

“Fonctions d’utilisabilité des configrateurs web : aperçu et perspectives”

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IHM’23 @ Troyes



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@TonyLeclercq

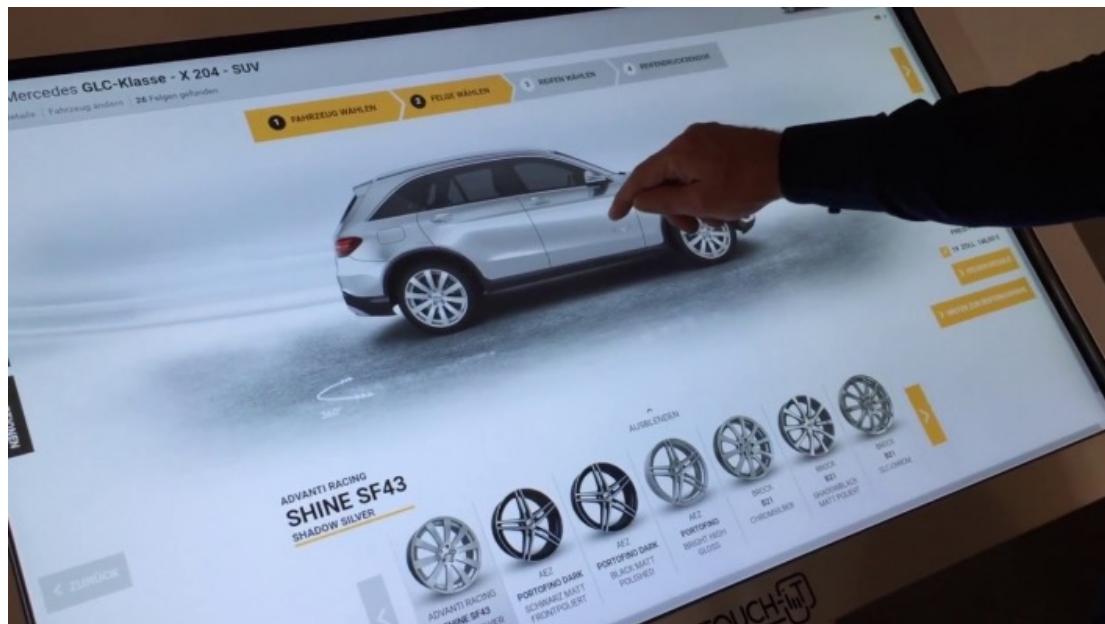
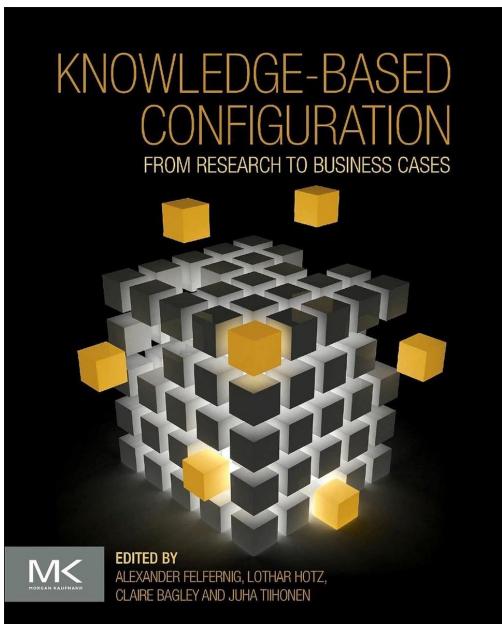


Présentation de l'auteur

- PhD student
- Définition de guidelines pour configuteurs web

Configuration

*“[...] a special case of **design activity** where the artifact being configured is assembled from instances of a fixed set of well defined component types which can be **composed conforming to a set of constraints.**”* - Sabin and Weigel (1998)



Configurateur

- Un outil permettant, **souvent à un utilisateur non expert**, de configurer un produit ou un service **selon ses besoins**
- tout en **cachant la complexité**
- souvent un **point de vente important**
- doit fournir une **expérience utilisateur (UX) de haute qualité**

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Configurateur - Exemples

The screenshot displays the ULA RocketBuilder configurator interface, featuring a large image of a rocket launching from a pad on the left and the configuration steps on the right.

Left Side (Launch Image):

- ULA Logo:** Located at the top left of the main image area.
- RocketBuilderSM:** Text at the top right of the main image area.
- Launch Date:** Step 1, "SELECT A YEAR" dropdown.
- Orbit Selection:** Step 2, "2. ORBIT" dropdown.
- Rocket Type:** Step 3, "3. ROCKET TYPE" dropdown.
- Service Options:** Step 4, "4. SERVICE OPTIONS" dropdown.
- Summary:** Step 5, "5. SUMMARY" dropdown.
- ULA Value:** \$73M (Customize button available).
- Buttons:** SUBMIT TO ULA, SAVE, SPECS, 3D MODEL, RESET.
- Progress:** Three circular progress indicators at the bottom.

