IT work culture in science centers

- Be Innovative
- Be Curious
- Be Creative
- Be Adaptive
- Be a Driver

"You can't plan the digital future, you need to build it"

What are the typical technical requirements for an exhibit? *(IT perspective)*

Reliable

If two or three of our main exhibits (~200 exhibits on the floor) are down = ”NOTHING WORKS”.

Remotely managed

Replaceable

Easily replaceable parts that can be found on the market or enough spare parts.

Lifecycle thinking

Customizable

All languages, texts, images, videos, sounds, parameters etc. has to be customizable. They should not depend on source code. Software versioning.

Possibility to reuse code – module thinking

IT & EXHIBITIONS

- Independent exhibition network
- Utilize infrastructure that already exists
- Read & store user data from exhibits
- Data analytics and flows
- Remotely monitor and manage exhibits and hardware
- Automate exhibit updates and version control

STATISTICS

- Virtual servers – Database, MQTT & UI
- Individual brokers for each exhibition
- Different UI for selected use cases
- Temperature & humidity measuring
- Sensors for mechanical exhibits
- Stores user and usage data from exhibits
- Control tasks

”The backend planning started when we had to figure out a way to synchronize 18 videoplayers, 4 audioplayers and 30 speakers”

Something to think about

- Simple data is collected from the exhibits
- The data varies depending on the exhibit; the current examples are just for reference
- For now, we proceed with a try and fail approach
- There are errors in the data interpretation
- It would be good to find ways and heuristics for extracting the correct data
- What kind of data should we collect from the exhibits to get a better overall picture?

Something to think about

- What metrics should be in place to improve the benefits?
- Data is constantly increasing; what metrics should be developed? Consider things and metrics that would be useful for Heureka's operations
- Where could we set target values and actually measure the progress and development of the target?
- Consider what would be useful and how to measure and analyze it
- Can data be turned into metrics for development that would be useful in future exhibition planning?

