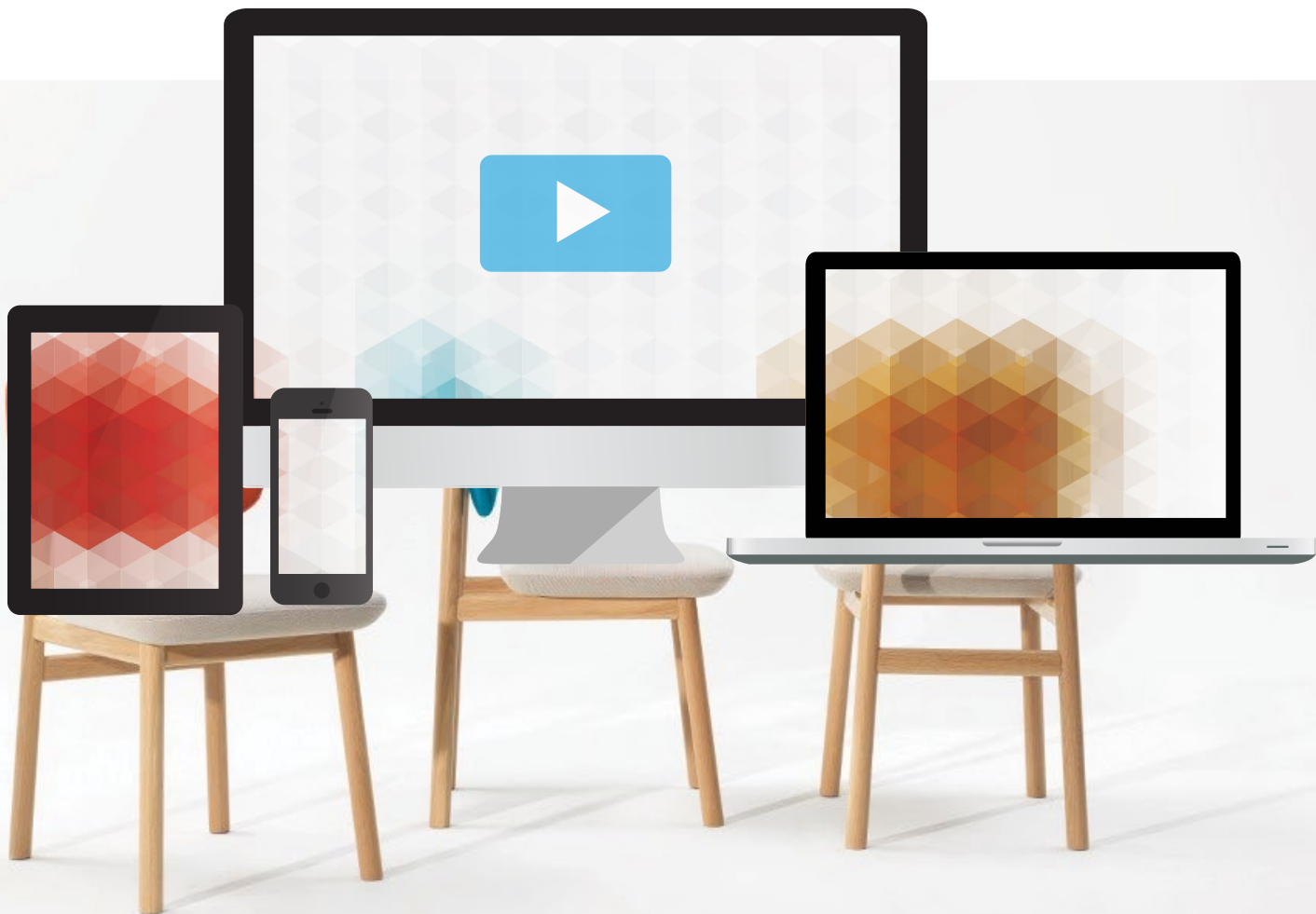


# JARDAN



## Room Planner 2.0

v0.2 06-11-14 **PROJECT BRIEF** Edan Weis

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**Design is as much a matter of finding problems as it is solving them.** Design research can expand the scope and purpose of the JRP.

# Understanding

The Jordan Room Planner 2.0 (JRP) aims to improve Jordan's existing Adobe Flash-enabled, "composer" by making it more **connected, social** and **intelligent**.