Right Side (Configuration Steps):

- Step 1: LAUNCH DATE** (dropdown menu open)
- Step 2: ORBIT** (dropdown menu open)
- Step 3: ROCKET TYPE** (dropdown menu open)
- Payload Weight:** Input field set to 0, note: Max payload weight with current fairing: 2,836 kg (KG/LB switch).
- Payload Fairing Size:** Short selected (radio button checked), Medium and Long options available.
- Service Options:** Step 4, "4. SERVICE OPTIONS" dropdown.
- Summary:** Step 5, "5. SUMMARY" dropdown.
- ULA Value:** \$73M (Customize button available).

Central Image:

Configurateur - Contraintes

The diagram illustrates a Renault Captur car configurator interface. The main window displays the exterior design of the Captur in Boston Blue, with options for wheels and upholstery. To the left, two smaller windows show interior options like leather seats and accessories like roof rails. To the right, three smaller windows show different configurations of interior options and accessories. A summary page at the bottom right provides a total price of £22,195 and monthly payments of £194. A blue arrow points from a user icon at the bottom left towards the central configurator window.

Choose your design - car config x +

https://www.renault.co.uk/cars/all-new-captur/configure/exterior-design.html?conf=https%3A%2F%2Fuk.co.rplug.re

CAPTUR

✓ VERSION ✓ ENGINE ✓ DESIGN 04. ANY EXTRAS? 05. OR ACCESSORIES? 06. SUMMARY

BOSTON BLUE

METALLIC BLUE

WHEELS

UPHOLSTERY

Boston Blue

+ £600

+ £700

WLTB Figures shown are for comparability purposes; only compare figures with vehicles tested to the same technical procedures. Actual real-world driving results may vary depending on factors such as weather conditions, driving styles, vehicle load or any accessories fitted after registration. Factory fitted options may have an impact on WLTB CO₂ values which may increase BIK and VED taxable rates, please consult with a local dealer for more information.

Please note any change in VED rate due to factory fitted options selected on the configurator will not change the on-the-road price shown, please consult with a local dealer for more information.

Total price £22,195 * CAPTUR Evolution Tce 90 MY22 *MRP excluding metallic paint.

£194 per month 0.0% APR Representative

next >

Modifie l'option A

Configurateur - Contraintes

The diagram illustrates a car configuration process for a Renault Captur. The main window displays the exterior design stage, showing a blue Captur with options like 'Iron Blue with Highland Grey roof'. Below the car, arrows point to the 'WHEELS' section, with the text 'Modifie l'option A' (Modify option A) indicating a specific constraint or modification being applied. The user icon at the bottom left represents the person interacting with the configurator. Smaller windows show other stages of the configuration process, such as engine selection and the final summary.

Choose your design - car config x +

https://www.renault.co.uk/cars/all-new-captur/configure/exterior-design.html?conf=https%3A%2F%2Fuk.co.rplug.re

CAPTUR

✓ VERSION ✓ ENGINE ✓ DESIGN 04. ANY EXTRAS? 05. OR ACCESSORIES? 06. SUMMARY

IRON BLUE WITH HIGHLAND GREY ROOF

COLOURS WHEELS UPHOLSTERY

+ £600 + £700

WLTP Figures shown are for comparability purposes; only compare figures with vehicles tested to the same technical procedures. Actual real-world driving results may vary depending on factors such as weather conditions, driving styles, vehicle load or any accessories fitted after registration. Factory-fitted options may have an impact on WLTP CO₂ values which may increase BIK and VED taxable rates, please consult with a local dealer for more information.

Please note any change in VED rate due to factory-fitted options selected on the configurator will not change the on-the-road price shown, please consult with a local dealer for more information.

