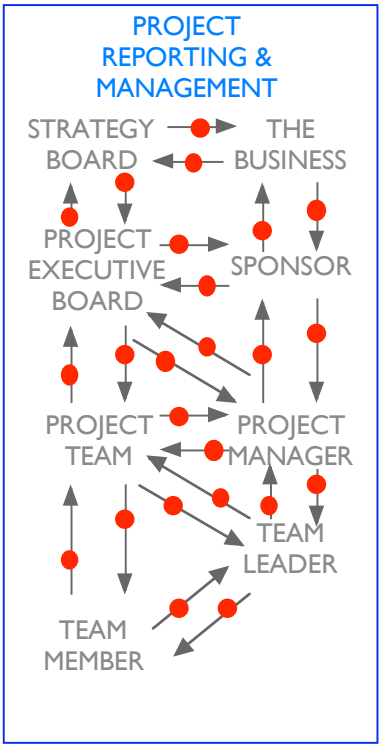
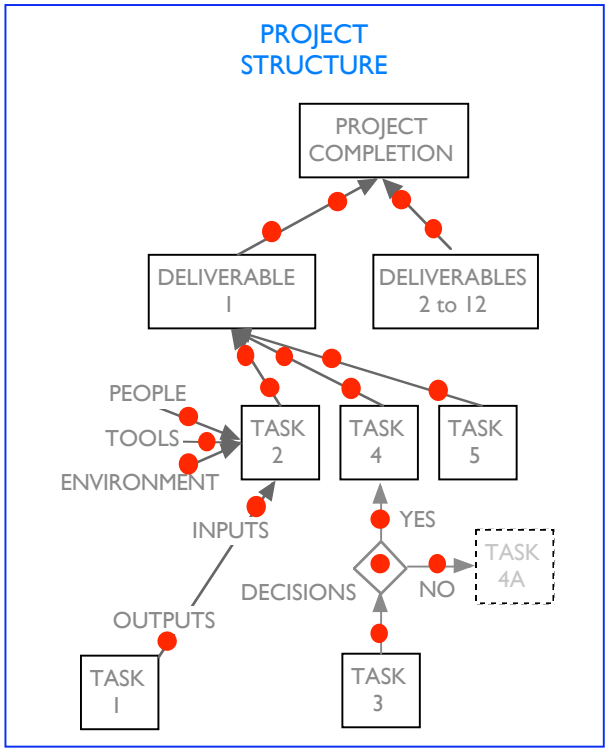
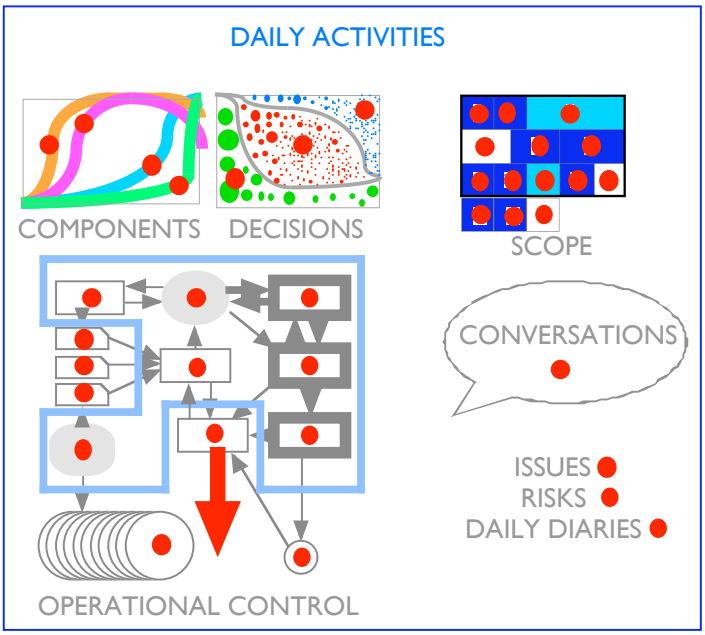
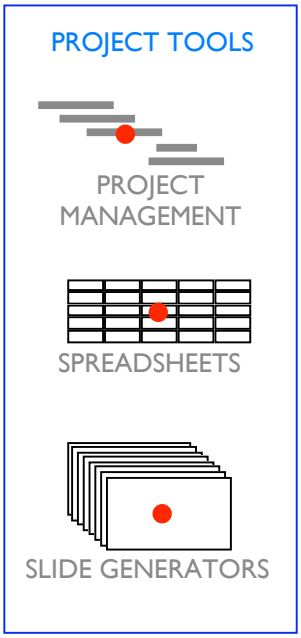
OPERATIONAL PROJECT CONTROL

This diagram attempts to give an overview of the immense complexity of the management of a project. The final part of this section explains a methodology for the control of a complex project by the project manager. This methodology, combined with the project chart, enables a project manager to know as much as possible about what is going on throughout the project and the implications and connections elsewhere.









