- Flux
  - Context
  - Rows
    - 1 row per job
  - Columns
    - Référence
      - Text
        - 45113 A
      - This reference is actually for the order, it is manipulated (usually appended) by the users to manage what amounts to order lines and for a given order line a part.
    - Client
      - Text
        - Fibois Grand Est
    - Planifié
      - Booléan
        - True if the whole action path of the job has been scheduled
    - Commentaires
      - Text
    - Description
      - Text
        - Cartes de voeux - 9.9 x 21 cm - off 350g - 350 ex
    - Envoi BAT
      - Date at which the BAT was sent to the client
      - Text
        - 03-déc-25
        - + reserved values : Attente fichier; Pas de BAT
    - Retour BAT
      - Date at which the BAT approval was received from the client
      - Text
        - 03-déc-25
    - Sortie d'atelier (deadline)
      - Date at which the job MUST leave the factory
    - Achats papiers
      - Select simple
        - Possible values
          - Stock
          - A commander
          - Commandé
          - Reçu
        - When value switches to « Commandé », we store the date and time of the commande
    - Papier - type et grammage
      - Text
        - C8300
    - Papier - format
      - Text
        - 63x88
    - Plaques
      - Select simple
        - Possible values
          - Todo
          - Done
    - Action path
      - Action definition syntax examples
        - Komori 20+40
          - Machine = Komori
          - Setup = 20 minutes
          - Run = 40 minutes
        - Komori 20+40 + vernis »
          - Machine = Komori
          - Setup = 20 minutes
          - Run = 40 minutes
          - Comment = « vernis »
        - Massicot 15
          - Machine = Massicot
          - Run = 15 minutes
        - Conditionnement « au mieux » 15
          - « Machine » = Conditionnement
          - Comment = « Au mieux »
      - Outsourced action syntax examples
        - ST Clément Pellicollage 2JO
          - ST = is outsourced
          - Clément = outsourcing provider
          - Pellicollage = action outsourced
          - 2JO = duration 2 open days
      - n actions are defined
        - Actions follow a single straight sequence
        - Brochures are considered inseparable
          - If the user wants to separate them he must create 1 row per separated element
    - Pré-requis
      - Required job reference
      - Select multiple with existing job references
    - Comments
      - Back and forth messages that are logged separately about a given job
      - With date and author
- Gantt
  - Constraints
    - BAT availability or « Pas de BAT »
    - Action precedence inside a job
    - Job precedence among jobs
    - Machine availability
      - Machines have operating schedules
        - Komori is operating MO-FRI 00:00-05:00 and 08:00-00:00
      - A task that overlaps a machine operating schedule is lengthened/divided
    - Machine order
      - We should be able to easily defined the order in which the machines appear as columns (I have an idea but it might change sometime and not cause any issue)
    - Machine category
      - A machine belongs to a machine category (for example « offset printing press »)
      - Each machine category can have a list of time saving potential similarities between consecutive jobs
        - For example « offset printing press » has : same paper type, same paper size, same paper weight, same inking
    - Machine capacity
      - Machines have a capacity of 1 except for « machines » that are actually outsourced which have an unlimited capacity and therefore can have multiple tiles on a given timeslot
    - Machines belong to machine groups
      - A machine group has a maximum simultaneously running machine count
  - UI ideas
    - The screen is divided into 3 main areas
      - Left
        - Two colums
          - Column 1 : list of jobs
          - Column 2 : list of actions for the job that is highlighted in column 1
            - Possibility to add an action
      - Center
        - We have one column for each machine with tiles in each column for the tasks that are assigned to the machine on a given timeslot
          - Machine unavailability is showed visually
          - The tiles stretch « across » machine unavailability times and take on a different appearance for the time periods they overlap machine unavailability time slots.
      - Right
        - General and contextual information : a single column divided in two zones horizontally
          - Late jobs
            - List of jobs that have a planned departure date that exceeds the configured departure date
          - Job actions
            - The list of all actions and time-frames for the job the highlighted tile belongs to (or the job highlighted in the left column)
    - Drag and drop behaviour
      - The tiles corresponding to job actions are placed by a drag and drop process
      - If an attempted drag would result in a precedence rule violation the tile reacts as if the tile had been dragged to the earliest or latest (whichever is closest) to the user intended drop location possible timeslot
        - Drag and dropping while holding alt allows the user to bypass this safeguard
    - Precedence rule visual impact
      - Tiles that break the precedence rules are shown with a red halo effect
      - Actions that break precedence rules are listed right after the late jobs in the right area of the screen.
    - Snap grid unit should be 30 minutes
    - Setup and run should be visually represented in a given tile but the tile should still be unsplittable and « measure » the sum of setup and run
    - Scrolling inside the center area should be handled through mouse/trackpad behavior (nothing special) but there should be a keyboard shortcut that is the equivalent of « show me the machine columns to the right of those I currently see »
    - For machines with capacity >1, the UI should behave like usual calendar app UI behaves when more than one meeting is scheduled on a given timeslot : it splits the columns into the required number of subcolumns.
    - Action tiles of a given job can only be scheduled by drag and drop to the desired timeslot
    - In a tile there are two visual shortcuts that allow to switch the tile's position with the one before or after it.
      - In the action list sub column of the left area of the ui
        - The actions are represented as regular tiles with their real durations and they can be reordered at will (which will then influence precedence)
        - If a tile is placed on the center area it appears with lower opacity here and a « recall tile » button appears on hover.
          - Let's imagine the user has placed 3 consecutive tiles in the schedule and he recalls the middle one, only the middle is recalled
    - Time is represented vertically
    - Each job gets assigned a random color for its tiles
    - The center area has a dropdown that allows the user to jump to a given timeslot
    - The left area has a text filter that allows to search for specific job or jobs
    - The UI shows a floating « branch » button that when clicked allows the user to duplicate the currently displayed schedule and edit it separately regardless of any constraint.
    - The user has access to a list of all schedules and can open any schedule by clicking on it
      - There is a « create branch » on each schedule line in the listed schedules
      - A dropdown allow the user to select the unique « PROD » schedule (similar in principle to a « commit/push » but there can be only one PROD schedule at a time)
    - When a schedule is created
      - A modal appears with a required « name » and an optional « comments » field
    - A schedule is saved as the user edits it (no explicit save button)
    - A job tile display the following information
      - Visual cues
        - Setup/Run duration differenciation
        - For each machine category's potential time saving similarities that are met between a job and its previous job, we show 1 filled out or hollowed circle based on the number of fulfilled similarities
          - These circles are displayed vertically « between » the tiles of consecutive jobs, overlapping both tiles equally
      - Written info
        - Reference
        - Job description
        - Start time
        - End time
    - Timeslots that exceed maximum machine count for at least one machine group appear visually highlighted
    - Job creation starts by clicking on « add job » in the first column of the left area
      - A job creation modal appears with the expected fields
      - The actions are created in a textarea by writing in a textarea that has autocomplete and basic syntax highlighting