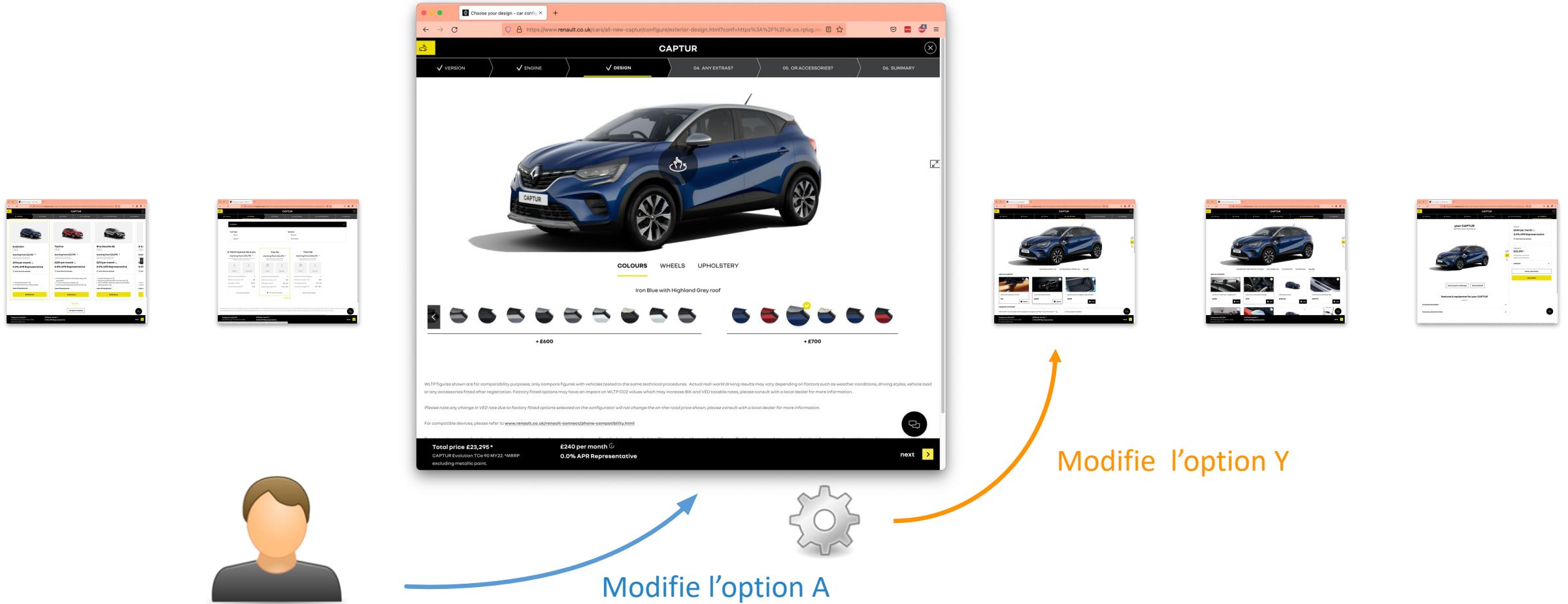
Total price £23,295* CAPTUR Evolution TCe 90 MY22 *MRP excluding metallic paint.

£240 per month 0.0% APR Representative

next >

Modifie l'option A

Configurateur - Contraintes



Configurateur - Contraintes

The diagram illustrates the Renault Captur car configurator interface, showing how changes to one option can affect another.

Central Screenshot: Shows the Renault Captur car configurator interface. A modal dialog box is open, stating "YOUR CHOICE REQUIRES A CHANGE:" with the text "Iron Blue with Highland Grey roof". Below it, it says "WILL ADD: Two-tone exterior paint + £400". It shows the "STARTING PRICE: £22,195" and the "NEW PRICE: £23,295". At the bottom are "cancel" and "confirm" buttons. The background shows the car's exterior and interior options.

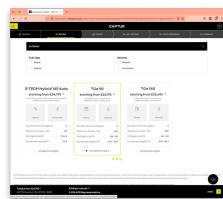
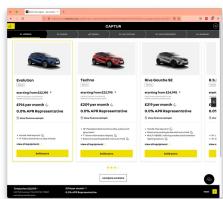
Left Side: A user icon (a person with a yellow face and brown hair) is positioned next to a blue curved arrow pointing towards the "cancel" button of the modal dialog. Below the user icon are two small screenshots of the configurator interface, showing different selection screens.

Right Side: An orange curved arrow points towards the "confirm" button of the modal dialog. To the right of the arrow are three small screenshots of the configurator interface, showing different stages of the configuration process.

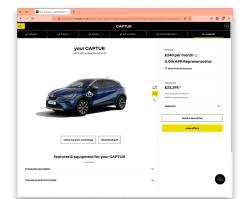
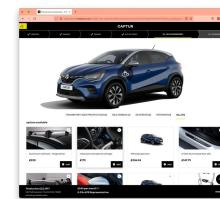
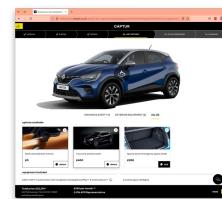
Labels:

- Modifie l'option A (Changes option A)
- Modifie l'option Y (Changes option Y)

