

**Brief Summary  
of  
Making work visible  
Exposing Time Theft to Optimize Work and Flow**

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1. The five thieves of time that prevent you from getting work done include
  - a. Too much Work in Progress – work that has started but is not yet finished – in other words Partially completed work
  - b. Unknown dependencies – something you weren't aware of that needs to happen before you can finish
  - c. Unplanned work – interruptions that prevent you from finishing something or from stopping at a better breaking point
  - d. Conflicting priorities – projects and tasks that compete with each other – especially when you are not sure which is the most important thing to do
  - e. Neglected work – partially completed work that sits idle on the bench
2. These five thieves hide right under your nose – and we are to get stuff done we must trap these thieves to expose the crimes they commit

**Too much WIP**

3. Too much WIP is when the demand on the team exceeds the capacity of the team. This results in delayed delivery of value, increased costs, decreased quality, conflicting priorities etc.
4. Typically, we take up more work that we have capacity due to various reasons
  - a. As team players, we feel “I don't want to be the person who lets the team down”
  - b. We fear humiliation – “I don't want to be criticized or fired”
  - c. We like something new to work on – so the focus shifts to the new from the work which is yet to be completed
  - d. We may not realize how big the request is – before taking up the new request.
  - e. Importantly we like to please people – “I say Yes to most requests as I want to be liked, admired ...”
5. WIP is a leading indicator of cycle time – the more items that are worked on at the same time, the more doors open up that allow dependencies and interruptions to creep in.
6. There is a relationship between the amount of WIP and cycle time – called Little's Law where the average cycle time is calculated as the ratio between WIP and Throughput.
7. Too much WIP results in context switching, decreasing quality of work items and irritated staff

**Unknown Dependencies**

8. Every dependency doubles your chance of being delayed or late” – Troy Magennis
9. Unknown dependencies become obvious when
  - a. Coordination needs are high and project managers are trying to get everyone aligned
  - b. People aren't available when you need them
  - c. A change in one part of plan/outline/code unexpectedly changes something else.

10. Every dependency increases the possibility you will be late. Every dependency you find and eliminate doubles your chances of delivering on time.

### **Unplanned Work**

11. The problem with Unplanned work is that it sets back planned work. It increases uncertainty in the system and makes the system less predictable as a result.
12. Often Unplanned work comes in the form of unnecessary rework or expedited work requests.
13. Unplanned and expedited work steals time away from work that is creating value.
14. Unplanned work not only causes its own problems but brings with it all the problems of too much WIP : context switching, interruptions, delayed work and increased cost.
15. Unplanned work increases risk, uncertainty, reduces predictability and smacks down morale.
16. Unplanned work is hard to see, but it can be made visible through use of Kanban Boards
17. Plan for unplanned work by reserving capacity for when it arrives.

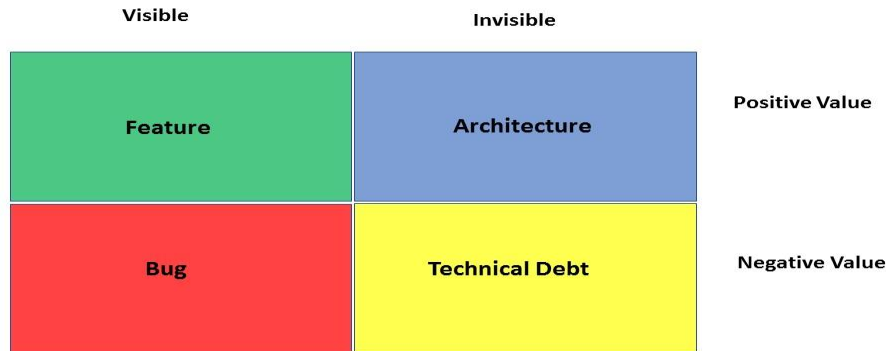
### **Conflicting priorities**

18. “Productivity isn’t about being a workhorse, keeping busy or burning the midnight oil. It is about priorities and fiercely protecting your time” - Margarita Tartakovsky
19. Conflicting priorities often show up when people are uncertain or disagree on what to work on
20. Reducing the volume of WIP helps people prioritize more effectively because they are fewer things vying for attention.
21. If people cannot prioritize effectively, they try to do too much at one and everything takes longer.
22. If everything is priority one, then nothing is priority one and everything takes too long.
23. One indicator of the problem of conflicting priorities is when you find yourself spending more time in meetings discussing priorities