CLASSICS – For whom the bell tolls

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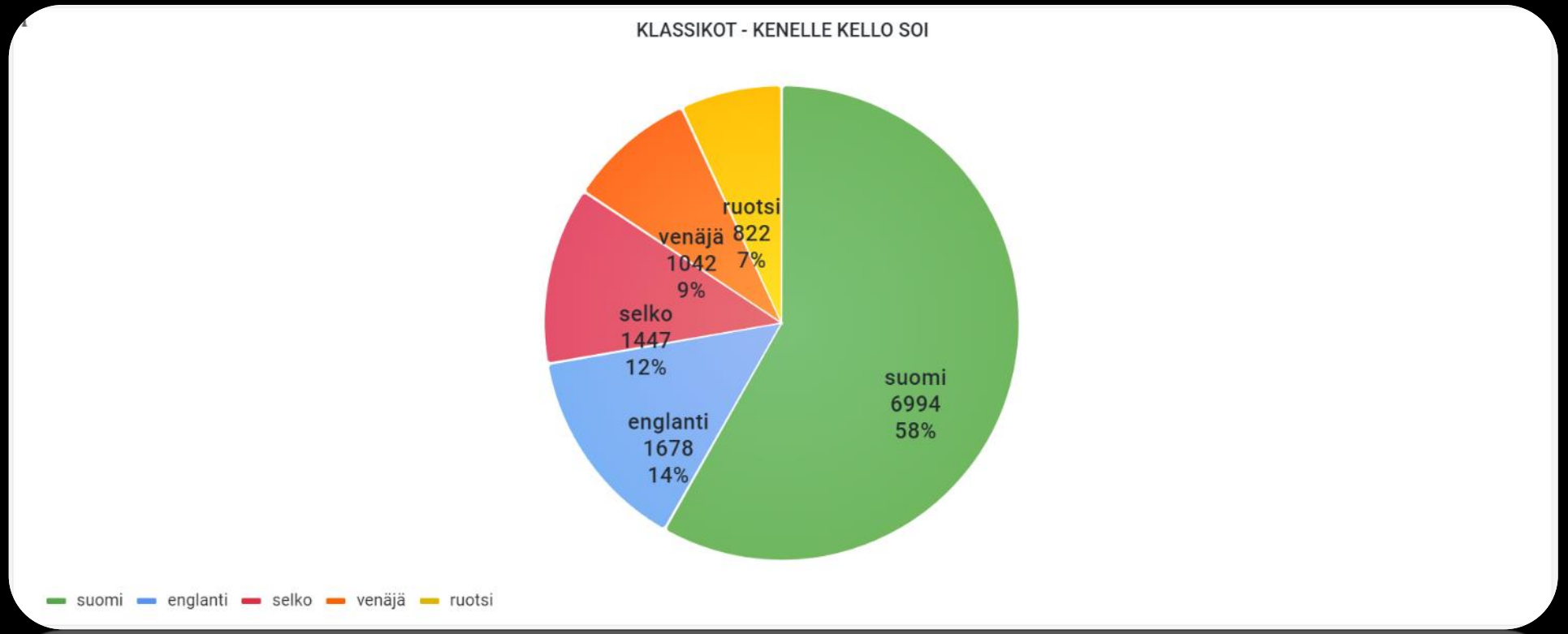
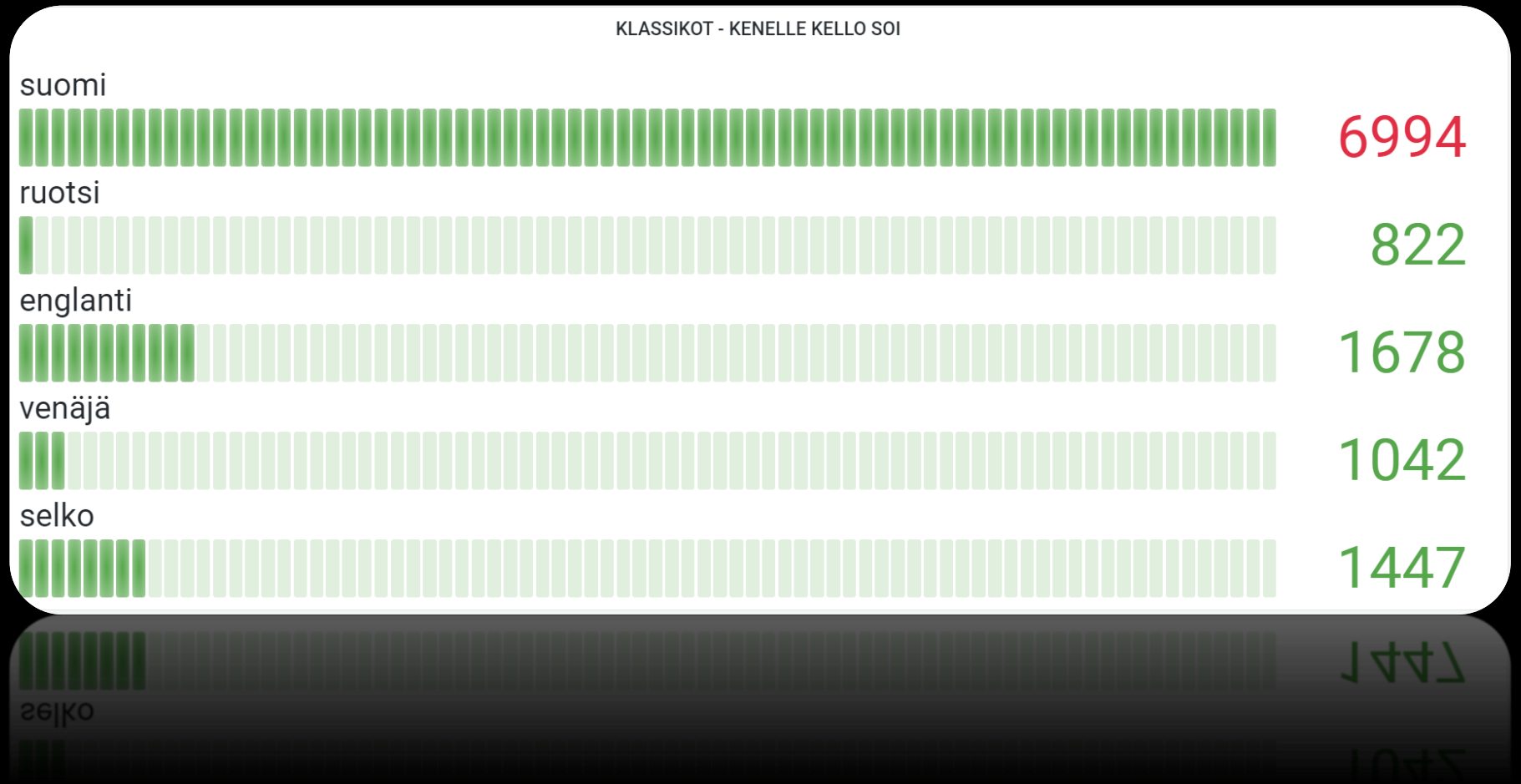