In a broader sense, an improved JRP responds to several developments:

- A more social and mobile web
- Focus on retail and homeware markets for Jordan
- The emergence of modern web applications
- The value of design exemplified by Apple, etc.

To address these new circumstances, the scope and objectives of JRP must expand beyond the technical realm to include human-centered design research and prototyping in combination with lean software development cycles.

# Design research to understand people and context

Choosing furniture, planning your room and online purchasing are activities incorporated into people’s everyday routines and habits—understanding them as such requires actively observing and participating in the social practices of internet users, Jordan staff, their customers and other stakeholders.

- How do people plan a room?
- Is planning contingent on other skills and activities?
- Do people have shared understandings about interiors?
- How do heavy objects, mobile devices, removalists and other elements shape interior planning practices?
- Is purchasing ordinarily part of planning decisions?

Empathising with people and their specific context through design research helps to frame people’s problems and understand their needs in response to real-life situations.

Experiencing a broad view of furniture activities and room planning first-hand, increases the chances of creating the next “killer app”, disruptive solution or niche product.

The result is a more imaginative and situated design activity than what would be otherwise accomplished via whiteboards and markers, conventional market research, or a technical “requirements list” from a software engineering perspective.

## Design research methods

### Fly on the wall

Observing people within their own environment helps to identify key interactions and information flows within Jordan—including online activity, organizational processes and manufacturing.



- Interior Designers
- Sales consultants
- Factory hands
- Deliverers / installers

Paying special attention to a wide range of stakeholders and their contextual details, encourages them to contribute their own knowledge and diverse ideas. Potential co-designers and interview candidates are also identified.



- Nominate willing staff
- Contact interior designers
- Site visits to installations



3-4 days



**Shadowing, Personas, Interviews and Measuring** are all part of research which can expand the scope and purpose of JRP.

### Create personas

Personas are ideal-type characteristics of JRP users, described and mapped according to the information gathered by other methods. A cross-section of different attitudes and behaviours is used to represent typical JRP users whose social and demographic attributes can be targeted in separate use cases, for example, the professional architect vs. ordinary mums and dads.

### Conduct interviews

Interviews are an opportunity to gather detailed feedback on Jordan’s existing composer application, but they are also a way of collecting input from people. Simple exercises such as recalling an experience or composing one’s own lounge room with paper cards, can highlight decision factors and technological inputs, and reveal people’s mental models regarding furniture layouts—how they’re established and the specific challenges encountered.

Cross examining respondents may reveal preconceptions about customers and their needs, especially in handling quotation and advice—information which can be incorporated into new features and inform more efficient workflows with the JRP.

### Measure success

The knowledge gained through previous phases of design research can be used to assemble a nuanced set of stakeholder needs and expectations. On this basis, suitable indicators can be formulated, for example: application downloads, website hits, tweets, customer feedback, industry awards, or product sales. While such measurements cannot provide causal explanations, they may be used to monitor and gather usage statistics, inform evaluations and facilitate testing in subsequent phases of development.



