

“Would You Give the Same Priority to the Bank and a Game? I Do Not!”

Exploring Credential Management Strategies and Obstacles during Password Manager Setup

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Password Managers Are Great

Password managers enable us to create long and complex passwords, because we do not need to remember them anymore.

But: Requires that we add and update credentials ASAP!



Password Managers Are Great, But Tedious

Password managers enable us to create long and complex passwords, because we do not need to remember them anymore.

But: Requires that we add and update credentials ASAP!

(but that's tedious work)

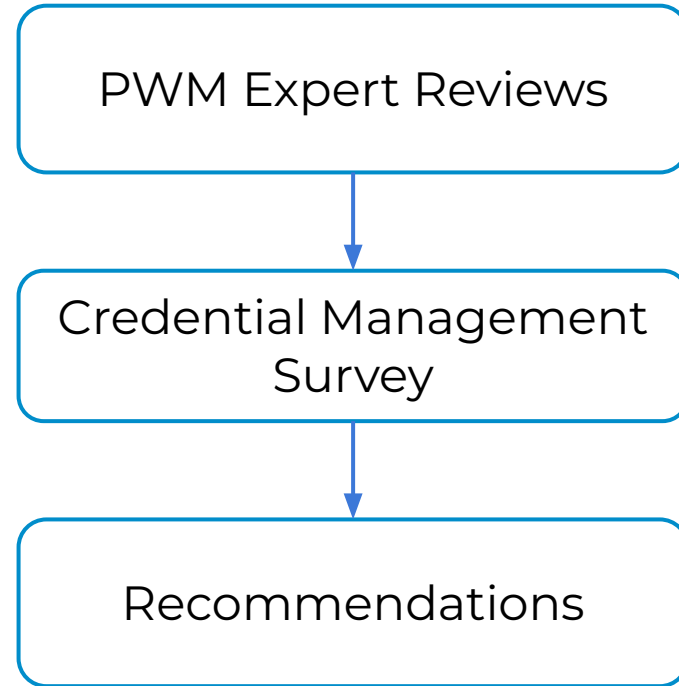


A Mixed-Methods Study on PWM Setup Strategies

RQ1: **What helpful features** do new users encounter?

RQ2: **What** are **common** user setup **strategies**, and **why** are they used?

RQ3: **How** can we **help users** and **improve** the setup process?





RQ1: Expert Reviews



We Reviewed 14 Password Managers

- Tested 12 PWMs & 2 Browsers
 - Offline & Cloud, free versions where possible
- Fixed set of tasks & on-screen prompts
 - Imports, auto-save, insecure passwords
- Recorded setup process



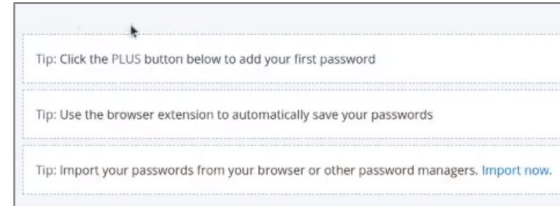


Motivation & Education Features Uncommon

- Tutorials



- Next Steps



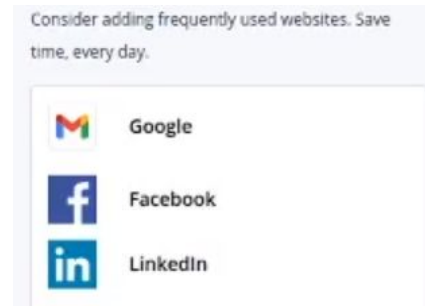
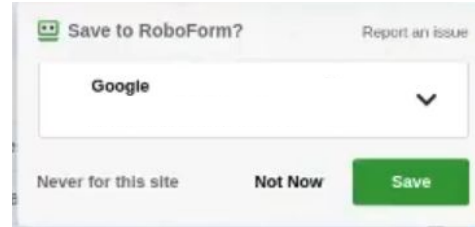
- Achievements





Imports & Auto-Save in Almost All Tested PWMs

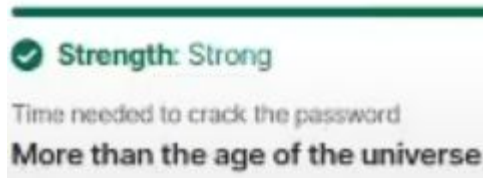
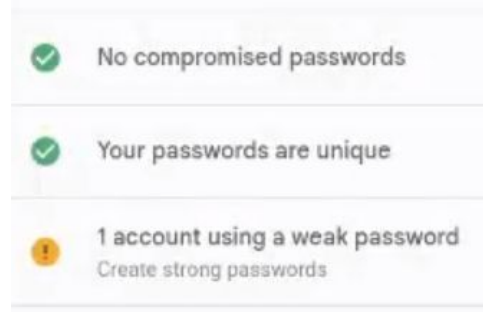
- Imports
- Auto-Save
- Account Suggestions





Security Features Widespread, but often Paywalled

- Security centers
- Breach reports
- Password meters
- Enforced secure master password





