

Info sheet 02

“Reverse design” for designing sets

Practical info sheets to help with eco-friendly set design, training teams and reducing waste during film production.

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Ecoprod Award for Jessica Palud's *Being Maria* in 2024

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Phase 1: Preparation, planning ahead in order to reduce impact

Head Set Designer

First Assistant

Set Assembler

From the outset, when reading the script, preparing the concept file and analyzing the script, **identify the set design requirements** in order to **optimize location scouting** with the directing, lighting and production teams.

Location scouting:

optimize locations, grouping them as much as possible in the same place or geographical area. This keeps transportation during filming to a minimum, reduces fatigue for crews, and saves fuel.



Use film commission websites to find local locations and service providers in different regions: these are very helpful for understanding the regional network.

Studios:

where possible, choose studios to centralize equipment and staff in a purpose-built facility. **Note:** brownfield sites require the installation of temporary workshops where crews often work in precarious conditions (without water, heating, etc.).

91% of set design professionals believe that studios are the best place to encourage eco-design.

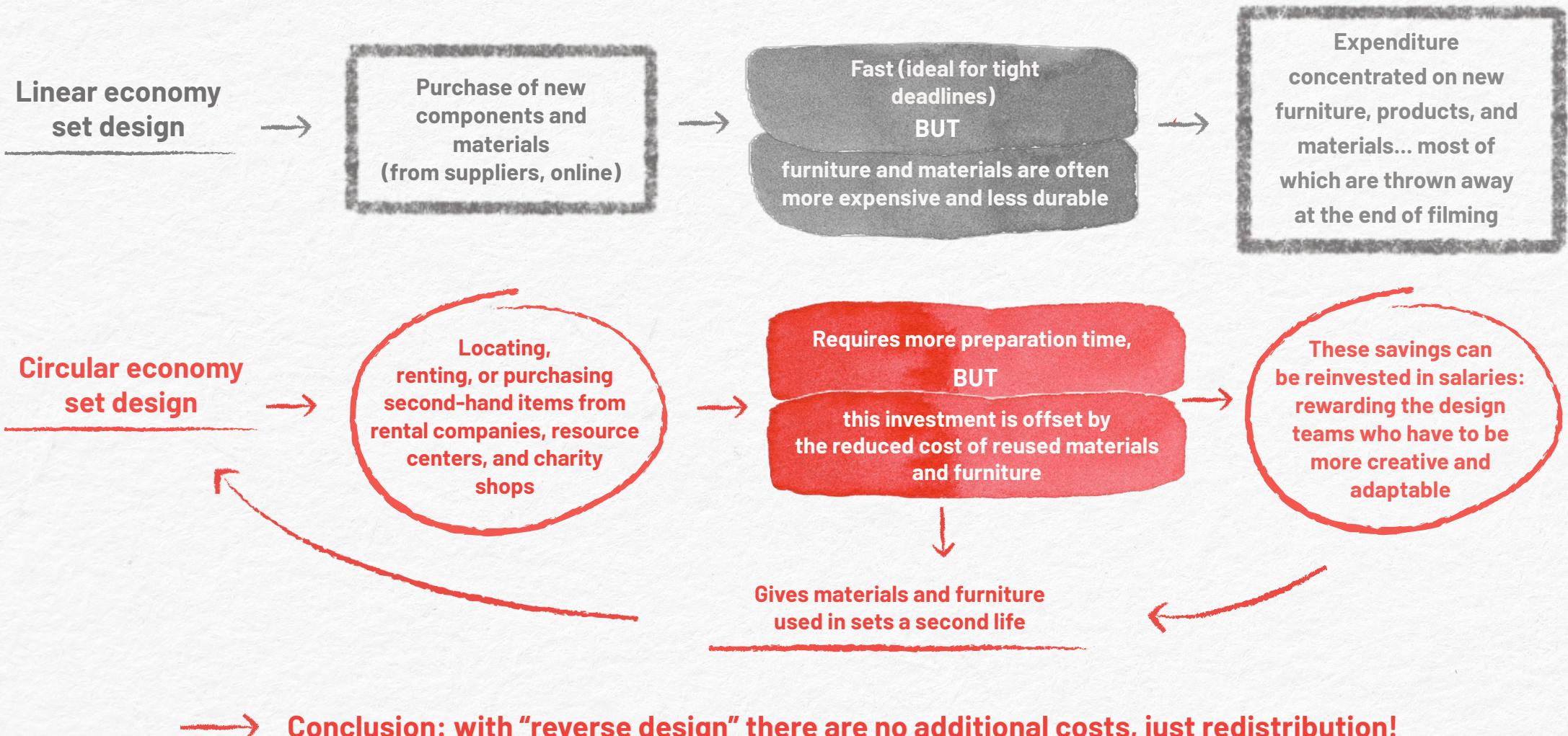
(Source: Survey on practices in set design: implementing eco-responsible solutions, by Samuel Zarka, the Eco Déco Ciné collective and Film Paris Region, 2021)