- General public
- Jordan staff
- Internet users



- Schedule and arrange with people or groups



30 minutes per interview

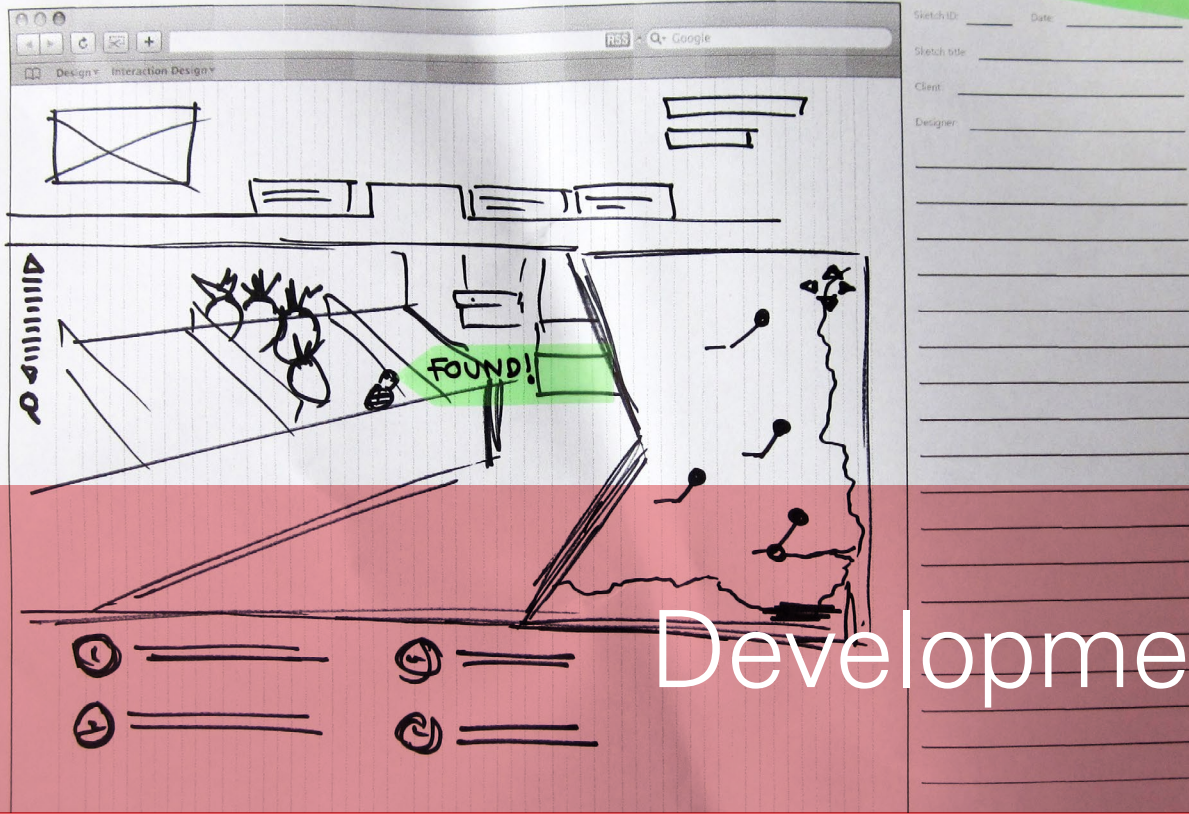


Development of the JRP will be split into several stages designed to address different target outcomes. New features will be developed in relatively short time-frames without the need for detailed documentation, functional requirements or scheduling.