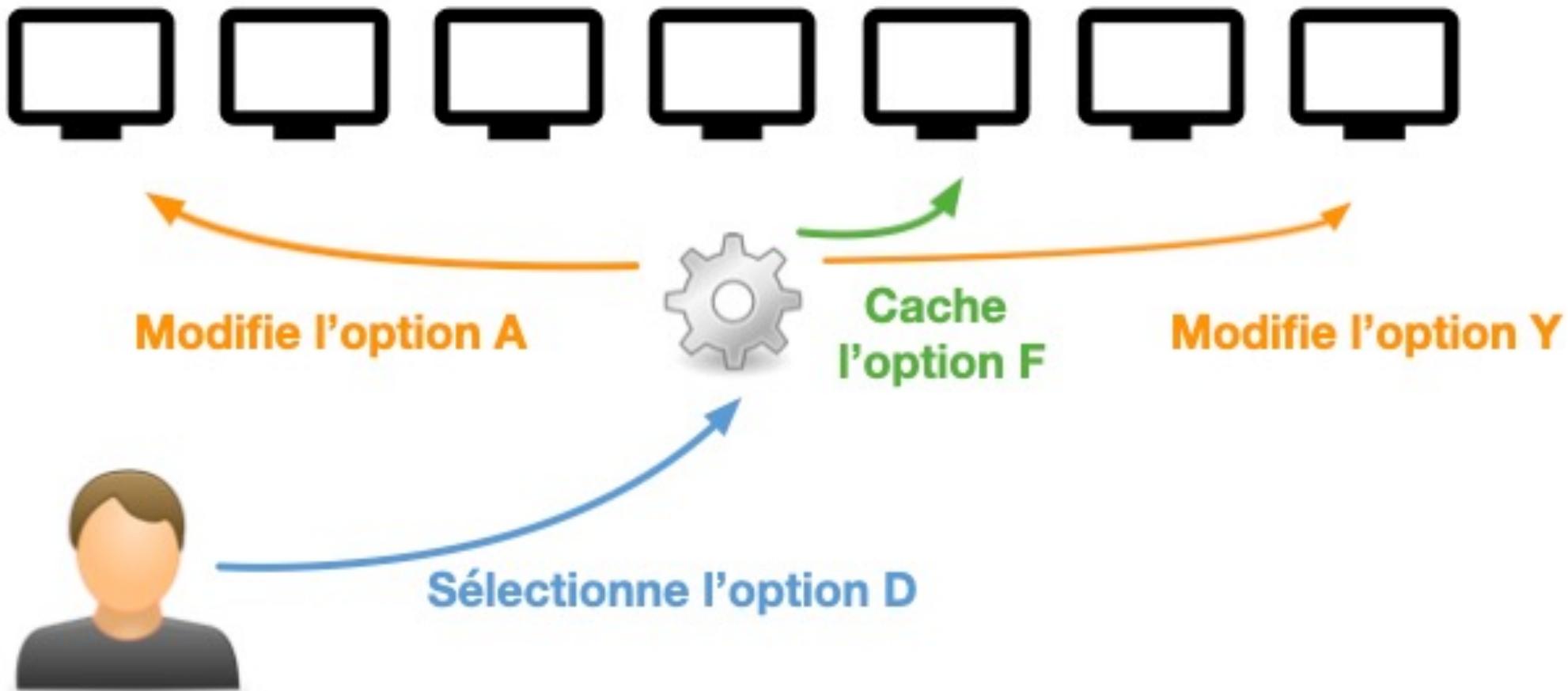
Configurateur - Contraintes



A large screenshot of the Renault Captur configurator interface, specifically the exterior design section. The car is shown from a front-three-quarter angle in Iron Blue with Highland Grey roof. Below the car, there are color swatches for 'COLOURS' (Iron Blue, Black, White, Grey, Silver, Blue, Red, Green, Orange) and 'WHEELS' (various designs). The total cost for these selections is +€600. At the bottom, there is a note about WLTP figures and a summary of the total price: Total price €23,295*, CAPTUR Evolution TCe 90 MY22, *MRP, EXCLUDING METALLIC PAINT. The 'next >' button is visible at the bottom right.



Configurateur - Contraintes



Mécanisme de réparation manuel



✖ Not enough slots on Motherboard for quantity of RAM selected - Please reduce amount of RAM modules

RAM

Crucial 4GB DDR4 2400MHz UDIMM (1x4Gi) ▾

3 Unit(s)

A screenshot of a software interface titled "RAM". It displays a single RAM module entry: "Crucial 4GB DDR4 2400MHz UDIMM (1x4Gi)". Below this, it shows "3 Unit(s)". The interface has a dark header bar with a question mark icon and a back arrow icon.

Mécanisme de réparation assisté a.k.a. Assisted Repair

[Close X](#)

Your Selection Requires Changes

You have selected **20-Inch x 8.0-Inch Tech Gray Aluminum Wheels** which requires some changes to your configuration.

The ADDITION of:

- Normal Duty Suspension
- 265/50R20 BSW All Season LRR Tires

The REMOVAL of:

- Off-Road Adventure II

The total price of this vehicle will decrease by \$300.

