

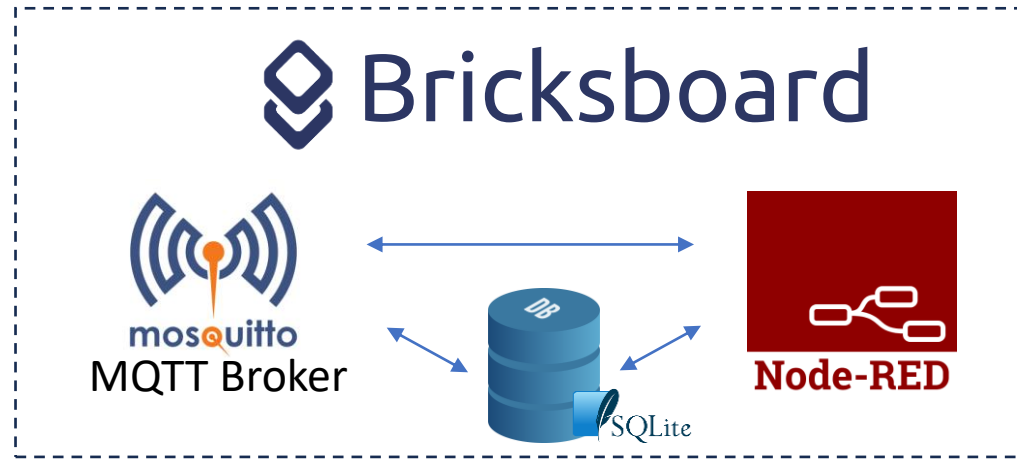


# La piattaforma Bricksboard

Fabrizio Innocenti

# Bricksboard

Cos'è



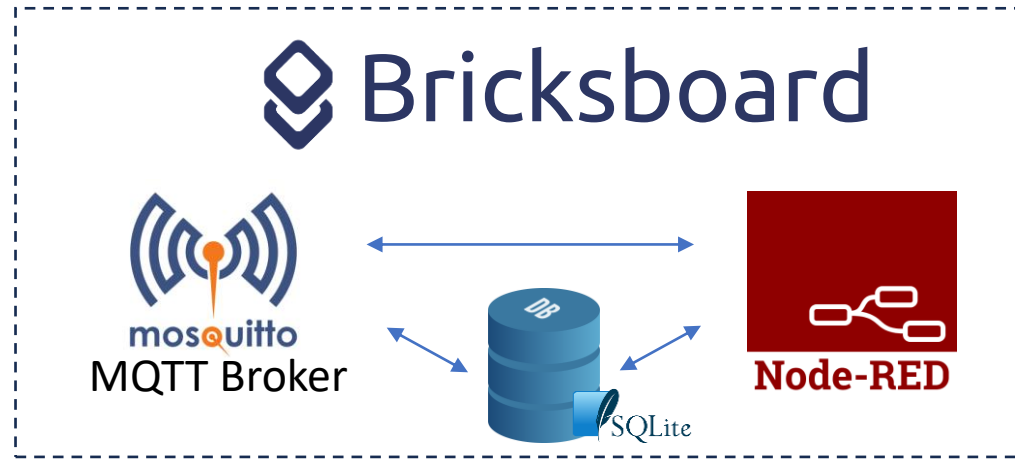
**Bricksboard**, è una piattaforma utilizzabile per creare facilmente e in pochi minuti il tuo **pannello di controllo**.

Potrai realizzare velocemente sofisticate applicazioni IoT in un ambiente semplice da usare, ove i singoli mattoncini Blebricks diventano **Nodi-Blebricks da interconnettere e collegare** tra loro.

La piattaforma si basa sullo **strumento di programmazione Node-RED**.