THE ADVANTAGES OF PAPER

The operational work control system that will be described in due course makes a clear distinction between project filing (which is almost exclusively electronic) and the control of project activities – which is largely paper-based. This is not a consequence of a failure to computerise. Paper can be manipulated, written upon, sorted and resorted far quicker and with far more comprehension that documents on a screen. A project may have ten tasks running simultaneously, each of which may have a hundred separate pages of document. These separate sheets can be anything: PowerPoint slides, Excel spreadsheets, emails, Word documents, photocopies, handwritten notes.

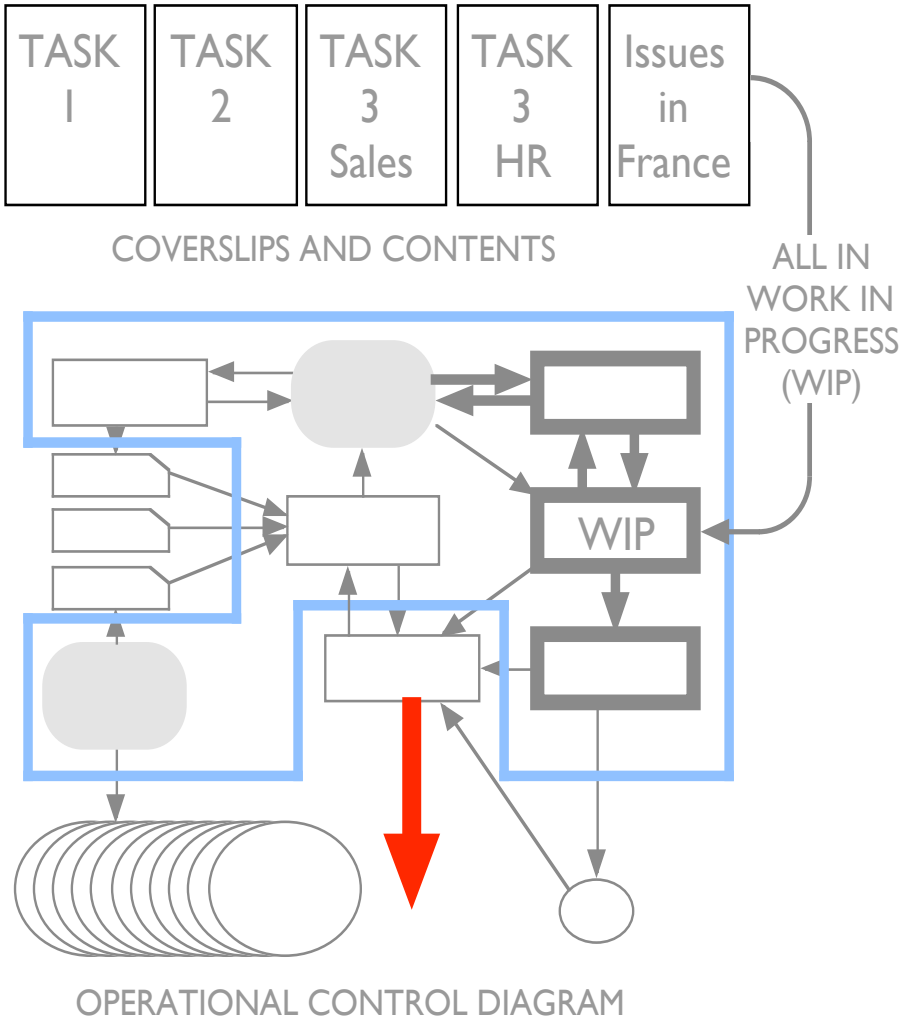
To review project progress the project manager should set aside time once a week to scan through these sheets – say 1,000 in all. With paper this can easily be accomplished in half an hour. In addition, the process of flicking over each page in turn is autonomic and does not distract from a line of thought. Opening one document and reading it on screen can take half-a-minute, the resulting document cannot be instantly compared with one opened fifteen minutes before, and the operation of the keys and shift of visual focus destroys much of the train of thought in short-term memory.

There is one additional reason. Effective project control needs big wall charts. There is no current computer display five by two metres that displays 10 or 12 point type at actual size, and can be taken off the wall in a couple of minutes and put into a briefcase or deep pocket for carrying.

BELOW THE TASK

A project is composed of tasks and deliverables. We are now going to discuss the process of controlling the completion of a task. The method recommended here is not claimed to be the only way in which this can be done. The author would merely claim that it is the product of some twenty-years of thinking about work control, that it has remained substantially unchanged for the last fifteen years – and that it works for him.