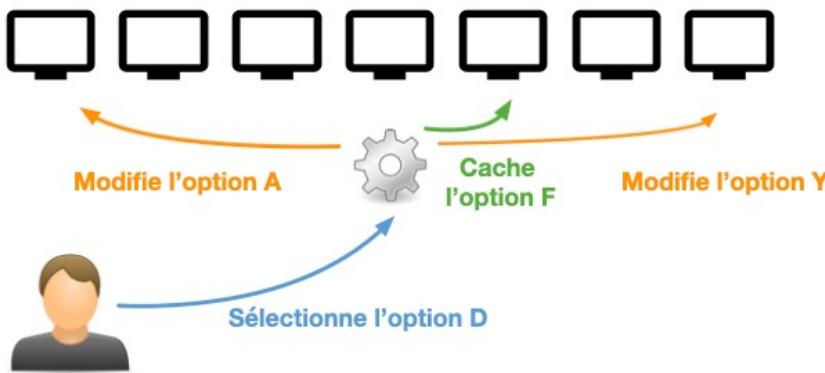
[Help me understand this >](#)

Would you like to make this change? No thanks [YES >](#)

Question de recherche

- Le mécanisme de réparation n'est-il pas une fonction d'utilisabilité ?
- Quelles sont les fonctions d'utilisabilité existantes dans les configuteurs web ? A quelles fréquences sont-elles utilisées ?

Assisted Repair



Your Selection Requires Changes

You have selected **20-Inch x 8.0-Inch Tech Gray Aluminum Wheels** which requires some changes to your configuration.

The ADDITION of:

- Normal Duty Suspension
- 265/50R20 BSW All Season LRR Tires

The REMOVAL of:

- Off-Road Adventure II

The total price of this vehicle will decrease by \$300.

[Help me understand this >](#)

Would you like to make this change? No thanks

YES >

Close X

Assisted Repair

- Assure un feedback et un feedforward
- Automatise l'ensemble des modifications nécessaires (automatisation et navigation)
- Permet qu'une configuration reste ou redevienne valide
- Permet que la configuration soit la plus proche des souhaits de l'utilisateur !
- Permet également de laisser des options disponibles

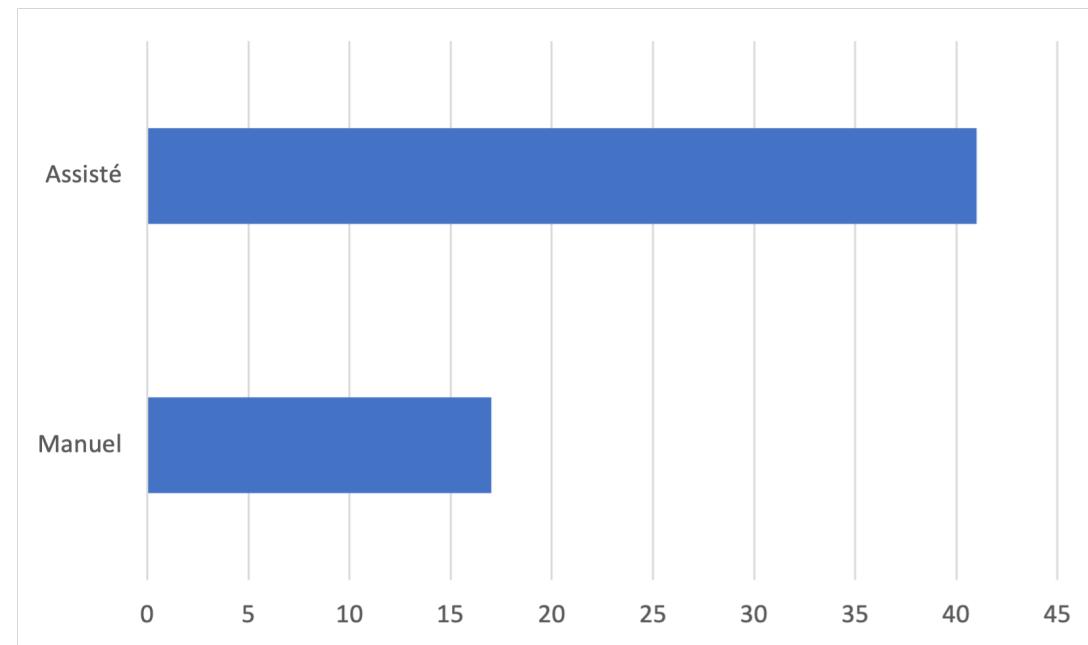
Fonction d'utilisabilité

- Undo
 - Copier / coller
 - Suggestion / complétion. -> sélection par défaut, objectif à prioriser
 - Navigation
-
- Feedback
 - Feedforward
 - Navigation
 - Automatisation