# Bricksboard

Cos'è



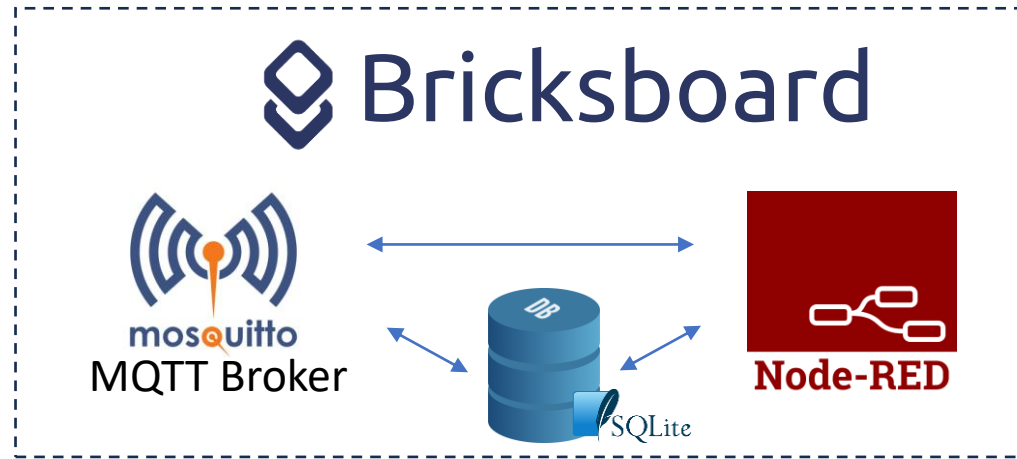
L'ambiente di programmazione è già configurato e pronto all'uso completo di:

- **Palette** con i [nodi Blebricks](#) per rendere la programmazione **no-code**, semplice e immediata
- [Broker MQTT Mosquitto](#) per la comunicazione attraverso la rete Internet
- [Database SQLite](#) per salvare automaticamente i dati ricevuti dai sensori, che verranno scaricati all'occorrenza.



# Bricksboard

Cos'è



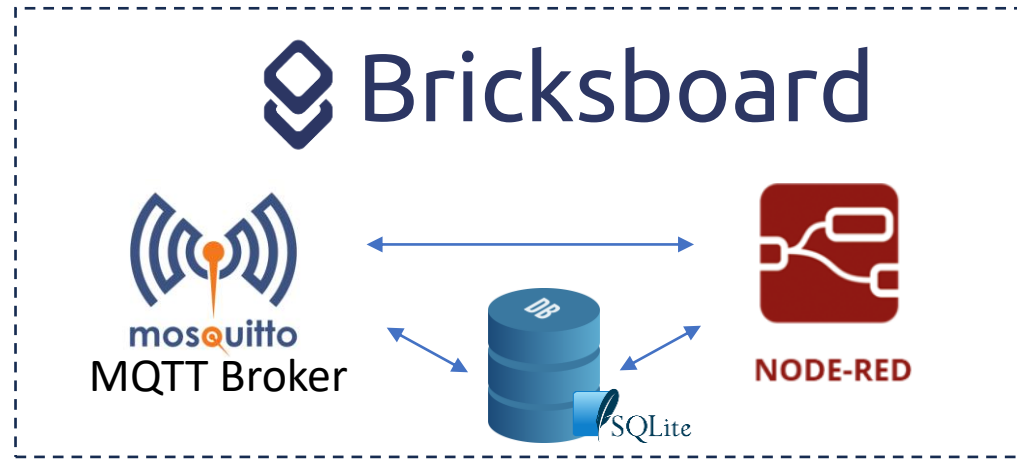
La piattaforma è **multiutente** e quindi utilizzabile da:

In particolare è possibile utilizzarla per organizzare **classi o gruppi di lavoro**, dove più utenti lavorano contemporaneamente a più progetti e il docente può:

- Verificare gli stati di avanzamento dei lavori
- Modificare e interagire via web in presenza o da remoto
- Scambiare blocchi di codice anche via whatsapp