Each stage will result in cumulative changes to the final product resulting in continuous improvements to its functionality and the addition of working portions of the final product in the form of incremental “releases”.

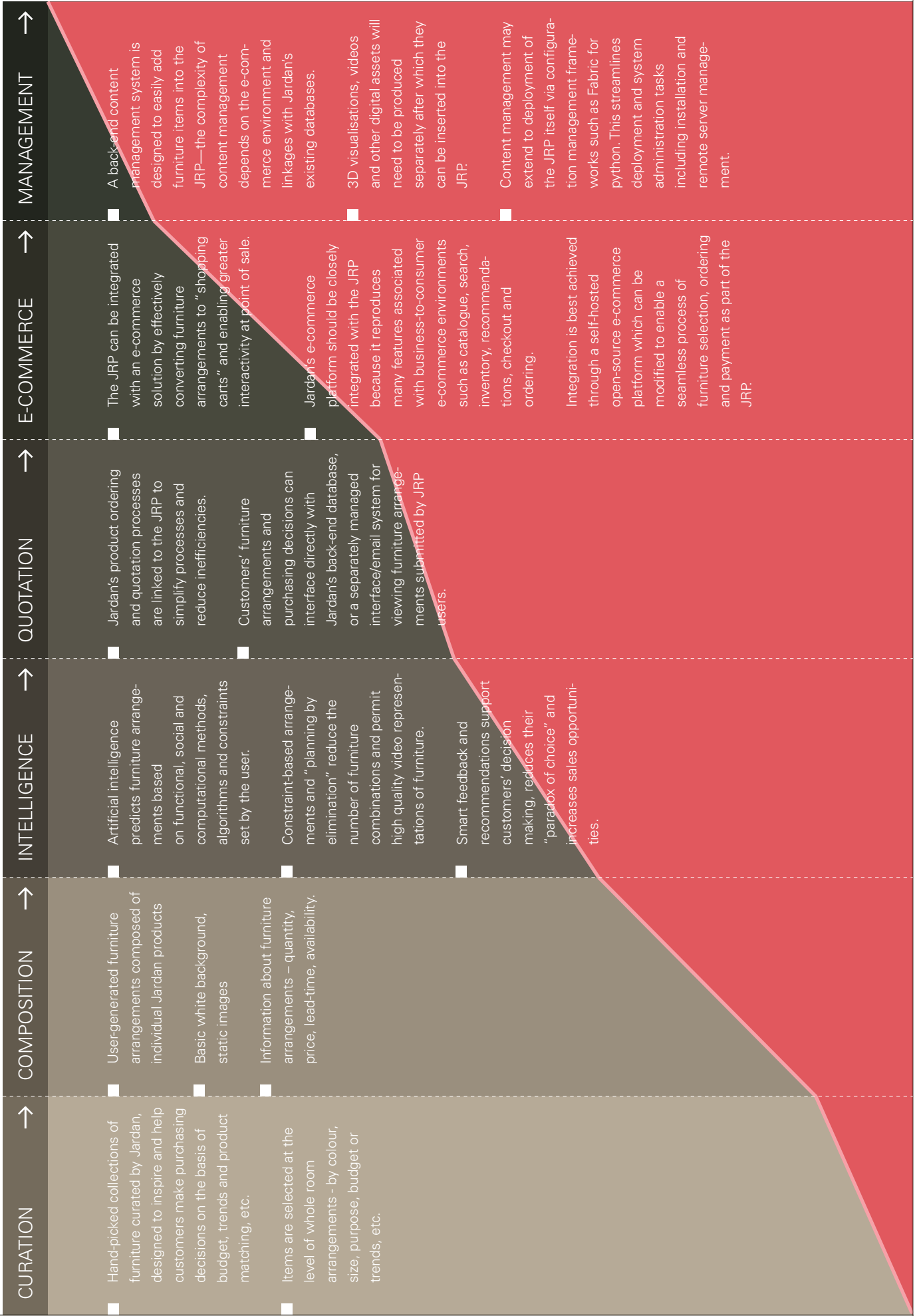
The purpose of staged development is to respond to changes in scope with greater flexibility by prioritising features that are valuable based on regular user feedback, while better managing time and budget constraints.

