. Thus, the non-critical resources should be available to assist when needed. In the adjudication system, unlike closed industrial or service-providing systems, this policy should also apply to other participants in the litigation, such as lawyers representing the litigants. Similarly it should also apply to other governmental branches, such as the prison service, which is responsible for bringing the accused to the trial. In a regular service-providing system, mandating a third party to become subordinate to the requirement of the bottleneck may be problematic. However, due to the unique nature of the adjudication system, the legal power given to the judges may enable them, to a significant extent, to impose such cooperation upon third parties. In this respect the judicial system may then be more efficient in implementing the focused management approach than other systems, which have to bargain in order to achieve cooperation from third parties.

#### 3.6. *Elevate the system's constraint*

The previous five steps of TOC have dealt with increasing the throughput of the court system, without any changes in the system itself. Now it is time for structural changes in the system to increase the effective capacity of the bottleneck. Increasing this capacity will increase the throughput of the whole system.

Elevating and breaking the constraint can be achieved in two manners:

##### 1. **Elevating using capital investment**

An effective increase in the capacity of the constraint can be achieved through appointing additional judges, recruiting retired judges to deal with "easy cases", etc.

##### 2. **Offloading – a delegating mechanism using existing resources**

Offloading means relieving the bottleneck by transferring some of the workload to non-critical resources. In our case the offloading process

involves transfer of work from the constraint (the judges) to non-critical resources such as legal aides, interns, legal helpers or administrative staff. Offloading can also be achieved, fully or partially, by diverting the cases from the courts to other decision-making authorities. All types of alternative dispute resolution (ADR) serve as offload mechanisms. Due to the heavy burden of caseload, legislators and the courts encourage the transfer of cases to ADR [1, 12]. Referring a case from the court system to arbitration will result in a decision in the controversy by a private decision-maker and relieve the judicial system from such a case. As a result the bottleneck – the judge – is freed to handle other cases waiting in line. From the system's perspective, it does not matter if these resources perform the task of the bottleneck at a slower pace than the bottleneck. The important fact is that they contribute to the overall throughput.

3.7. If, in the previous steps, a constraint has been broken, go back to step 3. Do not let inertia become the system's constraint

If a constraint is broken, we must return to the step of identifying the new system constraint and not let inertia become the system constraint. In our case, it seems that the constraint is not going to move to any other resource.

### 3.7.1. The tactical gating mechanism

To help the system perform to its utmost, the constraint, the judges, must work efficiently and effectively. Subordinating the rest of the system to the constraint is achieved via the tactical gating mechanism, that is, the controlled release of tasks (cases) to the system. To assure efficient operation of the bottleneck, the tactical gating mechanism will adhere to the following policy:

- Only tasks screened by the gating process will be released for workup.
- All tasks will be released only through the body or person in charge of the gating (the "gater"). A task that was not screened and released by the gater will not be processed.
- All tasks will enter the system with a "complete kit" (see later).
- All tasks will enter according to an appropriate scheduling mechanism; for example, the drum-buffer-rope (see below).

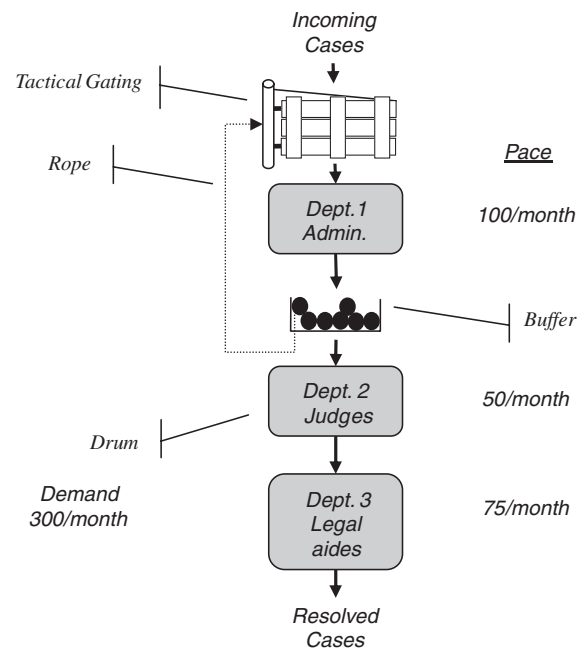


Fig. 2. The drum-buffer-rope (DBR) mechanism.