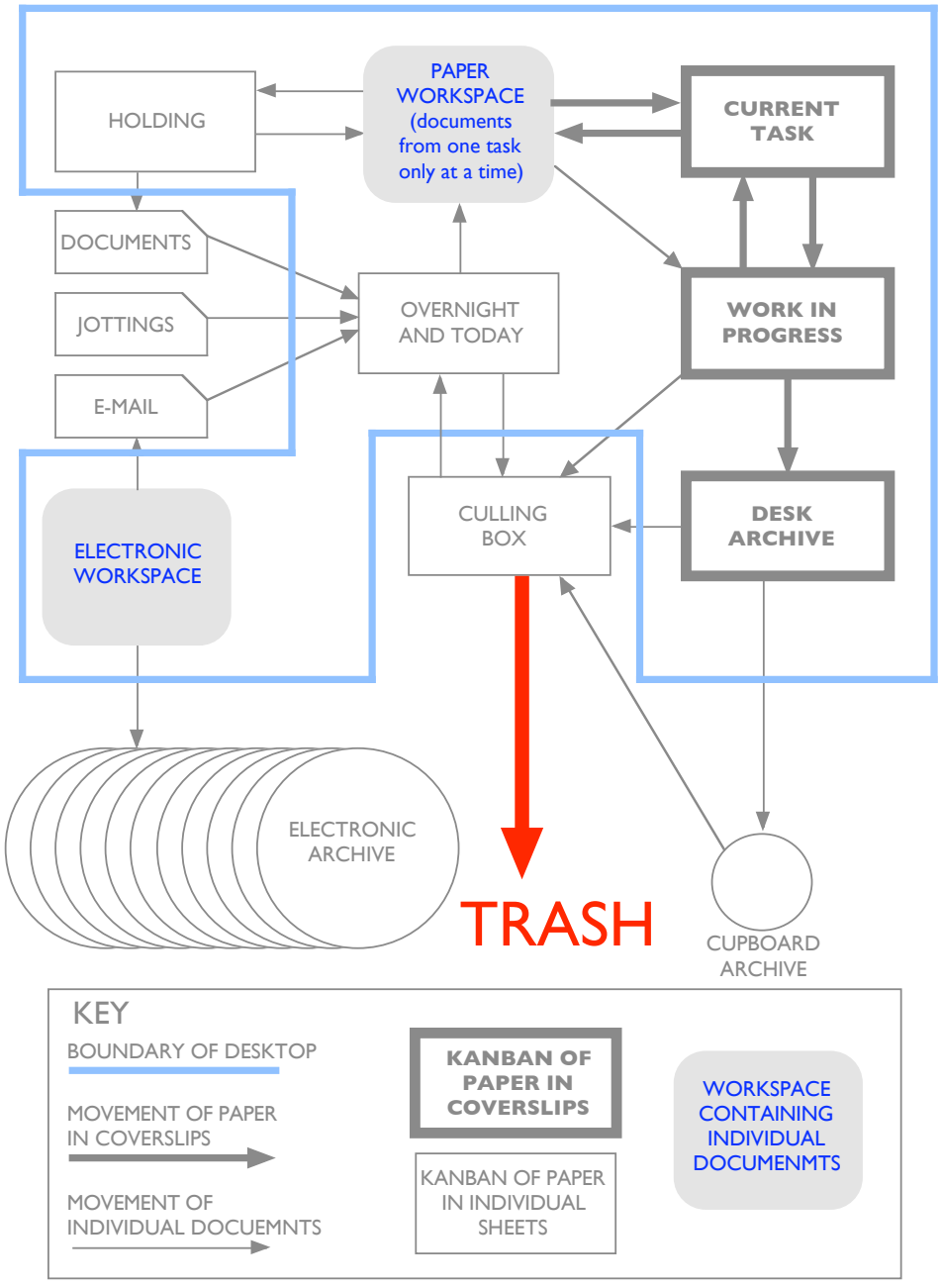
All current documents relating to a task are kept in a transparent coverslip. The type of coverslip used is closed on two sides only so that the contents can be extracted as easily as possible. The coverslip contains a title sheet at the top of the pile that has the name of the task written at the top (TASK 1) and the bottom. This first sheet also has a space for handwritten notes. If the documents form too bulky a pile then the task is split into two coverslips (TASK 3 Sales and TASK 3 HR) with a reference to each on the front sheet of each. Operational files may also be needed that cover several tasks (Issues in France). These also are each contained within a coverslip.