CLASSICS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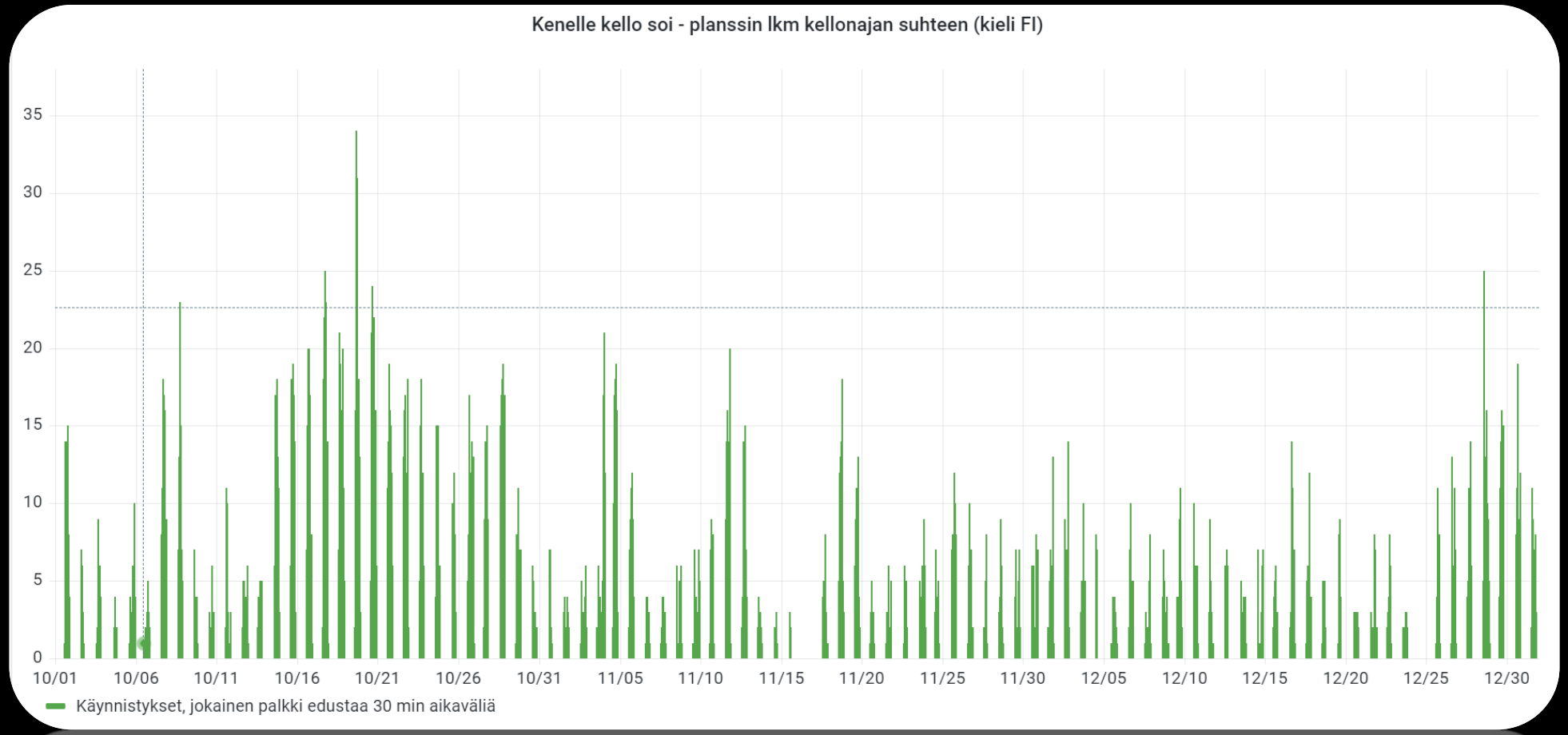
CLASSICS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