### 3.7.2. The drum-buffer-rope (DBR) mechanism

The DBR mechanism presented in Fig. 2 is a scheduling mechanism for entering tasks into the system [10, 27]. It has been very successfully implemented in healthcare systems, service industries, production facilities, financial institutions, and R&D organizations.

- The drum provides the rhythm for the flow of tasks through the system. The system constraint (the judges) determines the rate at which tasks and cases should enter the system and flow through it. In the presence of a resource constraint, the drum will be the work rate of the bottleneck, i.e., the judges. Thus, the rate of inserting tasks into the system will be governed by the constraint and not by non-critical resources (see [23, chapter 9]).
- The buffer is a controlled quantity of tasks that accumulate before the bottleneck to assure that it is fully utilized. The buffer serves to protect the system both against fluctuations that arise from malfunctions and delays in the chain feeding the bottleneck and also prevents the bottleneck from dealing with too many cases at the same time. Thus the bottleneck avoids the bad multi-tasking (BMT) phenomenon and improves performance by providing more throughput at a lesser lead time with much more quality [22]. The size of the buffer



is measured in terms of the bottleneck utilization time. It is estimated that a judge who deals with 800 cases at the same time should have a buffer of no more than 200 cases.

- The rope is a “logical rope” that transfers information on the situation in the buffer to the tactical gating mechanism to coordinate release of tasks into the system. When the number of tasks in the buffer becomes smaller, additional tasks are released into the system.

The DBR mechanism can be effectively utilized in the district courts, especially during the hearing stage. In accordance with the “continuous hearing” method (see below) cases should be heard at least once a week. If a judge can hear no more than two cases a day, at five working days per week, he or she should have a buffer of no more than ten cases. This includes the cases in the process of opinion writing.

### 3.7.3. *The complete kit concept*

The complete kit (CK) concept and its theoretical background are easy to understand and not difficult to implement. This managerial tool has been implemented in various organizations with a high success rate. It is easy to adopt in the adjudication system environment, providing much benefit in relatively short time spans, as in other industries today (for example, see [3, 7, 14, 19]).

A complete kit in the court system is the set of information, forms, materials, documents, and other information needed to complete a given procedure, process or task. It is the readiness of the kit prior to the start of the procedure. There are two types of kits: The inkit and the outfit. The inkit is the kit required as an input to the legal procedure. The outfit of a given task is the kit required as an output of the legal procedure. The outfit of a given procedure may be the inkit of the next stage.

To fully understand and value the CK concept, it is important to understand the “evils” of working with an incomplete kit. The following represent some of the adverse consequences of trying to work without a CK:

- More work-in-process (WIP)
- Longer response time
- High variance of quoted and planned response times
- Poor quality and more rework
- Decline in throughput
- Decline in productivity
- More operating expenses
- Decline in staff motivation

- Increase in complexity and control
- Less effort to ensure arrival of the missing kit item

The reader is referred to [23] for further details.

In a knowledge-based environment such as that of a legal procedure, the rule is that in the majority of cases, one should start working only if the kit is complete.

Working with an incomplete kit may reduce productivity by 40–80% [19].

We will now illustrate the complete kit principal in the magistrates’ court (first instance court), as applied to no-fault vehicle accident cases. At the first stages such cases are handled by the registrars, who specialize in the preparation of the file for the court. Among their tasks, in no-fault cases, the legal secretaries are responsible for bringing the file to a stage of a “complete kit” that contains at least the following:

- Statement of claim
- Statement of defense
- Appointment of a medical expert by the court
- Written opinion of the medical expert
- Detailed damages calculations on behalf of each of the parties.

When the file contains all these documents it is ripe for a compromise effort. The case is then transferred to a judge who will try and initiate a compromise between the parties.

### 3.7.4. *Measurement and control*

It is common knowledge that one cannot manage what one does not measure. Thus we have to measure the court system in global, effective, and simple measures of performance. Local performance measures may distort the decision-making process and lead to sub-optimization. A measure such as “time per case” may result in a preference for small cases which leads to the neglect of large ones.

In the adjudication system, it is proposed that the “six performance measures” described above be adopted. Thus throughput, operating expenses, inventory, lead time, quality, and due date performance can serve as a basis for a good measurement system.

### 3.7.5. *Strategic actions*

In addition to all the tactical actions mentioned above (exploiting the bottleneck, creating tactical gating, working only with a complete kit, offloading the bottleneck, etc.), strategic measures have to be taken. The strategic measures should include actions to reduce the increasing demand on one hand, and changes aim-



ing to increase effectiveness and efficiency on the other hand. These measures are beyond the scope of this paper.