As each film or audiovisual work is a prototype, **applying a “reverse design” process may require more or less effort to implement**, and the results will vary **depending on the conditions of the project** (with greater complexity for projects taking place in several countries or regions).

However, **as some works have similar characteristics, professionals are exposed to recurring situations**, hence the importance of reusing or adapting previously used set elements.

Preparing the project in advance is essential in order to determine the most appropriate design methods for the project and the locations.

Rethinking set construction: “Linear economy” ≠ “Circular economy”



Expenditure shifts from products (materials) to people (time and wages). This is beneficial for the planet’s resources and for the teams.

Phase 2: Designing, planning the life cycle of the set

Head Set Designer

First Assistant

Head Builder

Once the artistic decisions have been approved by stage direction and the design team (in collaboration with the Head Builder and Head Painter) a **"reverse design" approach is developed**, which consists of **creating elements from existing materials** (stage flats, doors, windows, etc.) to be integrated into the plans. These elements **can be modified to be incorporated into the set during construction.**

The aim is **to buy as little new material as possible** and **to use standardized, dismantlable, reusable, or recyclable stage flats** as much as possible. To do this, it is best **to visit rental companies and recycling centers**, as certain elements (furniture, doors, wallpaper, materials) can be a source of inspiration in the same way as **"recycled art."**



"Reverse design" also means **thinking ahead about dismantling**, dumpsters, and rental returns **when drawing up the budget.** It is possible to hire a service provider specializing in waste recovery, sorting, and upcycling.



Recycled art is an applied art that consists of giving a second life to salvaged objects and materials. It stimulates creativity and raises awareness of applied ecology and the circular economy.

Phase 2: Designing, planning the life cycle of the set

Head Set Designer

Head Builder

Second Drawing Assistant

Outdoor Materials Location Manager

Sourcing "**repertory flats**" and set elements (frames, columns, moldings, floors, etc.) from recycling centers, set rental outlets or renovation material stores, **which can be integrated into the plan**.

"Repertory flats" are designed to be stored and reused. For more details, please refer to the "stage flats" info sheet:

https://www.filmparisregion.com/sites/filmparis/files/2022-03/fiche%20Feuille%20decors%20EN_0.pdf

60% On average, **60% of a studio set's carbon footprint can be attributed to the manufacture of stage flats**. After filming, they are usually **thrown away**.

72% of professionals estimate that **30% or more of a set can be made from dismantlable and recoverable flats**.

(Source: Survey on practices in set design: implementing eco-responsible solutions, by Samuel Zarka, the Eco Déco Ciné collective and Film Paris Region, 2021)

Recycling centers for reusable materials dedicated to the cultural sector in Paris Region:

- ArtStock (92)
- La Ressourcerie du Cinéma (93)
- La Réserve des Arts (93)
- La Ressourcerie du Théâtre de l'Aquarium (75)



Les 3 Portes has a stock of windows, doors, shutters, stage flats, etc. Catalog available on request from Philippe Boulenouar: les3portes@yahoo.com