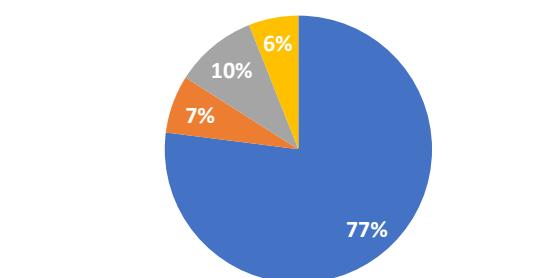
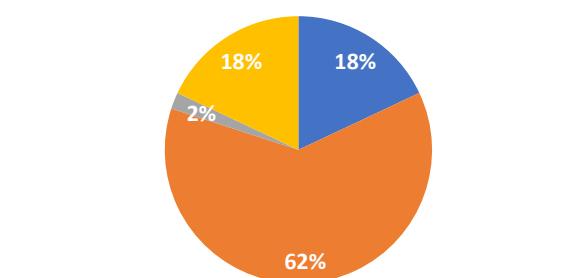
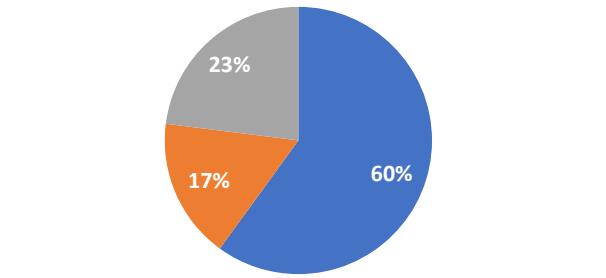
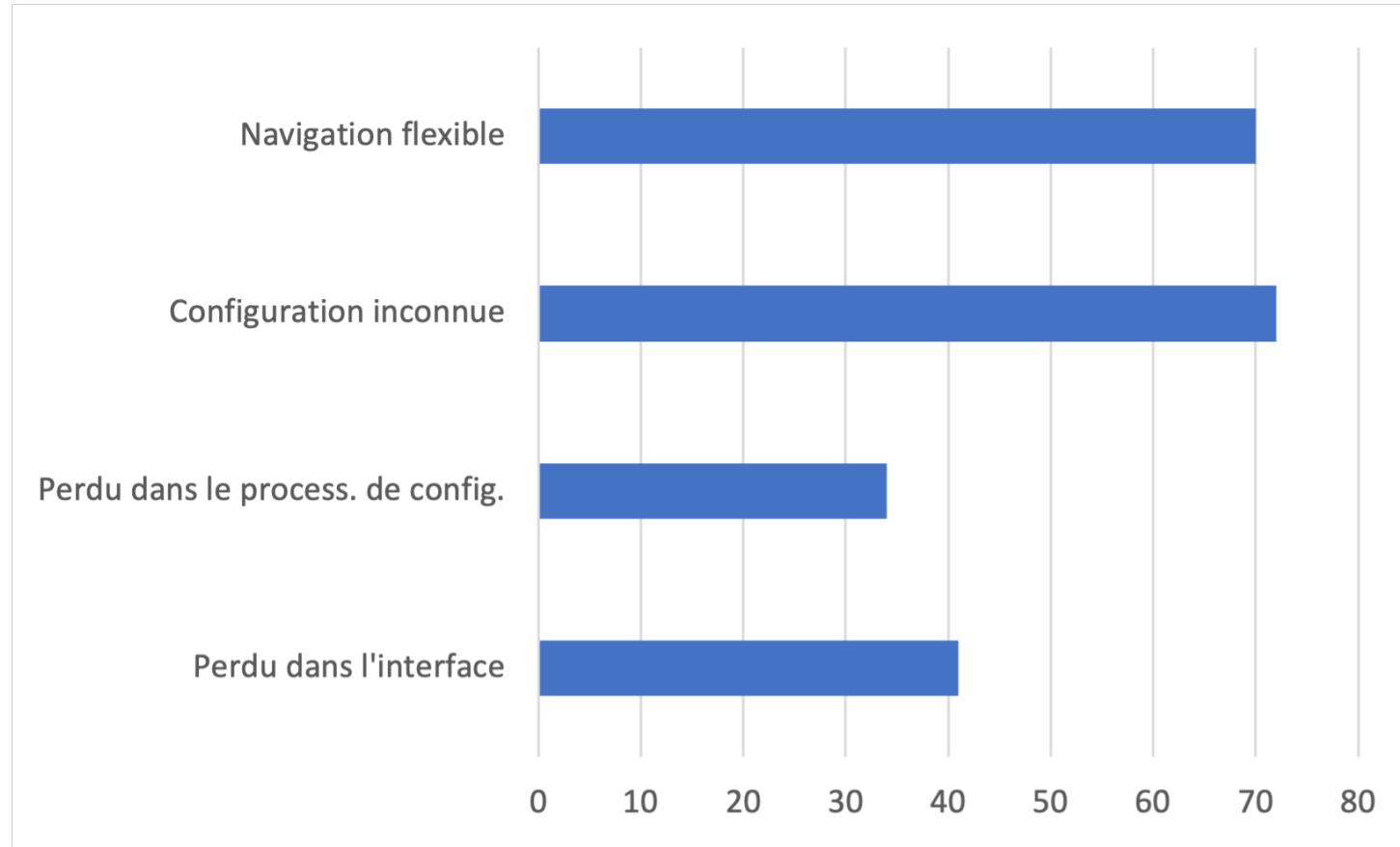
Etude