OPERATIONAL CONTROL DIAGRAM

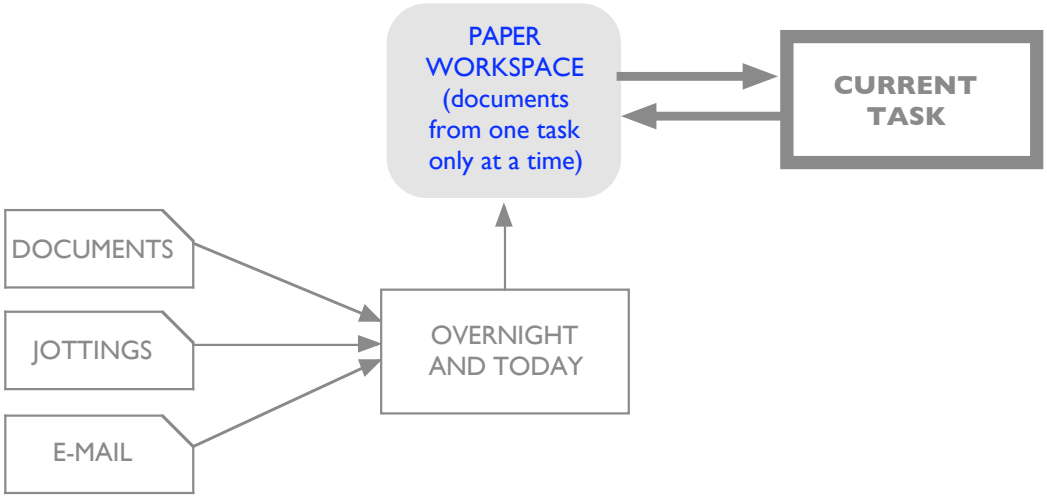
KANBANS

The page opposite explains the processes below in more detail. One word, KANBAN, may be unfamiliar. The model below is indirectly derived from Japanese production line management. Every worker has a bin or marked floor area into which (say) completed parts are put. The person next up the line draws on these parts so there will normally be an equilibrium. However, if the bin/floor area becomes full, the worker producing the parts stops producing them and helps his or her neighbour process them until the numbers in the bin fall back to a reasonable level. The kanbans below are filing trays or cardboard boxes that receive paper being processed through the system. When or if they overflow, the immediate task is to reduce the contents, irrespective of other priorities.



OPERATIONAL WORK CONTROL SYSTEM

The diagram opposite (which will be repeated on all subsequent left hand pages in this section) is the complete model of what starts off as a very simple process.



Work comes in. It can be formal on paper, jottings on a telephone call just received, or a printout of an email with information that will need to be referred to frequently. All this paper is put loose into a filing tray marked OVERNIGHT AND TODAY.

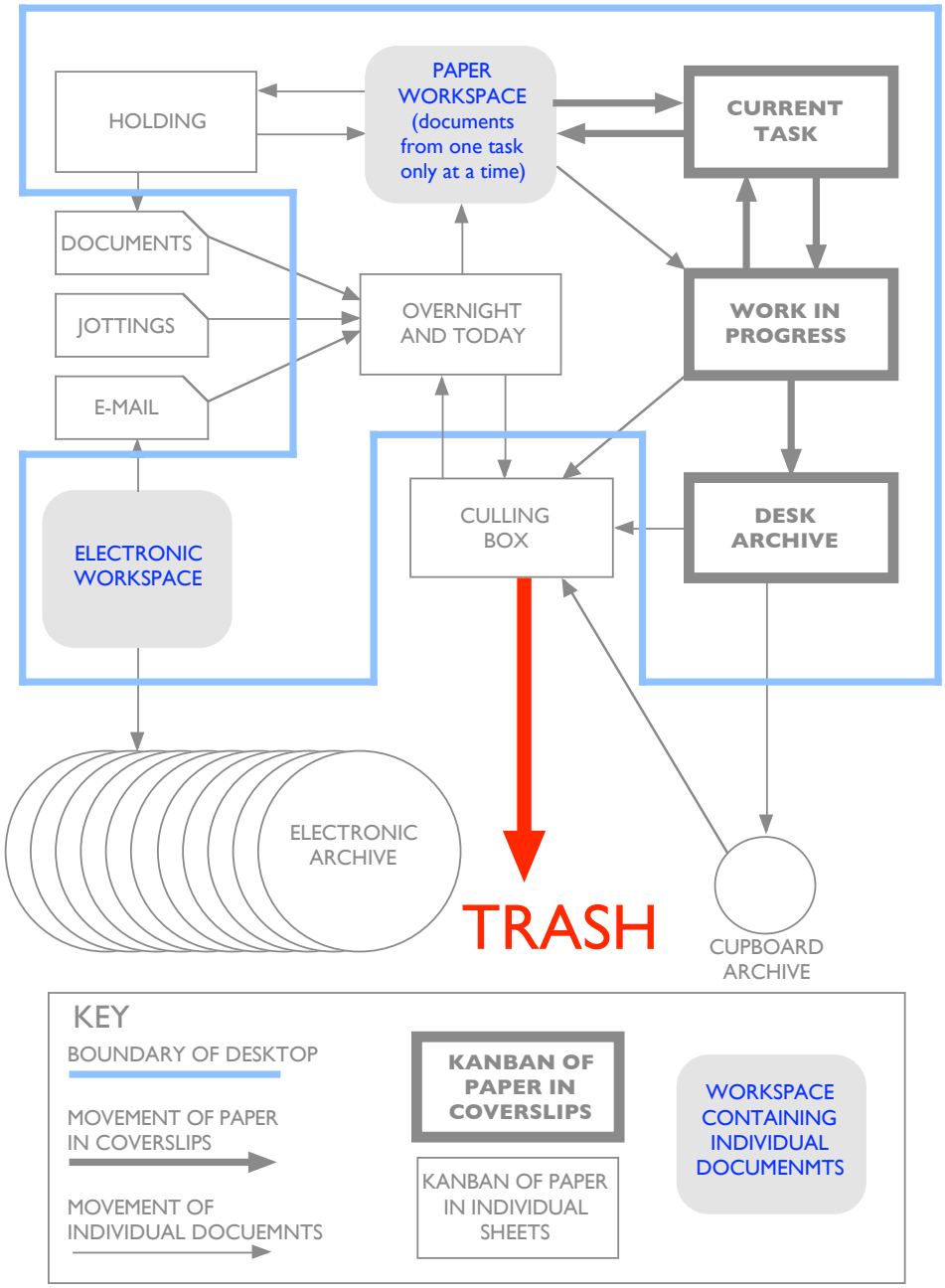
- OVERNIGHT AND TODAY must be empty at the end of the day