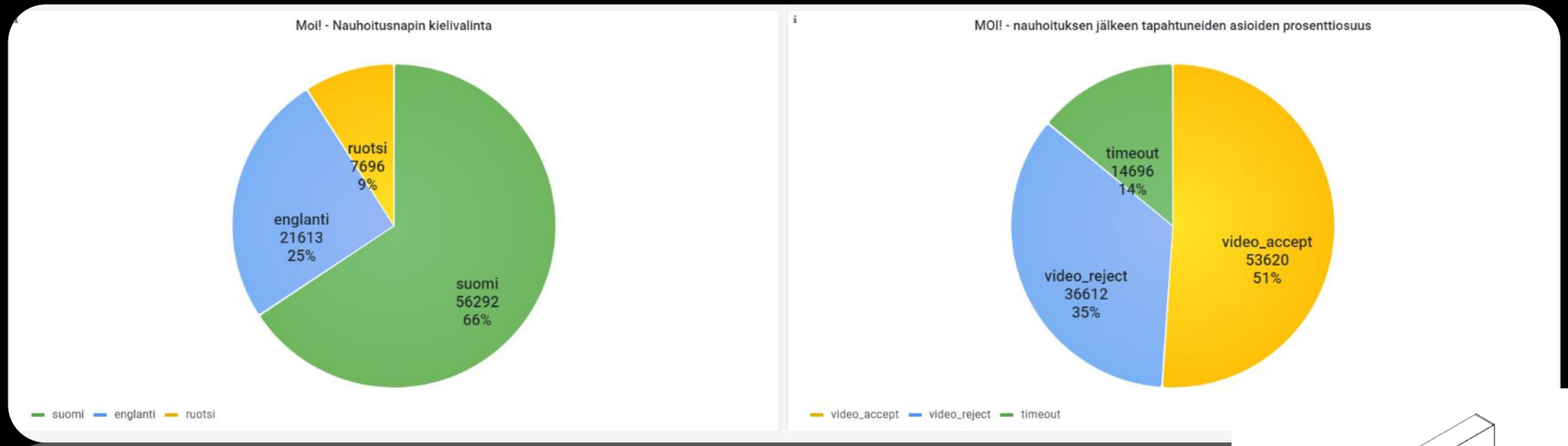
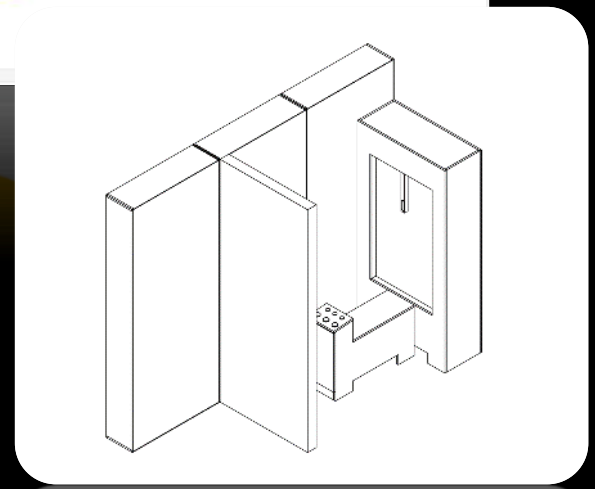
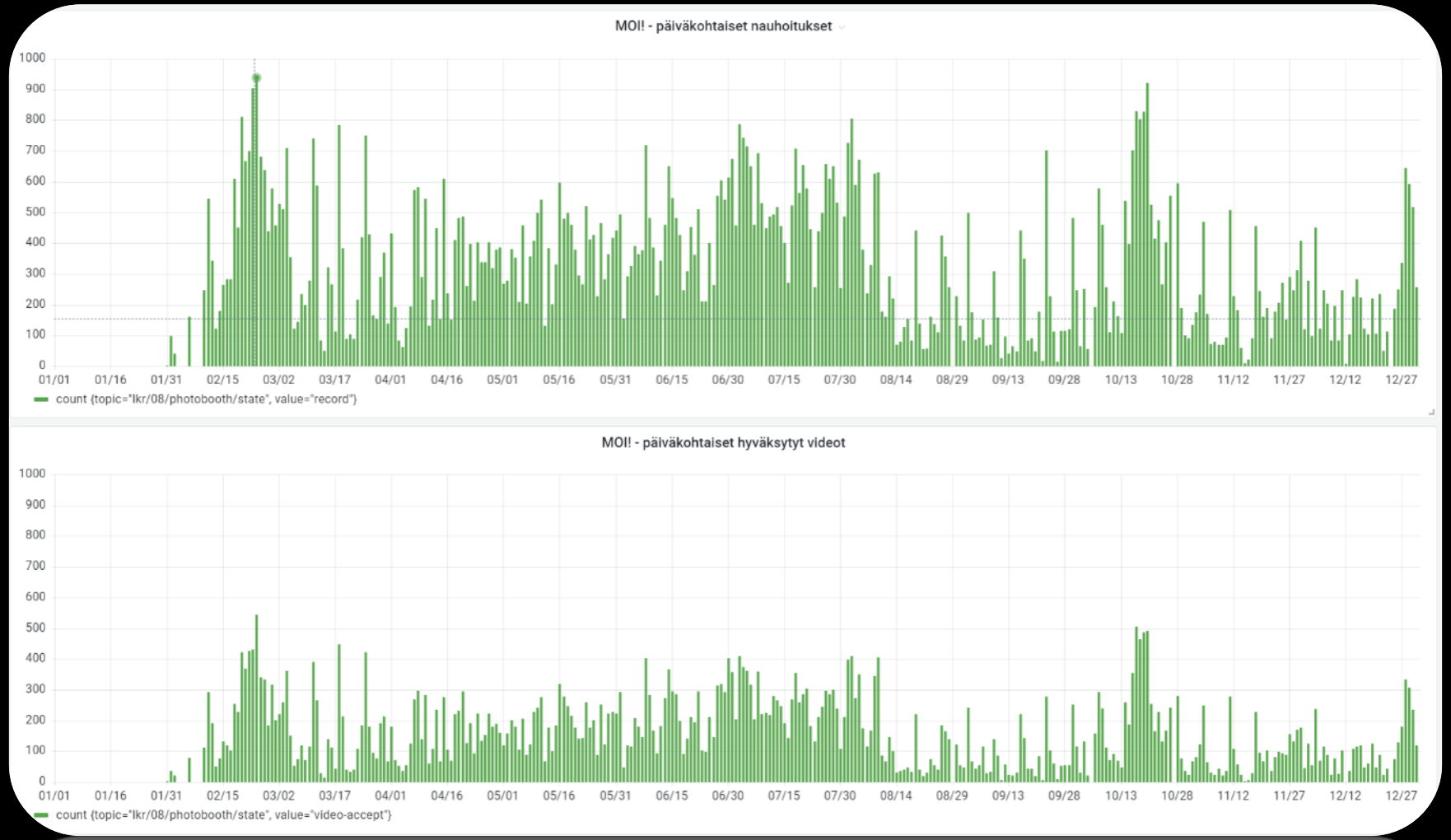
Käynnistykset, jokainen palkki edustaa 30 min aikaväliä