3.7.6. *The change process*

The process of initiating change in the court system in Israel started with a meeting with the chief justice, the head of the Supreme Court. A program of how to dramatically reduce the lead time, while increasing quality and throughput was presented. Later on, several six-day workshops were conducted with most of the presidents, vice presidents, and senior judges of the court system.

During these workshops, all the tactical tools described in this paper (TOC, the complete kit concept, measurement and control, DBR and tactical gating) were presented and practiced. At the end of each workshop, a survey was conducted. In this survey, the judges were asked (anonymously) for their estimation of the effectiveness of the various tools and techniques.

3.7.7. *Tools*

Some additional tools not mentioned earlier in this paper were presented and explained to the 94 judges during the workshops:

1. **The Pareto analysis (20/80):** According to the Pareto rule, 20% of the causes of a certain phenomenon are responsible for 80% of the phenomenon. The meaning of this rule is that in order to deal with a problem and to achieve significant improvement one must deal with only a small part of the causes of the problem. The implementation of this rule is based on an analysis depicted in a diagram that maps the different factors according to the influence they have on the phenomenon. Fig. 3 demonstrates a Pareto chart.
2. **The focusing table (easy-important):** The focusing table is a tool that helps us choose judiciously which tasks we should focus on and which tasks we should skip. The table lists the tasks at hand and consists of a scoring method for ease of performance from 1 to 5 (5 being a very easy task and 1 a relatively difficult task), and for the importance or the contribution of the task from 1 to 5 (5 being very important and 1 the least important). Table 1 demonstrates the focusing table.
3. **Current reality tree (identifying core problems):** The current reality tree is a tool that helps sort the undesirable effects in the system which cause the system to fail to achieve its goal. By building the tree top-bottom in cause-effect

relations, managers can easily identify the core problems of the system. Treating these problems will naturally treat the rest of the undesirable effects as they are no more than symptoms of the core problems. Fig. 4 demonstrates a current reality tree.

For more details about these tools, the reader is referred to [22].

4. **Analysis of the survey**

4.1. *The questionnaire*

A two-part questionnaire was presented to the 94 judges who participated in the survey. In the first part they were asked to examine the potential of various actions for improving performance by increasing throughput and decreasing response time, without harming professional quality. The results are presented in Table 2. In the second part they were asked to assess the potential of certain tools that can be used to improve the adjudication system. The results are presented in Table 3.

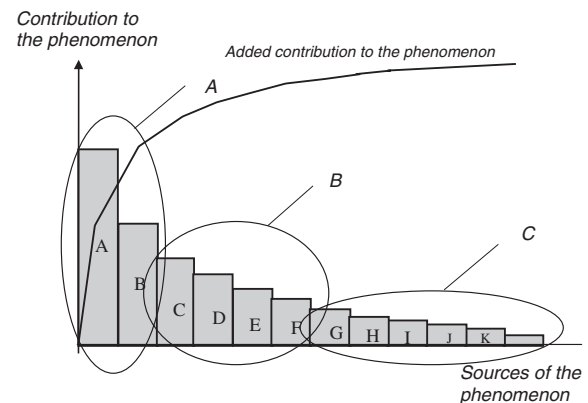


Fig. 3. The Pareto diagram.

Table 1  
The focusing table

Number	Suggestion	Importance	Ease of implementation
1	Action item A	5	3
2	Action item B	3	3
3	Action item C	5	5
4	Action item D	3	5
5	Action item E	4	5