The project manager has a PAPER WORKSPACE, normally the square yard or so of the desk beside the computer. This can contain any amount of paper in any order or piles or scatterings. There are three rules that govern the use of the paper workspace.

- PAPER WORKSPACE must never contain paper from more than one task
- PAPERWORKSPACE must be cleared when current task is completed
- PAPER WORKSPACE must be cleared at the end of the working day

In the simplest situation all this work is all for the same task. The project manager puts the paper from overnight and today into the workspace, works on it until whatever he or she is doing is finished for the moment (or until he or she is permanently interrupted) at which point it goes into a coverslip in a filing tray labelled CURRENT TASK. When he or she is ready to resume work on it the contents are taken out and scattered in workspace as before. There are two rules for current task.

- CURRENT TASK must only contain paper in a coverslip
- CURRENT TASK must only contain one coverslip and contents


HOLDING
PAPER WORKSPACE (documents from one task only at a time)
CURRENT TASK
DOCUMENTS
JOTTINGS
E-MAIL
OVERNIGHT AND TODAY
WORK IN PROGRESS
ELECTRONIC WORKSPACE
CULLING BOX
DESK ARCHIVE
ELECTRONIC ARCHIVE
TRASH
CUPBOARD ARCHIVE
KEY
BOUNDARY OF DESKTOP
MOVEMENT OF PAPER IN COVERSLIPS
MOVEMENT OF INDIVIDUAL DOCUEMNTS
KANBAN OF PAPER IN COVERSLIPS
KANBAN OF PAPER IN INDIVIDUAL SHEETS
WORKSPACE CONTAINING INDIVIDUAL DOCUMENMTS

IMMEDIATE ADVANTAGES

The first advantage of this system is that it grows organically. Task files are not set up until they are needed. The second advantage is that the system recognises that people work best when they have paper to shuffle around, make notes on, place side by side, clip to or unclip from. The third advantage is that paper never goes missing because the chaos of paper on the desk is all from one task.

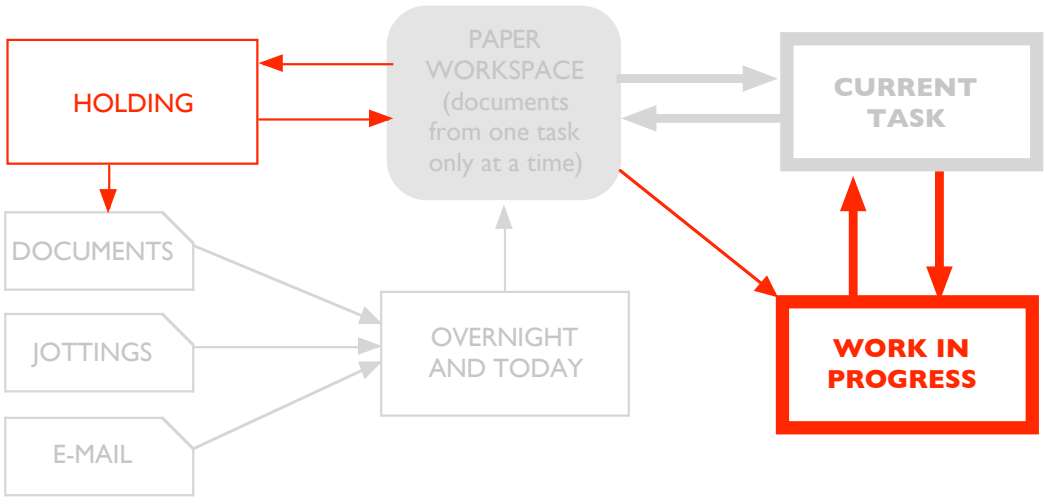
MULTIPLE TASKS AND "TOO PRESSURED TODAY"

It is a fortunate (or very bored) project manager who only has one task to control. New tasks are dealt with in exactly the same way as the first. However, because there can only ever be one current task, the new coverslips are stored in a filing tray called WORK IN PROGRESS. From time to time they will become the current task. The thick arrows indicate that loose paper in never passed between these trays, only in coverslips. New documents (or documents that may have become misfiled) can of course be transferred into coverslips as shown by the thin diagonal arrow.