### **Neglected work**

24. Maintenance of legacy systems is one of the most neglected types of work. Old, fragile systems decay, making them unpredictable as the technical debt adds up.
25. When new requests continuously jump over important maintenance work, neglected work sits alone and technical debt piles up.
26. If not dealt with, important neglected work eventually becomes an emergency.
27. Neglected work doesn’t get the attention, the budget, or the resources needed to be successful.
28. Waiting on feedback, work deemed important but not urgent and “Zombie projects” (projects which are low value, but are barely alive) are the key areas where neglected work is visible.
29. Often business frequently prioritizes new feature releases over fixing technical debt- choosing to work on revenue generating work instead of revenue protection work.
30. Neglected work is perishable and like rotten fruit is perishable

## Make Work Visible



**Visibility Grid**

31. This image is a good example of visualization. It displays the four elements necessary to make a work visual – structure, usefulness, relevance and honesty.
32. Visuals can show business pain points and other hidden information.
33. Kanban boards can help make work visible.
34. One of the first steps to make work visible is to identify the kind of work the teams does and then list out roadblocks preventing you and your team from finishing the work.
35. Then go on to identify the various work item types / categories which support different work flows and different degrees of priorities and metrics
36. This would form an input to the Work flow mapping – which would form the basis for designing the Kanban Boards.

## Ambush the Ring Leader

37. Breaking work down into categories helps people better visualize the flow of work, which in turn aids them in understanding the communication needs of the team and people outside the team.
38. WIP limits of often set at the top of the columns of a Kanban Board to keep linear flow of work in check. There are several ways to set WIP limits – WIP limits per work item type, per swim lane, per column or per person.
39. It is the WIP limits that create the necessary tension in the system – the constraint that enables the completion of work.
40. All work including invisible WIP has an associated cost, so make it visible.
41. Visualizing work through the lens of flow improves team communication and understanding.

## Expose Dependencies

42. Having a Dependency Mapping makes the various dependencies visible and lists down all the dependencies involved which prevent the work getting completed.
43. Visualize the work flowing between the teams helps communicate across teams.

## Perfect Crime – Unplanned work

44. Visualizing interruptions is quite useful for exposing Thief Unplanned work.
45. Ours is a world filled with uncertainty – where everything is changing. Sometimes we just don't know what we want or need until we see it – hence there will always be unplanned work. And this requires visibility.
46. When Unplanned work is made visual, other people can see it and understand why work isn't done and steps can be taken to prevent or at least limit unplanned work from taking over in the future.
47. Knowing the ratio of unplanned work to planned work helps when planning your workload capacity. If every week, there is a 25-50% unplanned work, then allocate 25-50% of your WIP for potential unplanned work.
48. Some of the strategies to counter unplanned work would be to have Office Hours, Do not Disturb Hours, Pomodoro technique

### **Prioritize, Prioritize, Prioritize**

49. Propose a prioritization strategy to kick off a conversation on priorities.
50. A3 Thinking process could be a good approach in arriving at an agreement of the various options.
51. The goal with prioritization is to determine what to complete next in order to get maximum value in the shortest amount of time and to avoid multi-tasking due to competing priorities.
52. There are several ways to prioritize – Highest paid person's Opinion, Cost of Delay, First In First Out and Weighted Shortest Job First.
53. Many organizations are blind to queues – they tend to focus on resource efficiency instead of applying systems thinking to improve the efficiency of the whole system end to end.
54. Quantifying the cost of the work that gets delayed is useful in prioritization.
55. Cost of Delay can be used to negotiate prioritization of work and bring visibility to projects that have a bigger impact on the bottom line than the others.
56. Cost of Delay combines urgency and value – two things that humans are not very good at distinguishing between – by asking the question “What value is lost by the delay of something. How much will we lose if we deliver this twelve months later?”
57. The Commitment line is a vertical line before a specific state that signals a commitment to do the work. The tasks in the backlog are options and they may never get done – once the task is moved beyond the commitment point, it is a fully agreed upon work and prioritized.

### **Preventing Negligence**

58. One of the important problems with neglected work is that the work would have remained untouched for weeks and we forget the details.
59. When you try to do too many things at one time, you won't do any of them great and sometimes you won't finish them at all.
60. Neglected work is another term for partially completed work – and provides zero value until it is finished.
61. Make time to work on fire prevention so that you can reduce the amount of time you spend putting out the fires.

62. One of the ways to manage neglected work is to acknowledge the neglected work sitting on the board, create space to finish the more important work and protect time to stop starting new work before finishing old work.