The phases described here are not definitive—they are contingent on the findings of design research against which business aims, objectives and use-cases are validated, and problem frames and solutions can be bridged.



# Development

## FUNCTIONALITY





## Lean software development principles

Lean software development adapts principles from manufacturing, logistics and construction to achieve quality, savings, speed and a focus on value in the software development process. Three core principles are particularly relevant to the development of the JRP.

### Eliminate waste

Eliminate anything that does not add value to the JRP as defined by the customer, eg: extra features, redundant requirements, detailed up-front planning, approval delays, project tracking. Only develop exactly what is needed, or considered fit for use.

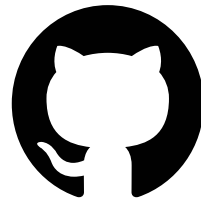
### Deliver as fast as possible

Rapidly design, implement, test and improve the JRP by making many small continuous, incremental and evolutionary changes so that feedback can be incorporated into successive development cycles.

### The minimal viable product

A minimum viable product has just the core set of features required to provide the most feedback and validated learning from testing with users, rather than investing time to produce a fully developed product and features that nobody wants.

These three principles supersede many techniques associated with traditional “waterfall” software development including, planning, establishing requirements, determining project scope and detailed scheduling.

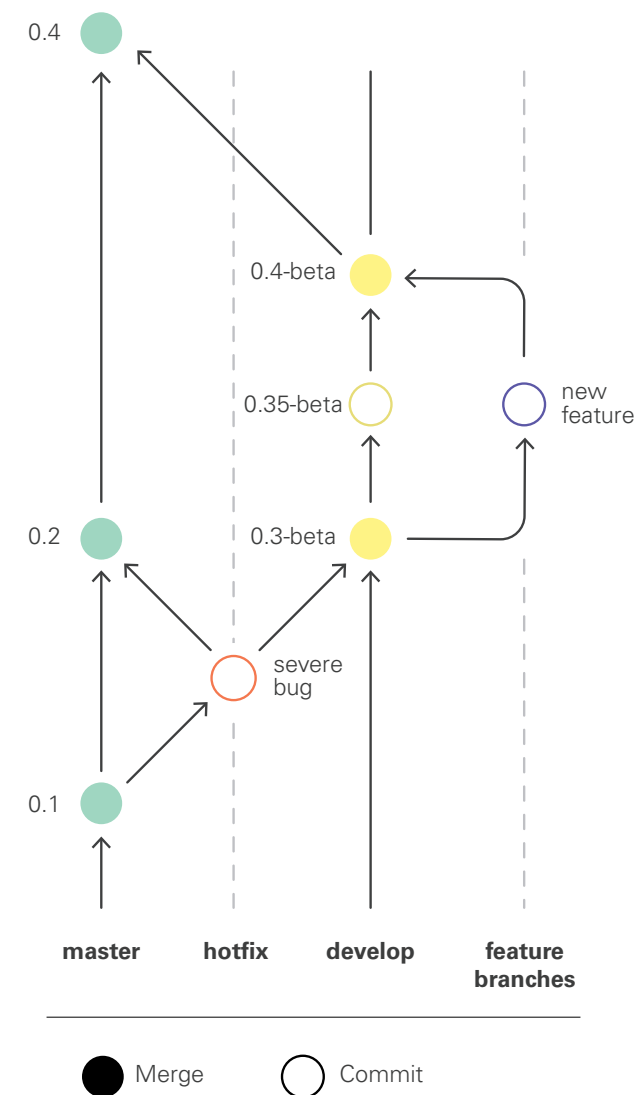


## Distributed version control and collaboration

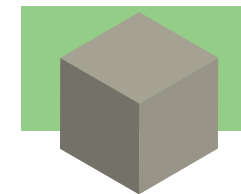
The popular web-based hosting service, GitHub will be used to facilitate collaboration and code maintenance in the development of the JRP.

A private GitHub repository allows multiple developers to safely store and track changes to the source code, including specific branches for feature requests, bug tracking, staging and deployment.

### GitHub development workflow



Services to integrate Jordan's existing content and digital assets for use with the JRP.



## Preparing digital assets

Jordan's existing digital assets (3D models, materials, photographs, etc) may need to be re-created or modified for use in the JRP.

### Scripting

Parametric control and automation of 3D geometry to systematically render large combinations of furniture arrangements

### Motion tracking and 2D compositing

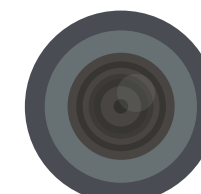
Using VFX software such as Nuke to track real-world camera footage and composite 3D models with matched V-Ray lighting and materials.

### HDR imaging

Producing High Dynamic Range textures and materials to increase the realism of 3D visualisation.

### Formatting

Preparing and encoding files according to standard HTML5 video compression formats (MPEG-4/H.264, WebM, Ogg/Theora)



## Digital film making

The JRP will introduce digital film making to Jordan's communications strategy. Video production will carry over Jordan's simple and crisp photographic style by making use of existing locations and studio backdrops.

To reduce studio hire and filming costs, a smaller number of empty scenes may be filmed, with 3D furniture rendered and composited into the footage as needed.

Videos can be easily adapted for the web, for example, by launching a vimeo channel, enhancing Jordan's promotional materials or producing footage for a short video about Jordan.





**Imaginables** convey possible concepts for the JRP and foreground the kinds of deliverables that might be used to address target outcomes.

# Imaginables

The JRP aims to break the mould of existing interactive room planners by addressing problematic user experiences and becoming more simple, yet sophisticated and beautiful to use. Examples of poorly designed room planners are abundant:

### You need a plug-in

Updated your JAVA plug-in? Support for Adobe Flash? Would you like a chrome extension with that? Additional plug-in requirements slow the user experience, or worse, turn users away from launching your application.

### Enjoy your blank canvas

The “IKEA effect”—increased valuation when labour is invested in self-made products—only occurs when we finish our creations. Most interactive room planners, however, make it difficult to begin the planning process; users are faced with a blank canvas and a plethora of sub-menu items to hunt through which can lead them to abandon their creations.

### Poor user interfaces

Interactive room planners suffer from feature bloat and reduced usability due to visually cluttered interfaces and an excessive amount of options.