Pressure of work may prevent the project manager from giving thought to everything in overnight and today. Anything unattended during the day or at the end of the day to is dropped into a tray or box on the desktop called HOLDING.

More rules:

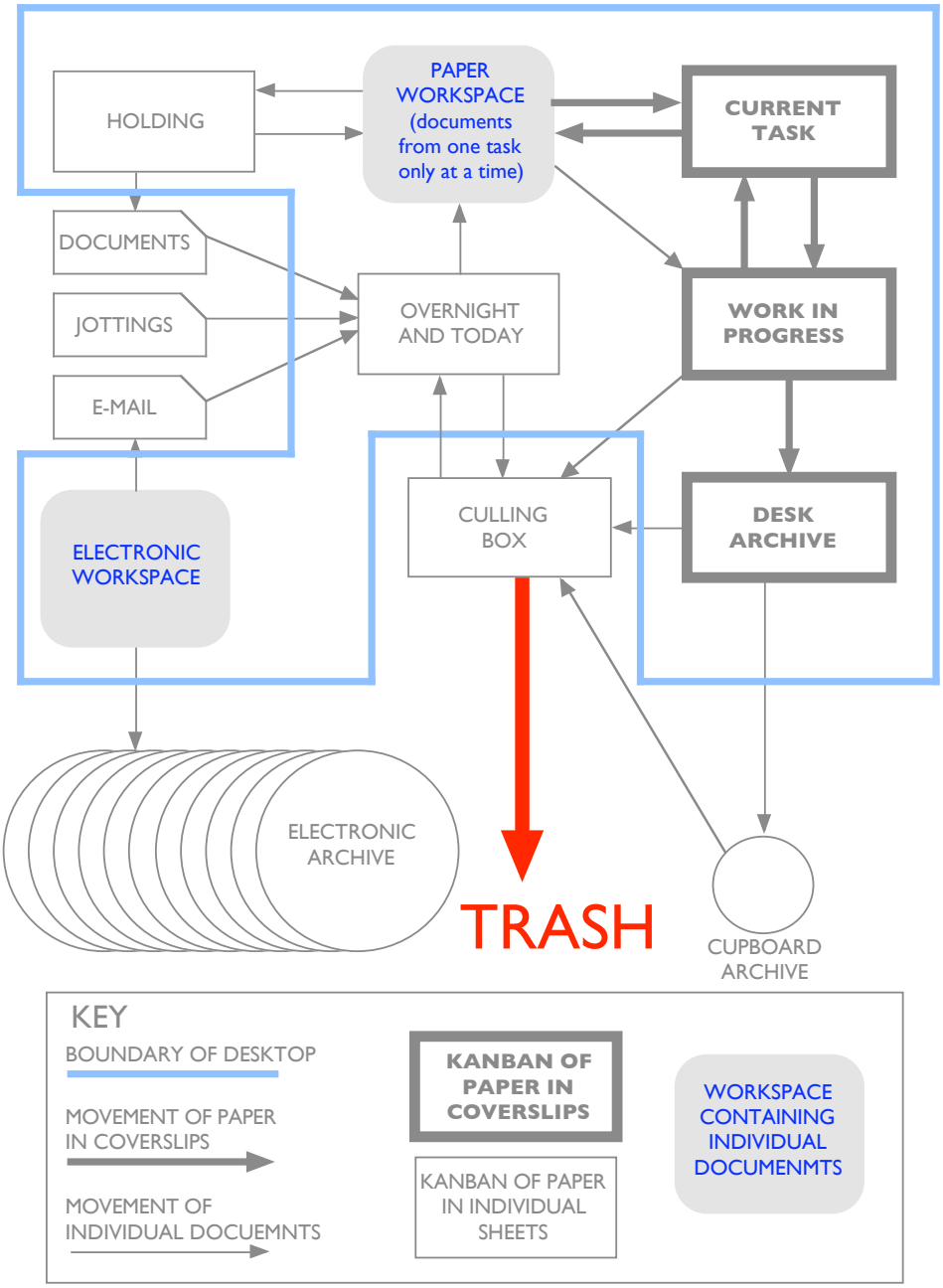
- WORK IN PROGRESS is thinned out (or expanded) when full
- HOLDING is reviewed every day, and thinned out when full



Documents from holding may be passed back into overnight and today. The purpose of the system is not to dispose of documents but to ensure that they are regularly reviewed.