### Metrics

63. Becoming more predictable means, we need to talk about probability – and once we are able to shift to a more probabilistic approach expectation around timeframes can be improved.
64. Good metrics help us to see progress and understand how long things really take – they steer us in the right direction.
65. Some of the best metrics that show actual progress are lead time, cycle time, WIP and aging reports
66. Flow time is a measure of how long something took to do from beginning to end.
67. Lead time and Cycle Time are types of flow time metrics.
68. The odds of being predictable decrease when WIP constantly increases and flow times elongate.
69. Unlike most other metrics, WIP is a leading indicator. The more WIP in the pipeline, the longer things take to complete.
70. Dan Vacanti, in his book, “Actionable Agile Metrics for Predictability”, talks of the power of Little’s law lies in understanding the assumptions necessary for the law to work. Some of the assumptions, Dan talked about in his book include
- All measure units are consistent
  - Average Arrival rate = Average Departure rate
  - All work that enters the system flows through to completion and exits
  - The average age of WIP is neither increasing nor decreasing.
  - The total amount of WIP is roughly the same at the beginning and at the end.
71. Attempting to load people and resources to 100% utilization creates wait times. The higher utilization, the longer the wait, especially in fields with high variability like IT.
72. Unpredictable events cause variability, and the more variability, the more vulnerable we are to capacity overload.
73. The more the people and resources are utilized, the higher the cost and risk – this forms the basis for the Queueing Theory, which is a field of Applied Statistics that studies waiting lines.
74. The optimal batch size for delivery depends on the combination of the impact of economies of scale and the cost of delaying responses (holding cost and transaction cost). Refer Don Reinertsen on Holding cost and Transaction cost)
75. One of the best predictors of short lead times is small batch sizes of work. Work batched up in small sizes constraints the amount of work needed to be completed before receiving feedback – and this enables predictability in lead times.

### The Time Thief O’Gram

76. Time Thief O’Gram is to be looked as a spotlight, shining a light on the uncertainty across the organization with the intent of looking at metrics that reveal high risk.
77. Time Thief ‘O Gram can be generated by tagging all thieves on the Kanban board – Unplanned work, Neglected work, Unknown dependency, Conflicting priorities and Too much WIP – the risks involved and measuring and tracking them.

78. This would provide transparency for leaders eager to see the issues facing teams and getting executive buy in to do things necessary to improve predictability and reduce risk.

### **Operations Review**

79. The goal of an Monthly Operations Review is to collectively look at the data to see and understand the health of the organization and look at opportunities for continuous improvement.
80. Operations reviews provide feedback loops to help you understand how the organization is doing and to enable you to make informed decisions.
81. It is important to time box the presentations and the Q&A session and help the participants focused on what is important.
82. Metrics presented may include
- a. Throughput - number of items completed during the period. Could be shown with a CFD
  - b. Flow Time - measure how long it takes the items to move across the board from start to finish
  - c. Issues and Blocked work items – this would help people understand why things took so long to complete and what is being done to prevent its recurrence
  - d. Additional metrics may include Aging reports, Flow Efficiency and Failure load (value demand vs failure demand) as a measure of quality

### **The Art of the Meeting**

83. Lean Coffee is one the ways a group of people can discuss ideas. The conversations are productive because the agenda for the meeting is democratically generated and every one's voice is heard.
84. For change to occur, people's behaviours must change, and in order to change behavior, the hearts and minds of people must be open to change.
85. This is best accomplished through personal relationship and having face ot face conversations in a safe calm and respectable setting.
86. Another meeting which is important for the team is the Standup meeting – where one goes round the table and each of them talk about what they are working on. It is important that one talks about invisible work, items which are blocked or anything that is impacting the deliverables and the team should be aware of.
87. Holding Standups at a regular cadence a the same location reduces uncertainty.

### **Beastly Practices**

88. Visibility of accurate metrics helps us make good decisions but is dependent on the transparency of others. If you need more predictability in your organization, measure flow time accurately.
89. Correlating activity with business value is risky. High activity levels do not equate to high business values – high activity levels mean hidden queues which result in delayed project timelines.
90. Use of a timesheet to track the number of hours worked does not reflect the speed of delivered business value
91. Instead of managing work with Gantt charts, consider managing work with queues – the longer the queue, the longer the wait time.

92. Instead of giving due dates, reduce WIP, prioritize by COD and reduce batch size.
93. Simplify meeting tools wherever possible
94. Instead of looking at best practices, look at conducting experiments to discover what best works for the content and the organization.
95. It is hard to manage invisible work – one of the ways you could do it is by having all the work visualized on a Kanban Board, limiting WIP to reduce the level of demand and protect the team from constant interruptions – only these will help organizations reap maximum benefits.

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