RQ2: End User Survey



End User Survey About Experiences & Reasons

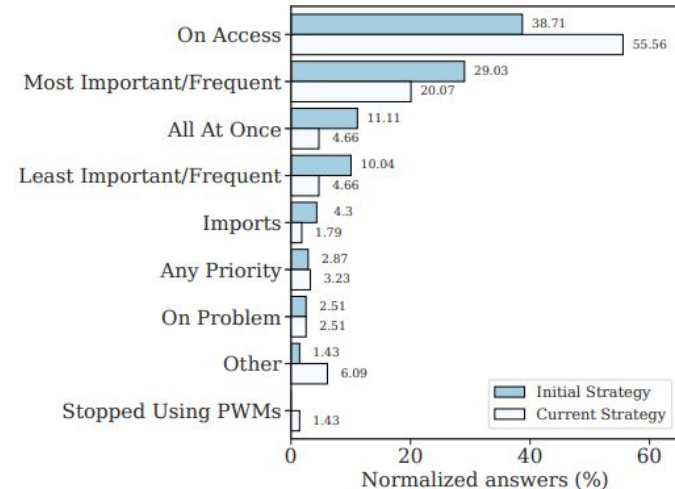
- Questioned 279 end users via Prolific
 - Pre-survey to identify PWM users

- Topics:
 - Initial & current adoption strategies
 - Other used PWM functions
 - Experiences during setup
 - Improvements



Passwords Are Mostly Added on Access

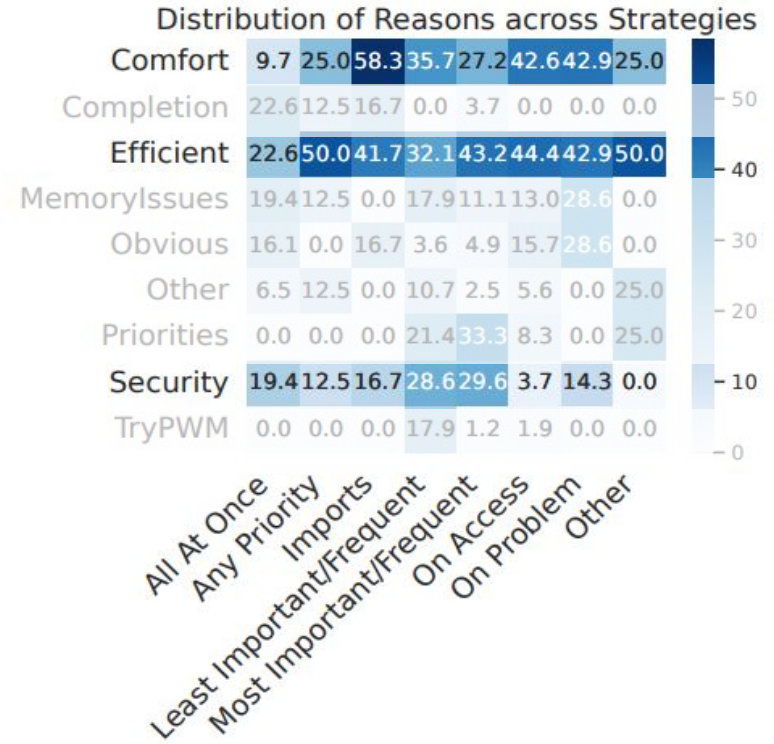
- Most common: Add when service is accessed
- Secondly: Add most frequent/important
- Others mostly irrelevant
- Shift to on access after initial setup





Comfort and Efficiency Drive Strategy Choices

- Comfort:
 - Seamless
 - Easy process
- Efficient:
 - Quickly done
 - Sufficiently completed
- Security less relevant!





Users Prefer Convenience Over Security

- Mainly seen as convenience tool
- Lack of trust
 - 10% initially only added least important accounts
 - 28% don't store all accounts due to distrust
- Users prioritize account types
 - Most common: Social media, email, financial



RQ3: Recommendations



We Should Ease The Addition Process Further

- Ease the process:
 - More automation
 - Guided additions
- Identify accounts:
 - Account scans
 - Account suggestions
- Motivate & inform users:
 - Privacy labels
 - Gamification & nudges



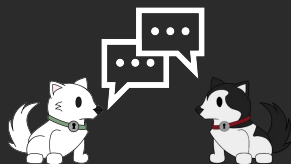
Summary

Contact

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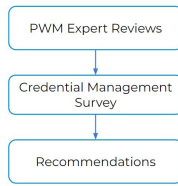


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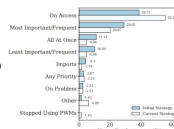
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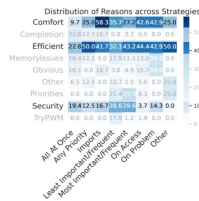
- Adding sites on access is most common
- Follow-Up: Adding frequent/important websites
- Others mostly irrelevant
- Shift to on access after initial setup



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Users Prefer Convenience Over Security

- Mainly seen as convenience tool
 - 10% initially only added least important accounts
 - 78 users reported not storing all private passwords
- Users prioritize what they add
 - Mostly social media, Email, Financial

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We Should Ease The Addition Process Further

- To ease the process:
 - More Automation
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- To identify accounts:
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- To motivate & inform users:
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