NATURAL DISASTERS - Hello





NATURAL DISASTERS - Hello



NATURAL DISASTERS - Hello

POWER OF PLAY – Electrical Roulette

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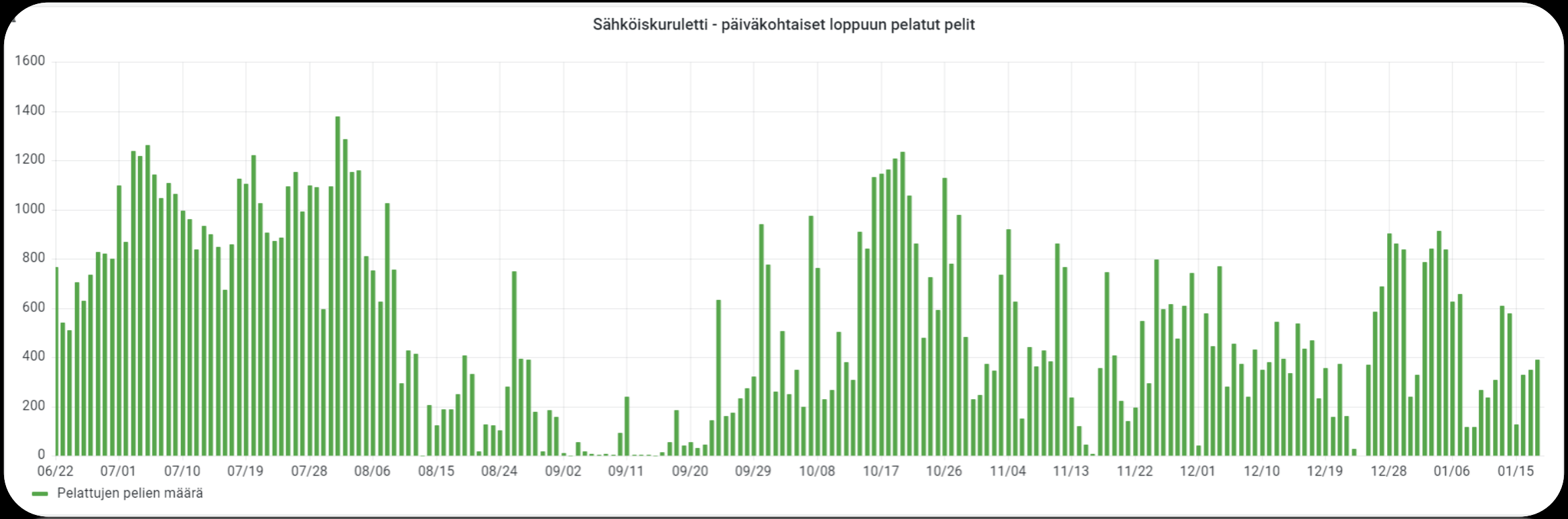
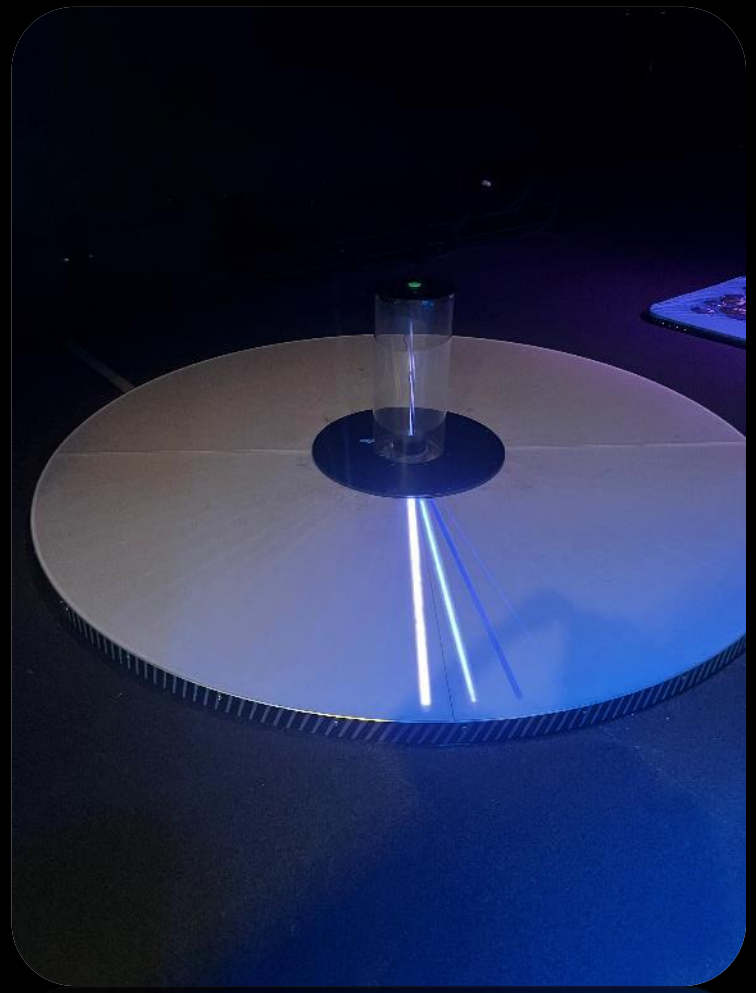
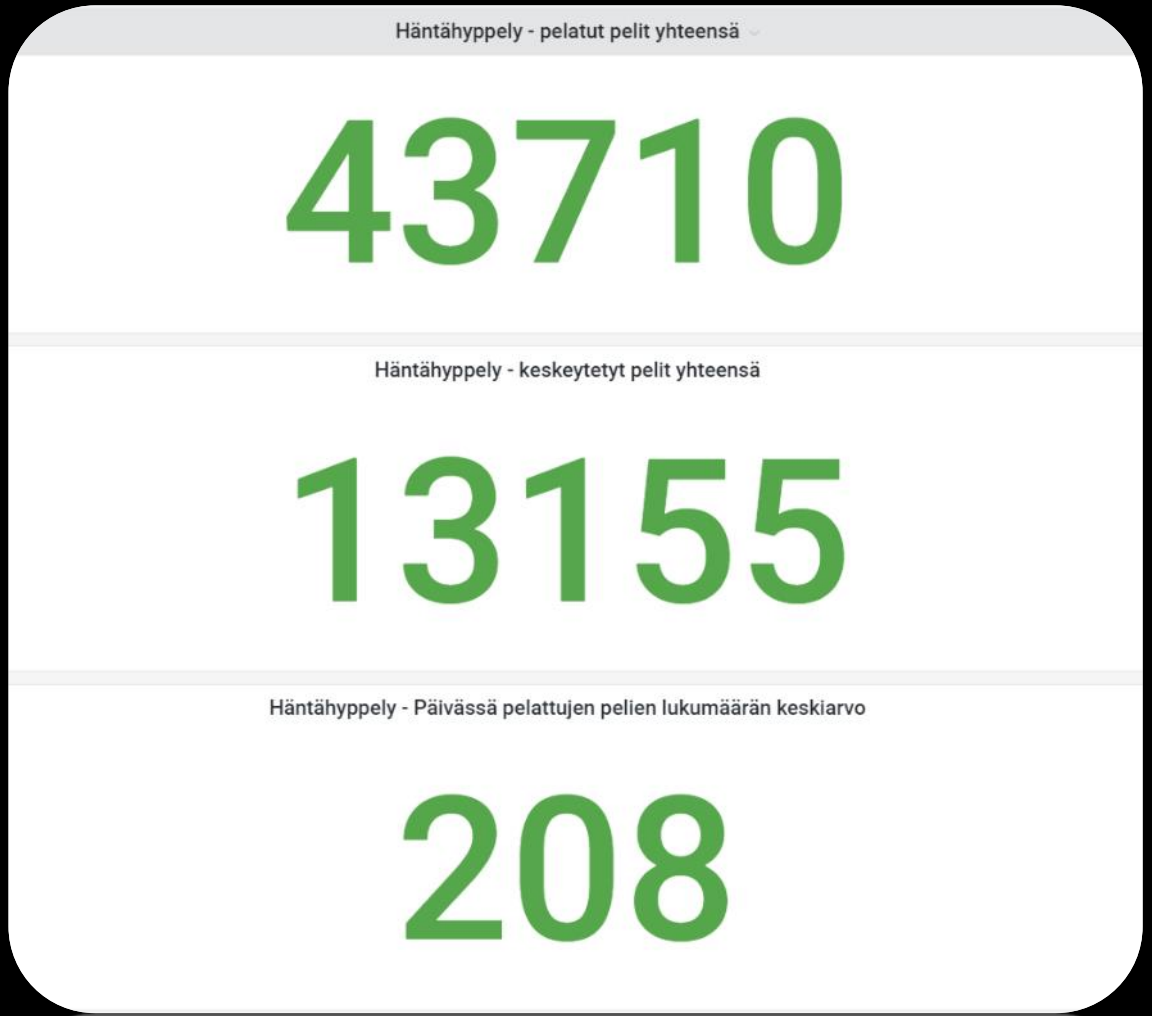