- 100 configuteurs
- Issus de 6 industries
- Pas loin de 200 variables d'observation
- Sélectionnés entre autres via la Configurator Database de Cyledge

Repair mechanism

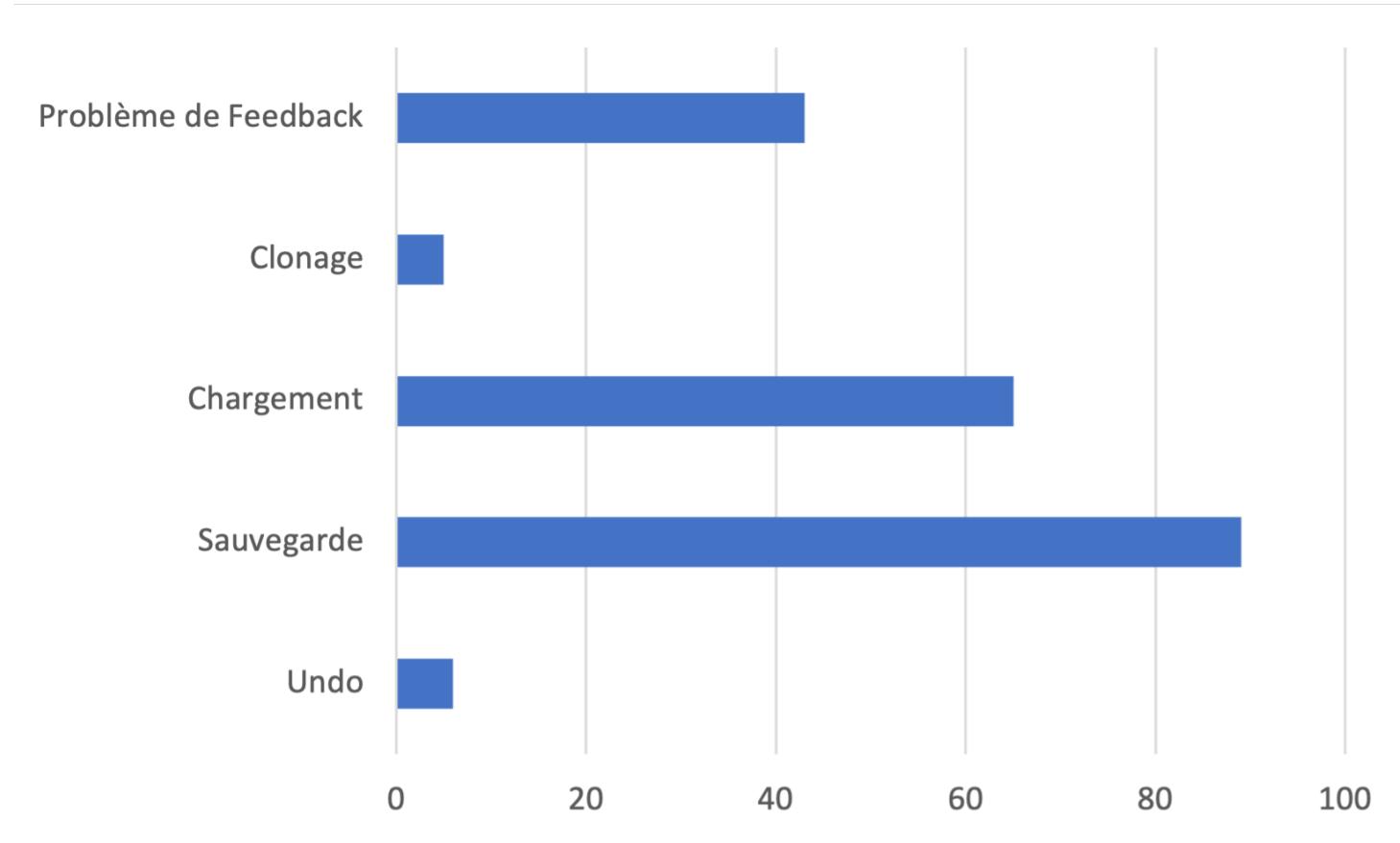


Navigation

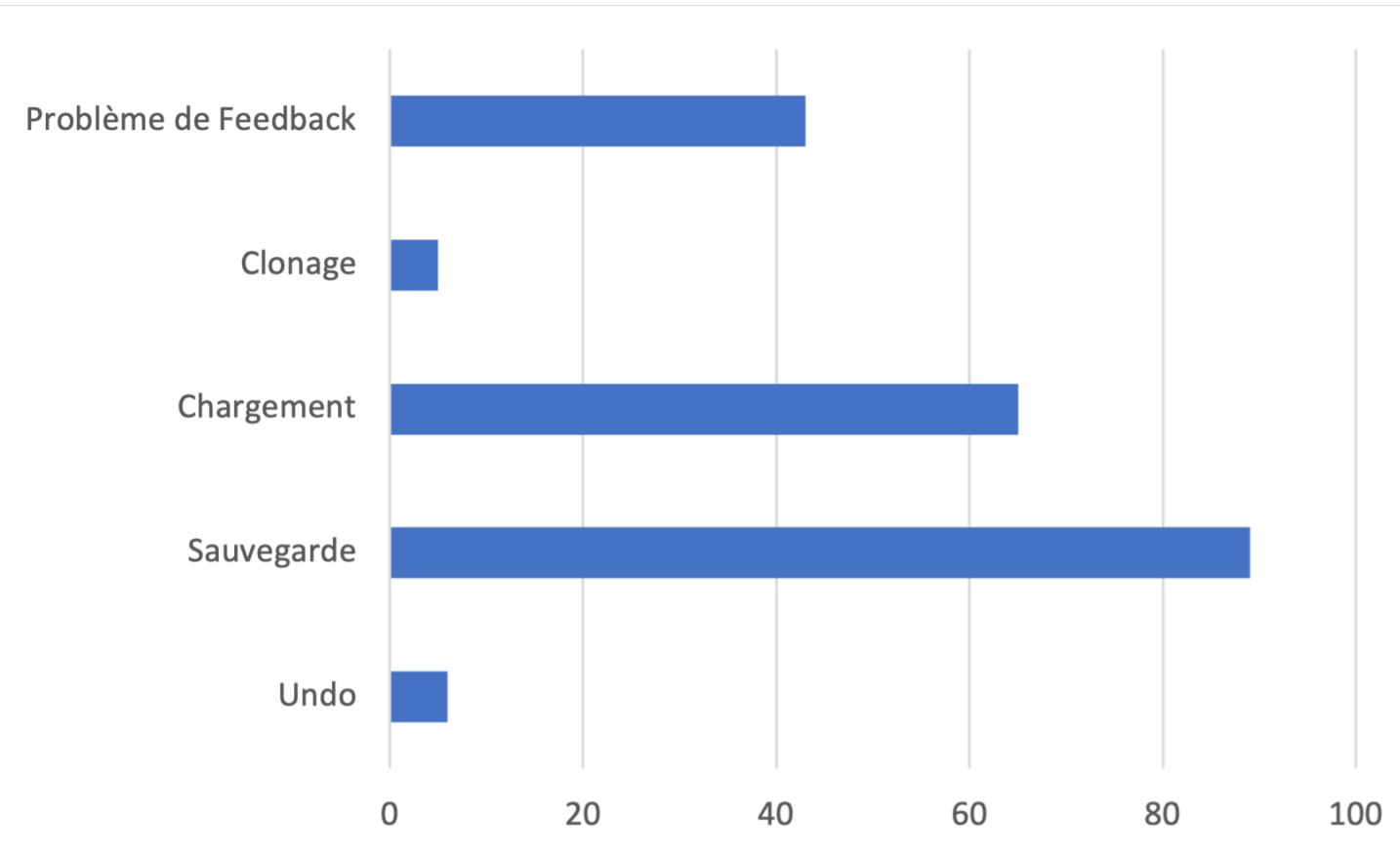


■ Stateful ■ Stateless ■ No relevant ■ No

Fonction d'utilisabilité



Fonction d'utilisabilité



Ratings : 10 %

Conseils : 17 %

Comparaison : 8 %

Question de recherche

- Le mécanisme de réparation n'est-il pas une fonction d'utilisabilité ?
- Quelles sont les fonctions d'utilisabilité existantes dans les configurateurs web ? A quelles fréquences sont-elles utilisées ?

Question de recherche

- Le mécanisme de réparation n'est-il pas une fonction d'utilisabilité ?

Oui !