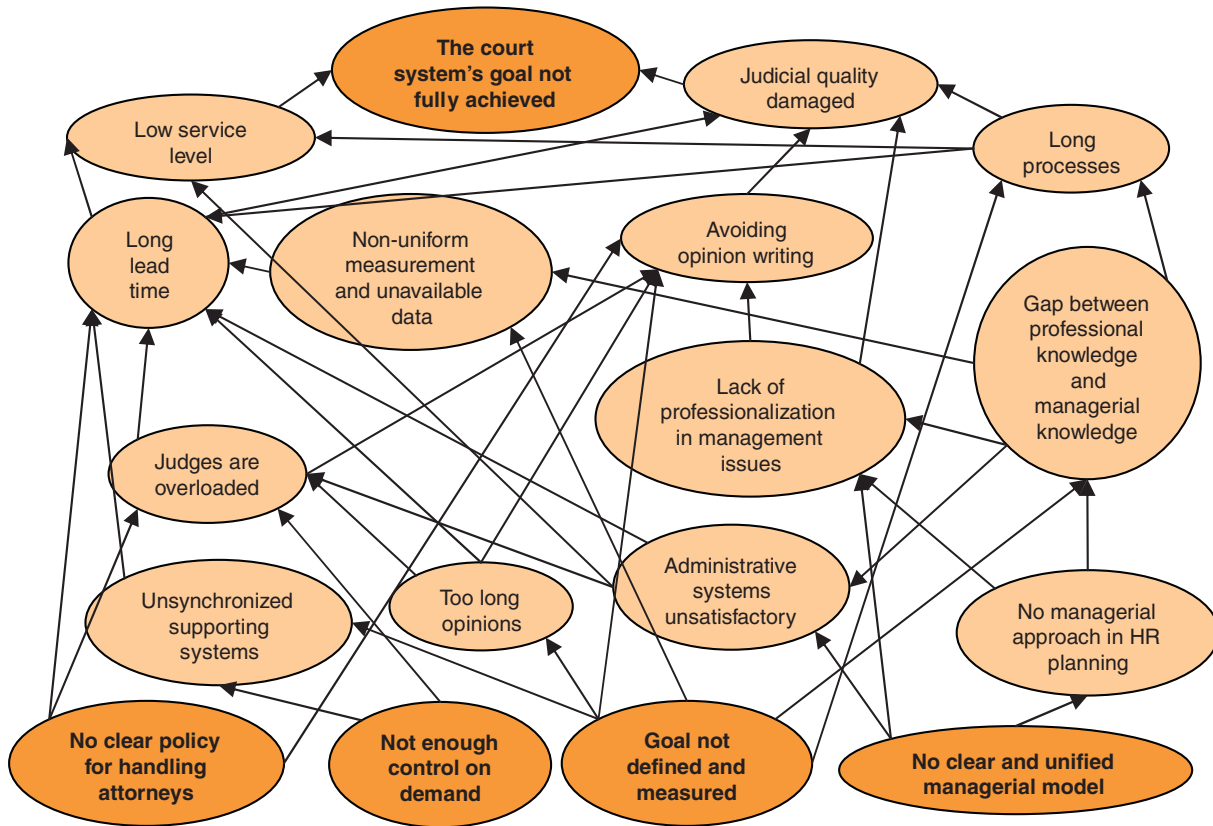


Fig. 4. Current reality tree (CRT).

Table 2  
The potential effect of managerial actions on adjudication system performance. The gray figures represent the common value

	NI	Non	5–10%	10–15%	15–20%	Over 20%
Offload by additional registrars	5	11	25	25	14	14
Offload by additional legal secretaries	3	1	25	21	23	21
Offload by additional legal aides	1	1	6	9	23	54
Offload by additional interns	0	21	32	15	17	9
Offload by additional administrative assistants	1	12	36	20	19	6
Reducing ineffective time inside the court room	4	7	21	25	20	17
Reducing ineffective time outside the court room	4	5	23	39	13	10
Writing shorter and more effective rulings in most cases	2	4	16	22	24	26
Working with a mandatory kit in preliminary hearings	1	10	17	34	19	13
Working with a complete kit in proof hearings	2	4	10	17	29	32
Further applying the gating process	6	2	15	23	22	26
Consecutive or frequent hearings	1	6	13	18	29	27
Writing shorter rulings	2	10	19	29	16	18
Improving judge's scheduling	3	3	30	23	22	13
Measuring lead time, throughput, and WIP	8	6	22	26	20	12
Breaking dummy and policy constraints	2	1	10	23	25	33

Table 3

The potential effect of managerial tools on adjudication system performance. The gray figures represent the common value

	NI	Non	5–10%	10–15%	15–20%	Over 20%
Pareto analysis (20/80)	2	1	10	24	26	31
Focusing table (easy-important)	4	3	19	20	31	17
Current reality tree (identifying core problems)	22	3	13	21	22	13
Management by constraints (exploitation, utilization and offload)	6	1	15	25	25	22
Gating	7	1	16	30	14	26
Complete kit	4	2	14	23	21	30
Measurement and control	5	2	19	25	26	17

#### 4.2. Analysis of the results

Courts, like any service provider, supply the demand of the clients, by providing decisions for the direct litigants. Thus, it is important to improve the functioning of courts, as in any other organization that provides goods or services. However, unlike a regular service provider the performance of courts has very important public interest implications. Insofar as the judicial system is one of the three cornerstones of a democratic society, the public interest in maintaining the proper functioning of the courts is essential for the existence of our society. Ill-functioning courts may lose public trust and distort the allocation of powers among the three branches of government. Furthermore, parties to disputes may resort to the other, perhaps socially undesirable, methods for resolving disputes. Unlike most service providers, which interact directly with the clients without generating positive externalities, the judicial system is by nature a provider of a public good. Decisions that are published (and current technology allows for almost costless dissemination of judicial decisions) provide free information regarding judicial interpretation of the law to anyone who is interested. In sum, improving the performance of the judicial system advances a wide range of interests and results in positive spillover effects. From the social welfare perspective, therefore, improvements in the judicial system seem to be much more desirable than improvements in a regular service provider.