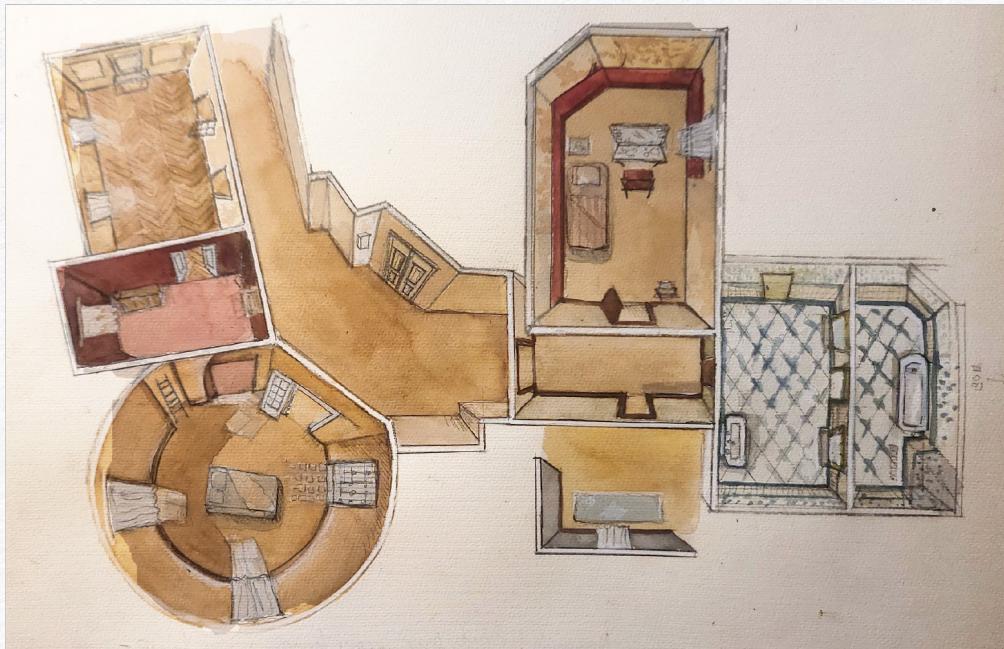
The **National Network of Artistic and Cultural Recycling Centers (RESSAC)** brings together stakeholders in the creative reuse sector to work on common issues and share their expertise.
<https://www.ressac.org/>

The eco-library run by L'Augures Lab Scenography is a collaborative eco-scenography platform that lists stakeholders in the circular economy, innovative techniques and materials, and eco-responsible projects.
<https://www.ecotheque.fr/le-lab>

The **Opalis directory** lists professional operators who sell reusable materials from the demolition of old buildings and structures in France, Belgium, and the Netherlands.
<https://opalis.eu/fr>

Phase 2: Set design, drawings and plans conceived using reverse design

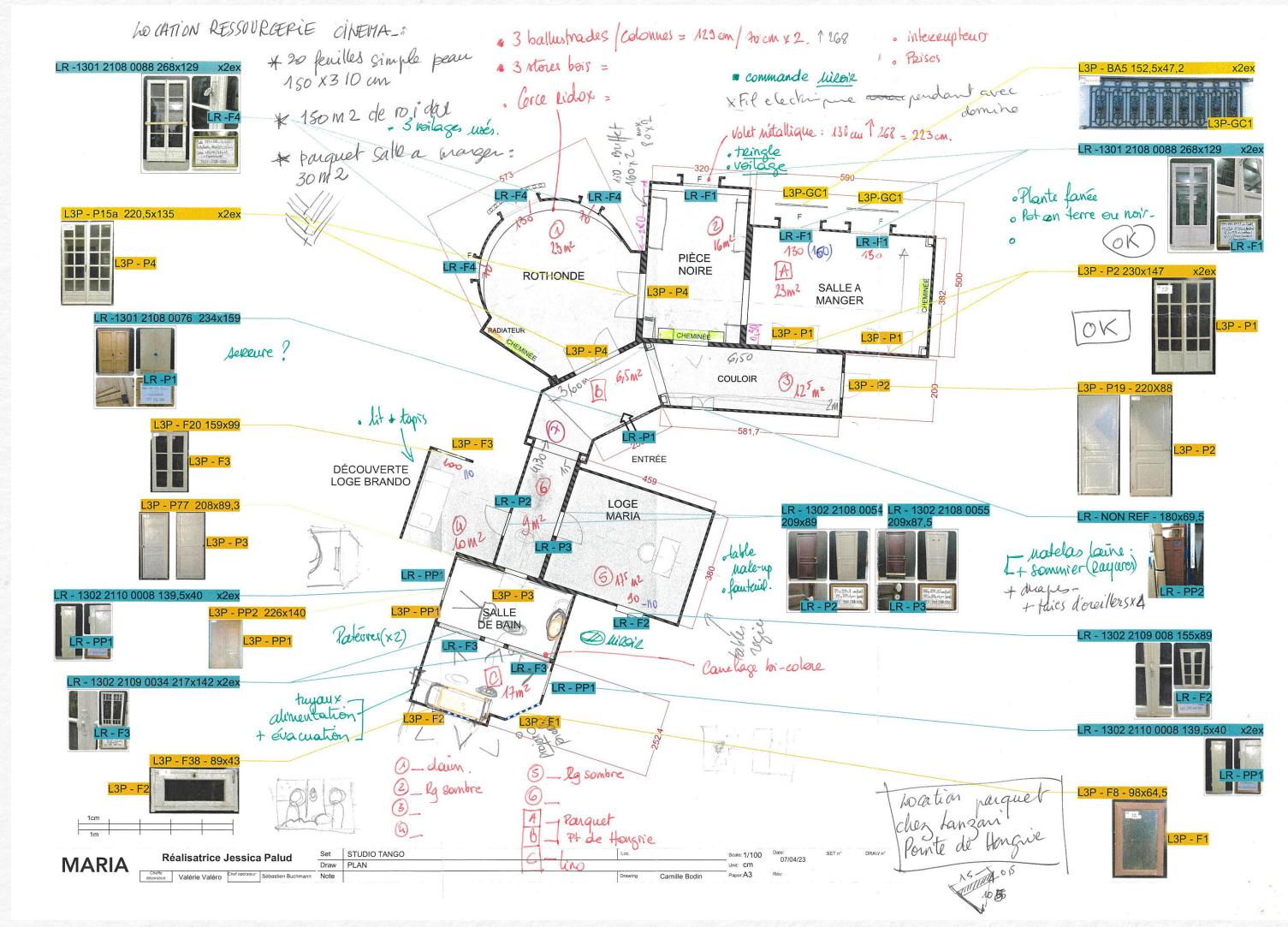
Watercolour and preparatory plan for the “Tango apartment” set for the film *Being Maria* by Jessica Palud, Head Set Designer: Valérie Valero, production: Les Films de Mina (2024).



