

IRDS

International Roadmaps for Devices and Systems

OK, ONE TWO THREE,
WE DIVE IN!



What is it?

Once upon a time, in the olden days, there was an **International Technology Roadmap for Semiconductors**, produced each year by international experts. This roadmap was known as the **“ITRS”**.

It was meant to be a **reference into the future** for university, consortia, national laboratories and industry researchers, **to stimulate innovation in technology.**

LIKE, YOU KNOW, A WHITE BOOK OR
A BIG CHEATSHEET IN A
COMPLICATED WORLD, A MODERN
PROPHECY...



Time passed, and in 2016, the ITRS became the **International Roadmap for Devices and Systems**, hosted by the **IEEE**, a famous scientific organisation. The IRDS has followed several of the successful methodologies demonstrated by the ITRS with an additional **expansion to systems**.

The core idea is the same: **it brings together worldwide experts**, fostering industry-wide collaboration and knowledge sharing, working for the future of semiconductors and technologies.



SO, IN SHORT, A GROUP OF SMART
PEOPLE WORKING TOGETHER
BEYOND FRONTIERS AND
WORKPLACES...!

Through work and research, IRDS members give guidance for the industry, researchers and suppliers.

The IRDS serves to:

- **Identify key trends** related to devices, systems and related tech
- **Determine generic needs**, challenges, potential, opportunities for innovation...
- **Encourage collaboration** and related activities worldwide

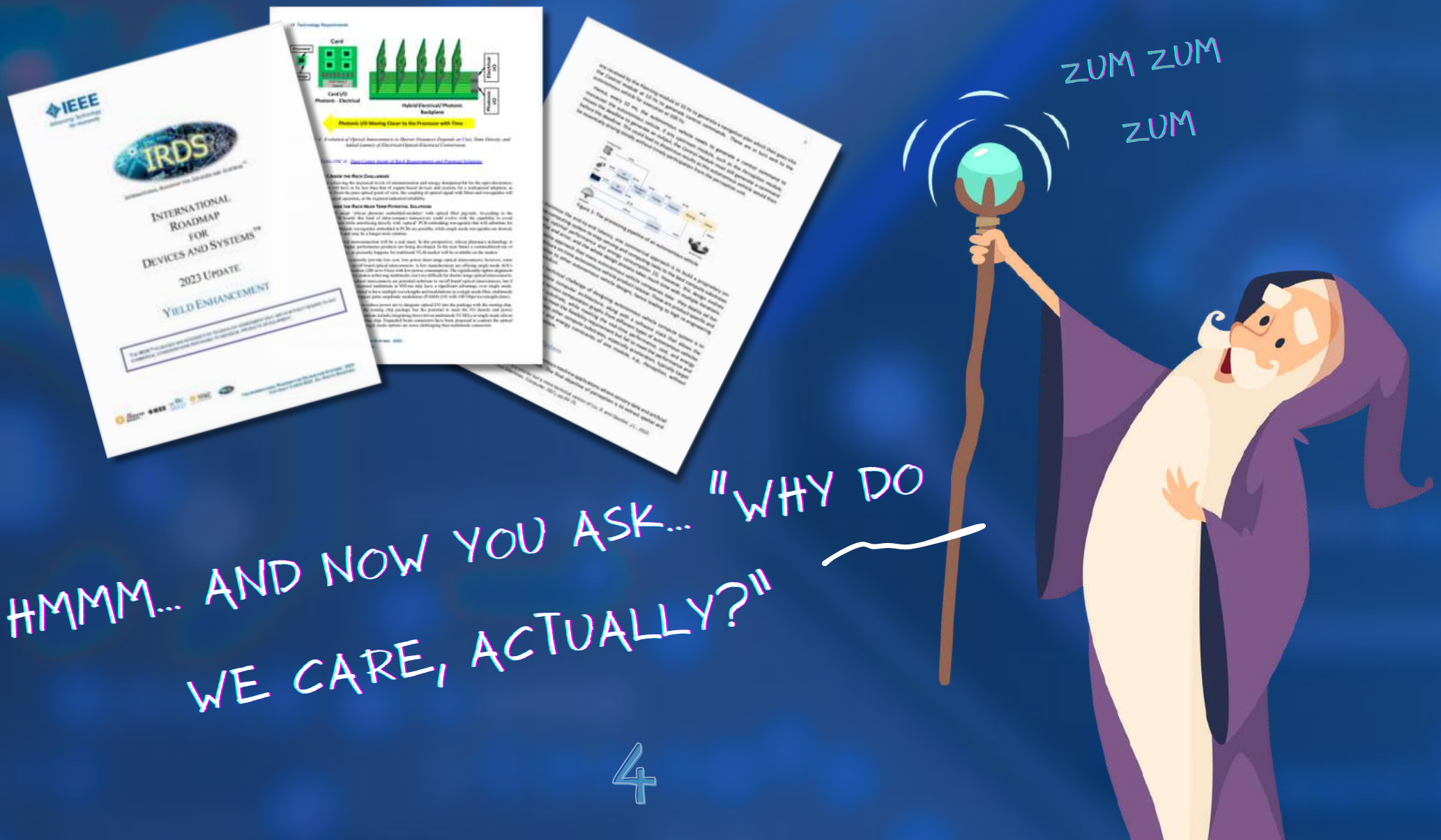


AND THE ROADMAP IS LOOKING

AT A 15 YEARS HORIZON!

CRAZY STUFF!

Of course, it's not an easy task and there are numerous teams working on different topics within the IRDS to regularly update the roadmaps, through detailed reports or white papers, on Moore's Law, Cryogenic Electronics & Quantum Information Processing, Factory Integration...And more!



Why it matters?

Well, let's take as an example the **ESHS team** - **“Environment, Safety, Health and Sustainability”**. They work on critical issues, such as **water consumption** in semiconductor manufacturing, **energy waste** and so on, raising awareness, assessing the risks and **suggesting a path to respond to these challenges.**

AND IT'S OUR TASK TO ACT
NOW, LET IT BE NOT JUST
ON PAPER!!



Besides its global impact on policies and research, IRDS matters even more today, as our world economy and future relies more and more on the development of electronic devices and systems.

Considering the geopolitical situation (with climate crisis, wars, chips shortage...), it is really important to have such an **objective work accessible to all** and creating initiatives.

OH BRO, THE FUTURE IS FREAKY!
NO JOKE!



You can find out more
and take a look at the
2023 IRDS on the
IRDS website!

irds.ieee.org



IEEE

**SiNANO
Institute**



Sources: IEEE, IRDS.

2023 - SiNANO Institute - sinano.eu