### Underwhelming 3D

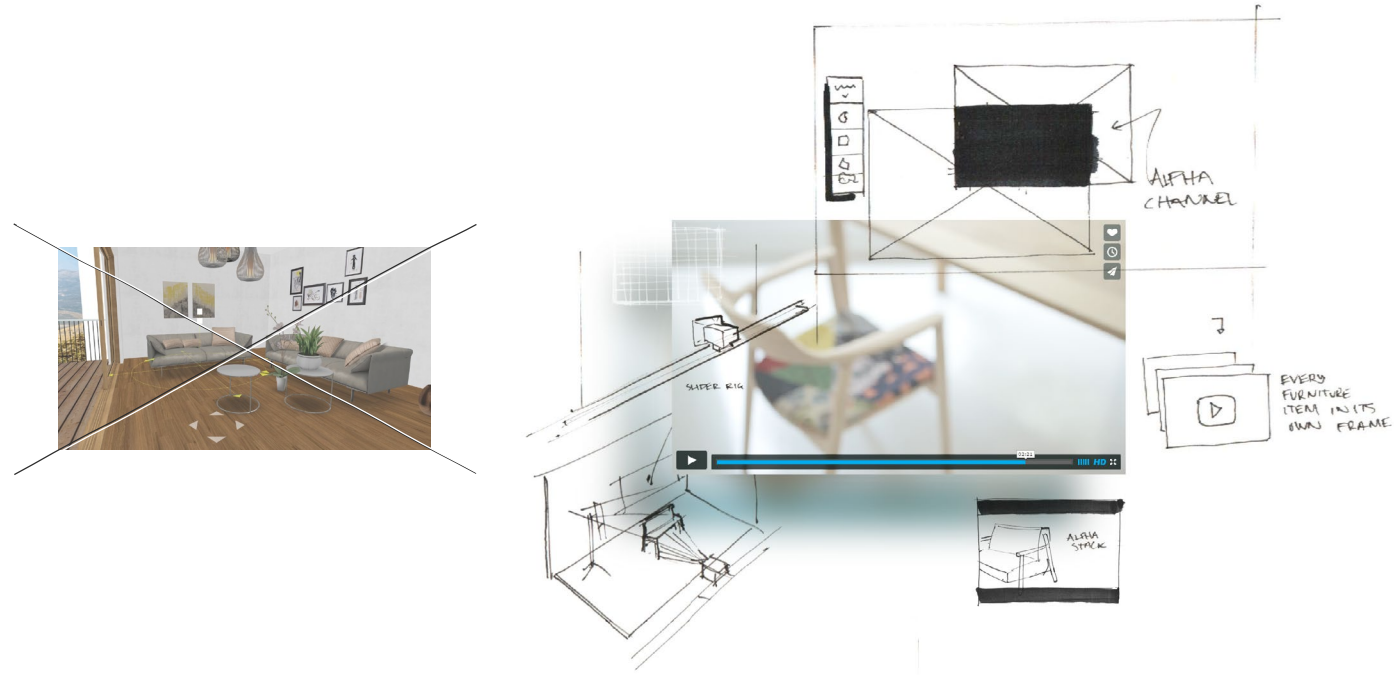
The current performance of in-browser 3D technologies (WebGL, Java, Unity 3D) produces slow-moving, visually flat and game-like images. Interior visualisations in particular, rely on global illumination (bouncing rays of light) which are not possible in the web browser.

### Full manual controls

The interactive workflows of most room planners mimic professional 3D modelling packages, despite serving very different users and typical use cases. Sequential operations and drag-drop placement of furniture items can frustrate the user and fail to address important contextual factors, such as practical constraints, recommendations, price and other planning criteria.

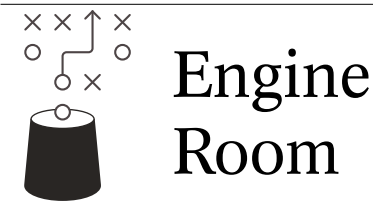
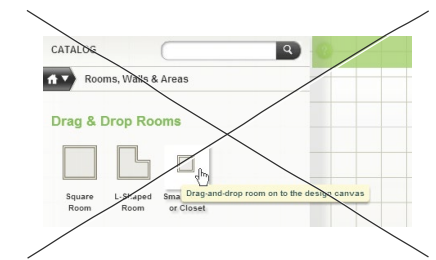
### Cinematic video— not real-time 3D

To overcome the limitations of real-time 3D graphics, the JRP will composite pre-rendered 3D animations into video footage with a cinematic feel; 24p, high dynamic range, camera movement and colour grading. Video will enhance the sense of space and context, while freeing the user from manual view controls without the need for plug-ins.



### Intelligent planning— not drag-and-drop

The JRP takes an entirely different approach to room planning by introducing social, functional and computational methods to support furniture arrangement and purchasing decisions. Rather than have users follow a linear process of drag-and-drop, the JRP will recommend items based on SEO techniques, generate furniture layouts according to rule-based logic and predict furniture selections based on a formal ontology of Jordan’s product range.



Thanks for reading

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