■ In purple, “repertory” stage flats rented from the Ressourcerie du Cinéma.

Phase 2: Set design, drawings and plans conceived using reverse design

Plan of the doors and windows rented for the "Tango apartment" set for the film *Being Maria* by Jessica Palud, Head Set Designer: Valérie Valero, production: Les Films de Mina (2024).



In yellow, the frames rented from 3 Portes

In blue, doors rented from the Ressourcerie du Cinéma

Phase 2: Designing, planning the life cycle of the set

Head Set Designer

Head Painter

A “reverse design” approach is to be implemented in collaboration with the Head Painter in order to apply materials to the rented stage flats using a **“skin” system** that prevents the flat from being damaged and facilitates dismantling. For more information on this “skin” system, **please refer to the painting info sheet 04.**

This **method allows** set-building and painting teams to **work in parallel and in collaboration**. Painters don’t have to wait until construction is complete to make the materials. They benefit from **more comfortable working conditions** (working horizontally) **and shorter drying times**.

Making “skins” has several benefits



- **Optimizing employee working time**
- **Reducing studio rental costs**
- **Facilitating dismantling and reuse of stage flats**



Preparing “skins” for the Tango walls
© Valérie Valero



Tango wall sample: plaster on underlay
© Valérie Valero



Sabine Barthelemy, Head Painter
© Valérie Valero



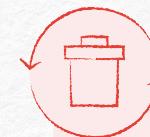
Sabine Barthelemy, Head Painter © Sabine Chevrier, “Design inversé” (Reverse Design) film

Phase 3: Dismantling

Head Builder

Head Painter

Props Assistant



Once the set has been cleared of props and furniture, the props assistants take all rented items back to the suppliers.

The painters remove and roll up the skins (which can **be reused**). Set builders dismantle moldings, frames, windows, floors, and ceilings.

If **dismantling** and **returns** have been **planned in advance**, the set can be almost entirely **recycled** and the raw materials can be returned to a recycling center to be given a new life.

→ Less waste, more creativity, and a reduced impact on the environment. Stimulation and satisfaction from finding meaning in a more eco-responsible and collective approach

Indicators for “reverse design”

Implementation effort



Environmental benefits



Improved working conditions



Financial effort:
Cost balance



Working time:
Balances out

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