- Quelles sont les fonctions d'utilisabilité existantes dans les configurateurs web ? A quelles fréquences sont-elles utilisées ?

Question de recherche

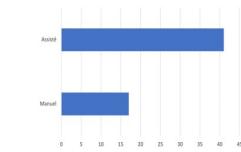
- Le mécanisme de réparation n'est-il pas une fonction d'utilisabilité ?

Oui !

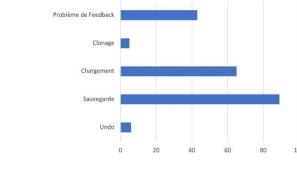
- Quelles sont les fonctions d'utilisabilité existantes dans les configurateurs web ? A quelles fréquences sont-elles utilisées ?

Parfois difficiles à identifier !

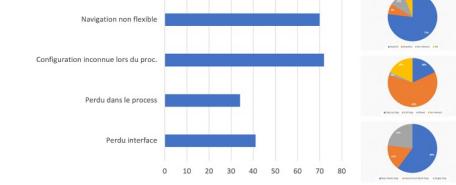
Repair mechanism



Fonction d'utilisabilité



Navigation



Conclusion

- Assisted repair est une fonction d'utilisabilité à étudier
- Un recensement et une description des fonctions d'utilisabilité est nécessaire

Merci pour votre attention



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