POWER OF PLAY – Tail skipping



POWER OF PLAY – Tail skipping



ME, MYSELF & AI – Poet machine

ME, MYSELF & AI – Poet machine

Runokone - aloitetut runot

31206

Runokone - runojen kielivalinnan prosenttiosuudet

suomi	ruotsi	englanti
75%	8%	18%

Runokone - tulostetut runot

20777

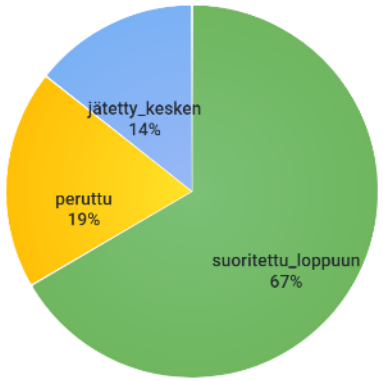
Runokone - perutut runot

5922

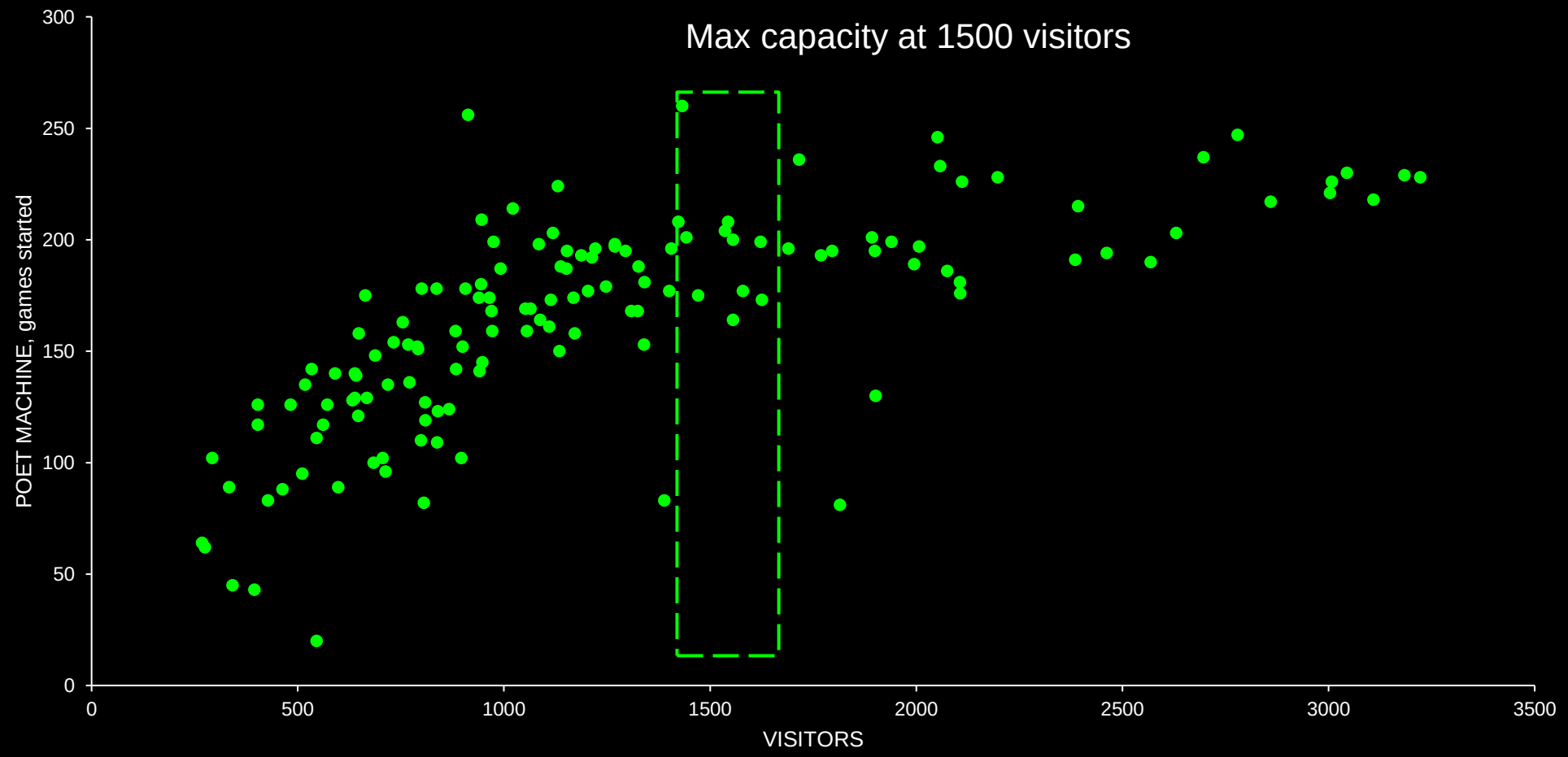
Runokone - runon teko jätetty kesken

4465

Uniikkien käyttökertojen lopputulokset, prosenttiosuus



ME, MYSELF & AI – Case Poet machine



ME, MYSELF & AI – Mind Reader