Thus our paper sets a theoretical and practical basis for significant improvements to court systems, supported by the results of a survey conducted among most of the senior judges of the trial courts in Israel. The results show that implementing the tools and approaches discussed in the paper can easily achieve the positive outcomes as set forth in the theoretical part of the paper.

A common approach to remedy, or at least diminish, the excessive length of proceedings (decreasing response time) is to appoint more judges [31]. This approach has its shortcomings. It is very costly and requires, in addition to the direct salary and benefits to the judge, the considerable additional costs such of building and maintaining more courtrooms, and adding administrative staff and clerks, amongst others. There are other serious issues associated with such an approach – in particular the problem of a decrease in the quality of candidates if a large number of additional judges are required.

Our approach does not face such shortcomings. Most of our recommendations do not require the investment of substantial additional costs. Moreover, the implementation of some of our suggestions will increase efficiency and, at the same time, reduce the costs of judicial proceedings. For example, conducting consecutive hearing sessions requires no additional costs; however, it will reduce the re-learning costs associated with long intervals between sessions. The survey predicts that this no-cost change will increase throughput (and decrease lead time) by approximately 20%. Some of our methods will require allocation of additional costs, but these should be very small relative to the added efficiency that will be derived from implementing the method. For instance, the majority of the judges assess that adding legal aides will improve throughput by 20%. The legal aides actually remove part of the load from the judges and offload pressure from the constraint of the judicial system. The cost of employing legal aides is just a fraction of the costs associated with recruiting and maintaining additional judges.

Introducing methods to improve the efficiency of an organization must also relate to the quality of the product or services supplied, particularly in monopolistic organizations. Judicial systems are a sort of monopoly, and as such, it is quite simple to increase throughput

at the expense of quality. As explained earlier, maintaining or improving the quality of judicial systems has a positive spillover effect on other institutions in our society as well as on the public in general. Hence, in reshaping the performance of judicial systems, we aim to apply only methods that will not decrease the quality of the courts. As evident from the underlying question that served in the formation of Table 2, the methods that we elected are such that do not reduce or harm the quality of the judicial system. These methods at least maintain the current quality of the judicial product, and, as seen in other service organizations, improve quality while increasing throughput and reducing lead times. Thus it is safe to state that implementing our methods will lead to a better judicial system.

As seen from Tables 2 and 3, most of the tools and techniques are expected to increase throughput substantially. The best practices as determined by the judges were:

- Offloading by additional legal aides
- Writing shorter and more effective rulings in most cases
- Working with a complete kit prior to the commencement of the hearing stage
- Further implementation of the gating process
- Breaking dummy and policy constraints

As for the tools, the Pareto principle and the complete kit concept were chosen to have the most potential. It should be noted that implementation of these tools requires very few resources and the expected improvement is considerable. Unlike some of the methods presented in Table 2, the tools (Table 3) do not in any way interfere with the essence of the judicial work; hence they are not likely to have any negative effect upon the quality of the judicial product.

## 5. Conclusions

Within the first year after the end of the workshops, a decision was made by the court management to offload the judges by assigning additional legal aides to all judges. Dozens of legal aides were added to the district court judges.

As seen from the analysis of the questionnaire, most judges found the Focused Management tools and techniques to be useful and fruitful. They will undoubtedly help the adjudication system just as they have helped industry. The judges found that implementing any of these methodologies by itself has a potential

for improvement current performance by more than 20%. This means that the judges assess that throughput will increase, and consequently response time will decrease – both to a significant extent. Furthermore, these socially desirable results can be achieved without impairing the quality of the judicial decision-making.

It is noteworthy that the implementation of several of these techniques could yield remarkable improvements in the efficiency and effectiveness of the judicial system. We cannot, at this stage and based upon the current data, predict exactly what the cumulative level of improvement will be. However, the potential for improvement is clearly very high.

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