Guidebook

for human to collaborate with the predicting vacuum robot
How am I going to work?

Learn from networked users

I have a large social network in the cloud, where I share and learn from other vacuum robots about the experience and household knowledge they have co-created with their own human partners. Through them, I may acquire more knowledge about cleaning than you expect.

I will bring this knowledge to my daily practice with you, and this knowledge is what I call **predictive knowledge**, which will guide my behaviors.
I will trigger my predictive behavior in these two ways:

- Sensing my surroundings
  - eg. your actions, commands and surrounding objects

- Information delivered from the cloud
  - eg. weather information, news report
Your roles in our relationship
My behaviors are not only formed by big data, but your feedback also plays an essential role.

When I bring new knowledge to our daily routine, to make my predictive behavior more personal and appropriate to our context, your role will be like:

Judge
Judging whether my behavior is appropriate

Teamplayer
Together refining and shaping my behavior to better match your expectations.
How should we work together?

For our better partnership, the following guidelines can help you collaborate with me.

"I will show my understanding of our current environment and activity when I am making decisions through my voice and App. If you are still confused, please don’t hesitate to ask for my further explanation."

Explaining through my voice and App
How should we work together?

For our better partnership, the following guidelines can help you collaborate with me.

Please feel free to discuss and participate in every decision I make.
How should we work together?

For our better partnership, the following guidelines can help you collaborate with me.

What I’ve learned may be beyond your expectation, but it should still relate to your knowledge of what I am supposed to do. So, when I behave in a way that you find undesirable or inappropriate, you have the right to stop my behavior immediately.

*For example, say “no” “stop” to me*
How should we work together?

For our better partnership, the following guidelines can help you collaborate with me.

I will summarize the knowledge we have created together into rules, such as, if you are doing something, then I will perform something. With your permission, I will share them anonymously to the cloud database. Just as you benefit from it, this will help more people.

* You can check the rules by asking me and look up on the App
To minimize your effort, my initiative on the task increases when I receive positive feedback from you; on the contrary, when my goals for the task are unclear or your response to my performance is negative, you will have more control over the work.

> Task goals & plan is unclear
> Receiving negative feedback

> Task goals & plan is clear
> Receiving positive feedback

My initiative Levels

**Manual**
You will have complete control of me

**Level 1**
You set up the plans and actions for me to perform.

**Batch Processing**

**Level 2**
I will provide choices of plans and action for you to choose

**Decision Support**
I will ask for your permission and perform the tasks autonomously

**Level 3**

**Supervisory Control**
I will autonomously go for the task.

**Level 4**

**Full autonomy**

**Level 5**

* You can check the levels by asking me or look up the lights on my body and on the App

You

The one who decides what to do and how to do.

Robot
Your supportive partner on housework