REVIEW OF TASKS

- All tasks are reviewed once a week. Every document in work in progress and current task are scanned through. It will take less than half-an-hour.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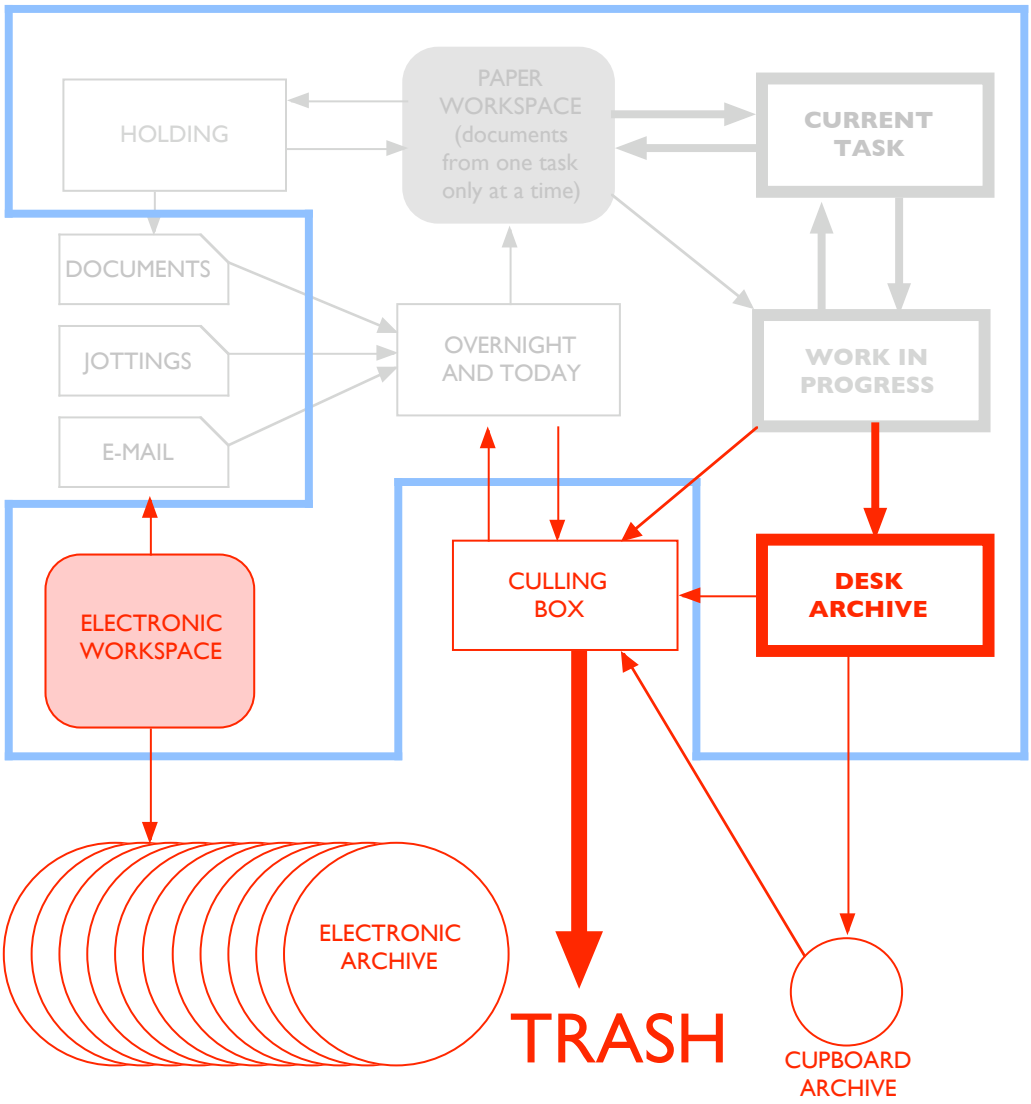
WORKSPACE CONTAINING INDIVIDUAL DOCUMENMTS

