


**NAME:** Chemical lab automation (framework) 

**DATE:** May 16, 2026 5:24 AM

**DESCRIPTION OF TECHNOLOGY**  
In the world of chemical discoveries, a lot of experiments get performed. A way to increase the amount of discoveries would be to increase the speed and amount of experiments by means of automation.

For this a lot of things needs to be brought together: robot and machine control, planning automation, experiment...

## HUMAN VALUES

## TRANSPARENCY

## IMPACT ON SOCIETY

## STAKEHOLDERS

## SUSTAINABILITY

## HATEFUL AND CRIMINAL ACTORS

## DATA

## FUTURE

## PRIVACY


## INCLUSIVITY

**FIND US ON [www.tict.io](http://www.tict.io)**

THIS CANVAS IS PART OF THE TECHNOLOGY IMPACT CYCLE TOOL. THIS CANVAS IS THE RESULT OF AN IMPROVEMENTSCAN. YOU CAN FILL OUT THE FULL TICT ON [WWW.TICT.IO](http://www.tict.io)

# IMPROVEMENTSCAN - CANVAS - HELPING lab automation (framework)

**NAME:** Chemical lab automation (framework) 

**DATE:** May 16, 2026 5:24 AM

**DESCRIPTION OF TECHNOLOGY**  
In the world of chemical discoveries, a lot of experiments get performed. A way to increase the amount of discoveries would be to increase the speed and amount of experiments by means of automation.

For this a lot of things needs to be brought together: robot and machine control, planning automation, experiment...

**HUMAN VALUES** 

**Now that you have thought hard about the impact of your technology on human values, what improvements...**

If you think about the impact of this technology on human values and needs. If you think about how this technology affects the identity of the user, the autonomy of the user (can the users make their own decisions?) and the health and well-being of the user. If you think about all that, what improvement would you (want to) make? In the technology?...

**TRANSPARENCY** 

**Now that you have thought hard about the transparency of this technology, what improvements would you like t...**

If you think about the communication on the way the technology works and the businessmodel. If you think about the explanation on automatic decisions that are made. If you think about complaint procedures and transparency on possible negative effects. If you think about all that, what would you (want to) improve? In the technology? In context?...

**IMPACT ON SOCIETY** 

**Now that you have thought hard about the impact of this technology on society (by filling out the questions...**

If you think about the real problem this technology is going to solve. If you think about the ability of this technology to solve the real problem. If you think about possible negative effects and whether this technology will contribute to a world you want to live in. If you think about all that, what improvements would you make? In technology? In context? In use?...

**STAKEHOLDERS** 

**Now that you have thought hard about all stakeholders, what improvements would you like to make? List them...**

If you think about all stakeholders of this technology. If you think about stakeholders that are less obvious. If you think about the way certain stakeholders are affected by this technology and if you want to take them into consideration. If you think about all that, what would you (want to) improve? In the technology? In context? In use?...

**SUSTAINABILITY** 

**Now that you have thought hard about the sustainability of this technology, what improvements would you like t...**

If you think about the direct and indirect energy use and the materials that are used in the technology. If you think about the lifespan of the technology and the hidden environmental impact of the technology. If you think about all that, what improvements would you (want to) make? In the technology? In context? In use?...

**HATEFUL AND CRIMINAL ACTORS** 

**Now that you have thought hard about how bad actors can impact this technology, what improvements would...**

If you think about this technology being used to break the law, or avoid the consequences of breaking the law, or to be used against certain groups, or to attack the truth or to pit certain groups against each other. If you think about all of that, what improvements would you (want to) make? In the technology? In context? In use?...

**DATA** 

**Now that you have thought hard about the impact of data on this technology, what improvements would you...**

If you think about the limitations of data. Things like subjectivity, incomplete datasets and so on. If you think about the way new insights are handled. If you think about the sustainability of the collection of data or the data that is collected from the users. If you think about all that, what would you (want to) improve? In the technology? In context?...

**FUTURE** 

**Impact Improvement: Now that you have thought hard about the future impact of the technology, what...**

If you think about an utopian and a dystopian scenario. If you think about the way this technology can change the world. If you think about the consequences of a different party buying your technology. If you think about all that, what would you (want to) improve? In the technology? In context? In use? ...

**PRIVACY** 

**Now that you have thought hard about privacy and data protection, what improvements would you like to make?...**

If you think about this technology invading someone's privacy or collecting personal data and if you think about the way this technology is compliant with prevailing law and mitigates dataprotection risks and concerns. If you think about all that, what improvements would you (want to) make? In the technology? In context? In use?...

**INCLUSIVITY** 

**Now that you have thought hard about the inclusivity of the technology, what improvements would you like to...**

If you think about accessibility to this technology. If you think about built in biases or automatic decisions that may be biased. If you think about who is benefitting from this technology and the diversity of the team that creates the technology. If you think about all that, what improvements would you (want to) make? In the technology? In context? In use?...

**FIND US ON [WWW.TICT.IO](http://WWW.TICT.IO)**

**THIS CANVAS IS PART OF THE TECHNOLOGY IMPACT CYCLE TOOL. THIS CANVAS IS THE RESULT OF AN IMPROVEMENTSCAN. YOU CAN FILL OUT THE FULL TICT ON WWW.TICT.IO**