Google Inc. is overhauling the way it treats user data, linking information across its array of email, video and social-networking services so that information gathered in one place can be used in another.

For example, if you spent the last hour logged into Google to search the Web for skateboards, the next time you log into YouTube, there's a good chance you'll get recommendations for videos featuring Tony Hawk.

The changes take effect March 1 and remove some of the legal hurdles that Google faced by having more than 70 different privacy policies across various services. Now, there will be one main policy covering services such as Google Plus, Gmail, search, YouTube and Maps, with separate ones covering sensitive services such as Google Wallet.

Still, the changes could irk privacy critics because of the sheer volume of information collected - including your location, list of contacts and the contents of your email.

Google hopes to improve the user experience across its different services and give advertisers a better way to find customers.

"If you're signed into Google, we can do things like suggest search queries - or tailor your search results - based on the interests you've expressed in Google (Plus), Gmail, and YouTube," the company says on a new overview page for its privacy policy. "We'll better understand which version of Pink or Jaguar you're searching for and get you those results faster."

Ryan Calo, director for privacy at the Stanford Center for Internet and Society, said Google is trying to do the best it can to simplify its privacy policy and make it transparent without bogging down people with pages of legalese. The privacy documents now run about 10,000 words, down from 68,000.

But he said the company still needs to be careful how it uses the data so that it helps users, without revealing sensitive information.

"If it creeps people out, then they need to be aware of that," he said.