THE REMAINING ELEMENTS AND PROCESSES

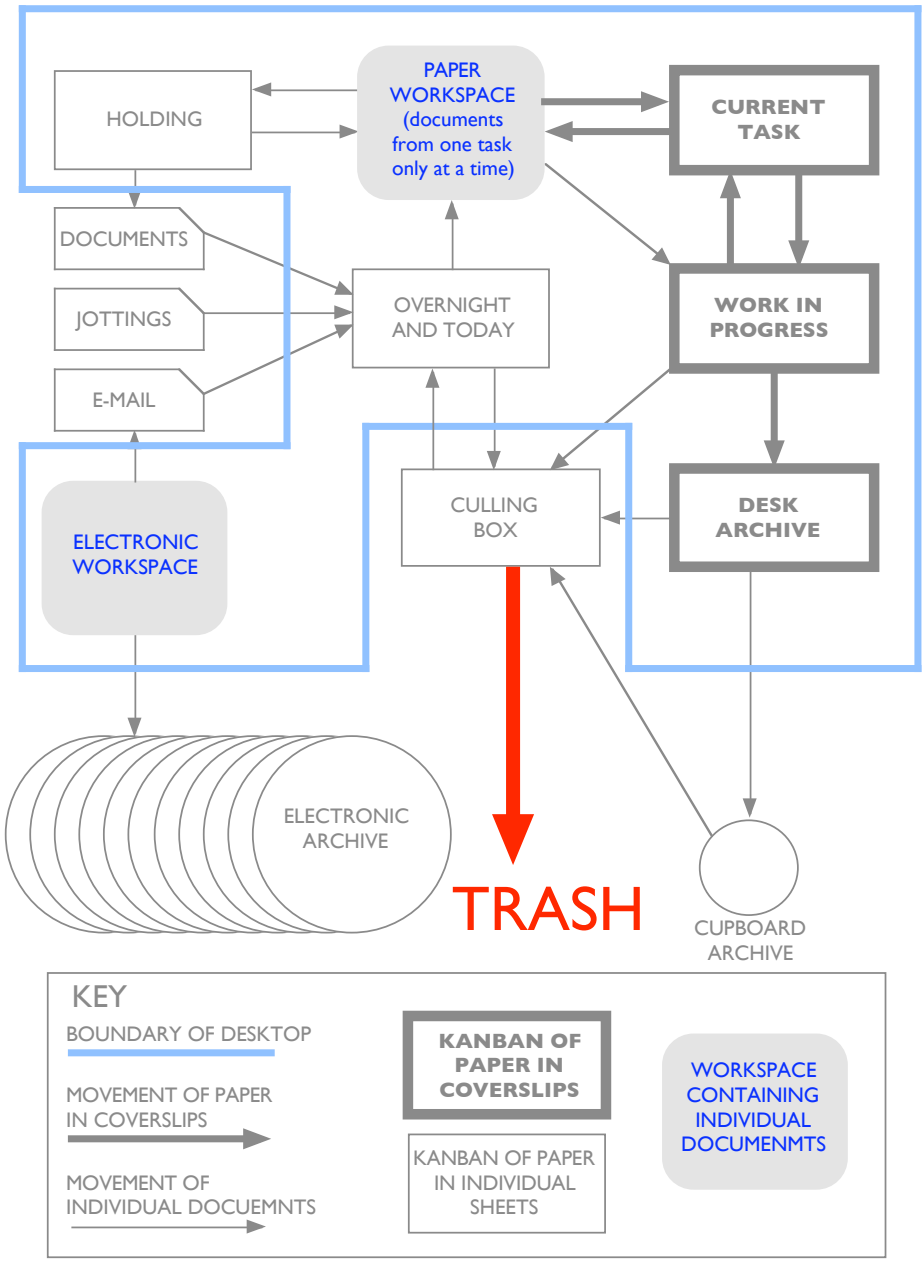
The blue border represents the physical boundaries of the desk. Very large bound documents do not fit well into this system. As far as is possible they should be accessed on the screen (ELECTRONIC WORKSPACE) in conjunction with the paper processing in paper workspace, and individual copies of pages can of course be printed out. Where this takes too much time, a separate archive of bound documents may be kept on the desk. This is DESK ARCHIVE.



As a general rule, all documents are filed electronically (ELECTRONIC ARCHIVE). Some formal project documents may need to be kept on paper: Architect's Certificates, purchase orders, and formal sign offs as example. These are not part of operational work control and should be kept in a CUPBOARD ARCHIVE or filing cabinet. The frequent review process will lead to a continual winnowing of paper. This is dumped into a CULLING BOX (an empty box of photocopier reams is ideal) and this is reviewed when it becomes full. This is a last backstop to prevent anything valuable being thrown out. Anything having lain undisturbed in the bottom of the culling box for a month or so can safely be placed in the TRASH.

MINOR NOTES

The system operates perfectly as described in the foregoing pages. Attempts by well-meaning (but misguided) colleagues to graft on Pending trays and Bring-forward files, and to file the work in progress alphabetically in punch-hole files, have all ended in miserable failure. The system is designed to keep paper mobile and instantly accessible. Pending trays and Bring-forward files hide it out of sight. Files live in cabinets and cupboards, preferably virtual. A list of work in progress (including current task) can be useful, pinned up on a cubicle partition. Written by hand on a sheet of A3 it can contain notes for instant reference in response to a phone call. The holding tray can usefully have a sheet of coloured paper placed on top of it after review (with the time of last review) so that new work is separated from sheets that have previously been looked at.



FREQUENTLY ASKED QUESTIONS

Q *How much time does the operational work control system take to run?*

A The full system takes less than a day to set up. There is no maintenance time separate from the review of the documentation, other than a few seconds occasionally sweeping a deskful of documents into a coverslip, and further set-up tasks such as expanding kanbans. There is considerable time saved from the following:

- Being able to find any document within seconds
- Never losing any documents
- Not having to sort filing into alphabetical or any other order
- Arriving at a clear desk in the morning

Q *Doesn't it tie the project manager to a specific desk?*

A Not at all. Nearly all the archive filing and the project chart and other documents are electronic. The project chart can be taken off the wall in a couple of minutes and stuffed in a briefcase. Task files can be pulled out even quicker and will have the advantage over punch-hole files that only current information is included. Also, all the project documents are available to any other member of the project team or the project office who can operate the system in the project manager's (frequent) absences with virtually no training.

Q *What happens if I fail to follow the rules?*

A The system will start to fail. However, at any time you can reconstruct it by reviewing everything and starting afresh.