# Bricksboard

## MQTT



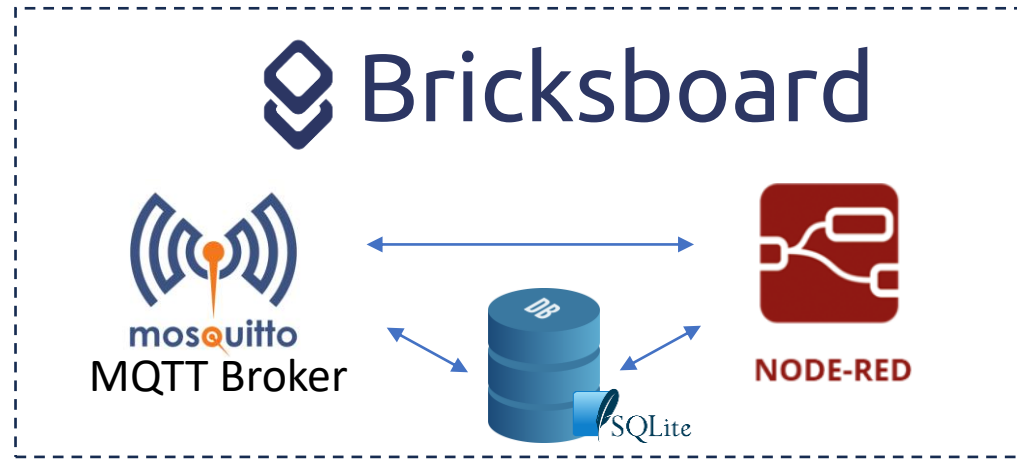
## Come comunicano i Blebricks con la piattaforma Bricksboard?

Il meccanismo principale passa attraverso il **protocollo MQTT** (**M**essage **Q**ueuing **T**elemetry **T**ransport).

*E' un metodo usato per la trasmissione di messaggi, semplice leggero e affidabile di fondamentale importanza per la IoT.*

Si tratta di una specie di «chat» dove si entra accedendo a un «**Broker MQTT**» e poi ci si registra a un argomento di conversazione «**topic**» dove ci si scambiano i messaggi.

# Bricksboard



Per stabilire la comunicazione con la piattaforma occorre quindi:

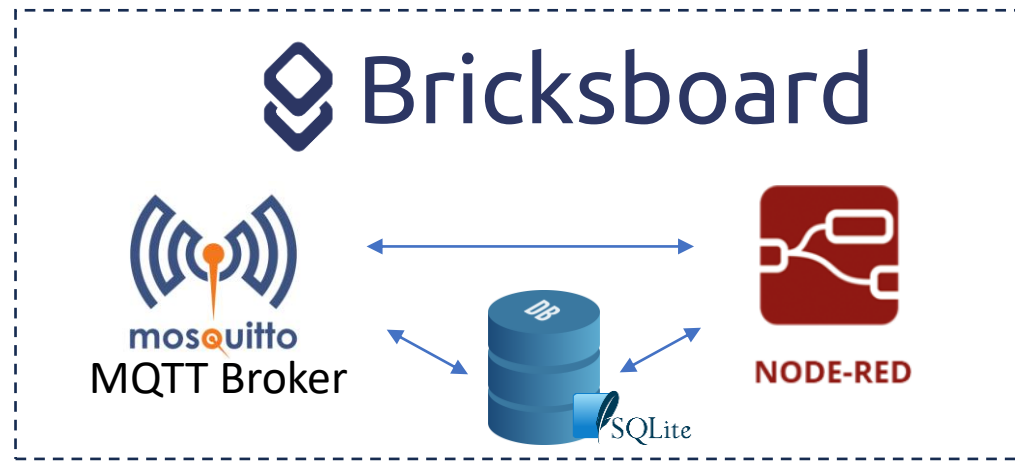
**Accedere al Broker MQTT:** se usi quello della piattaforma potrai utilizzare le credenziali ricevute al momento della registrazione

**Conoscere il «topic»** su cui avviene la comunicazione con lo specifico sensore

Come si  
stabilisce la  
comunicazione

# Bricksboard

## Topics



### Come impostare i «topics»

La forma generica del topic è la seguente:

**<tipo\_di\_GW>/<Indirizzo\_BLE-B\_Canale\_Comunicazione>/<Indirizzo\_BLE-B\_Sensore>/<attributo>**

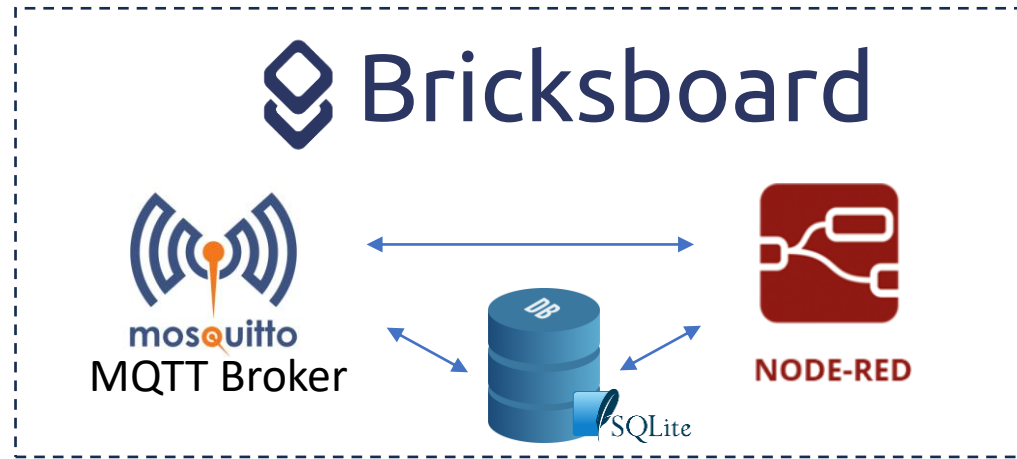
Definiti dal metodo di comunicazione

**gw\_esp** se si comunica con ESP o Gateway  
**gw\_bd** se si comunica con App Bricksdoor

- **data:** dati dai sensori
- **cmd:** comandi ai dispositivi
- **conn/BBE7** dati dispositivi RS485 (es soil, DSD, WIND etc)

# Bricksboard

## Indirizzi nei topics



**Gli <indirizzi> si ricavano dall'indirizzo del BLE-B** montato su ogni dispositivo, sia questo gateway, sensore, attuatore etc

**Si prendono le prime 5 coppie di valori HEX e si tolgono i «:» due punti**

**Ad es** se il BLE-B ha **indirizzo EC:A8:14:34:85:62** nel topic si usa: **ECA8143485**

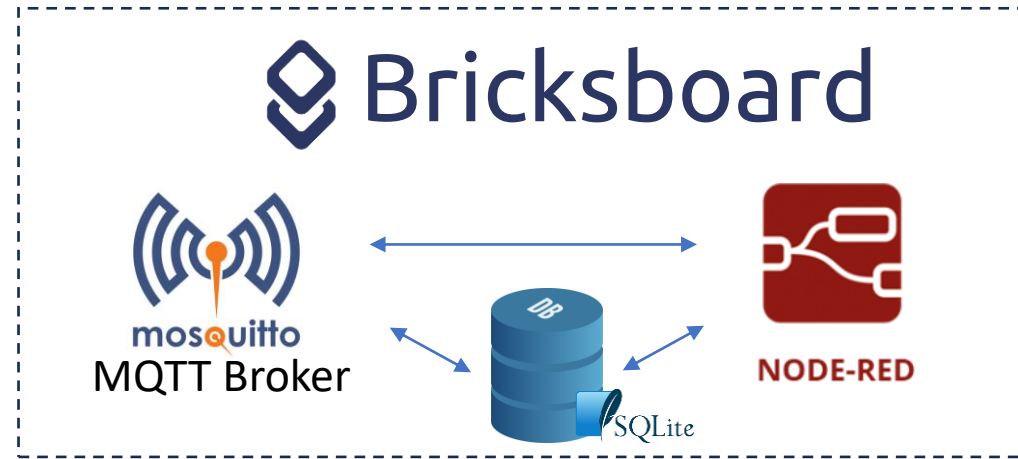
*Vediamo alcuni esempi su come si definiscono i «topics»*



# Bricksboard

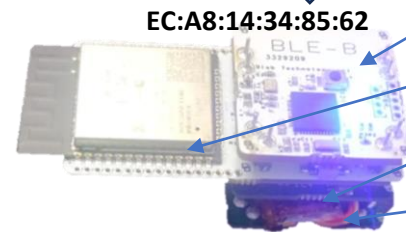
## Comunicazione con brick ESP Tramite WiFi

Vedi BLEB-GW Quickstart User guide  
per configurazione ESP e GW-ESP



### 1) Comunicazione con Brick ESP\* per collegamento con WiFi

Esempio:



- BLE-B: Brick di base con Bluetooth con indirizzo (MakeApp) EC:A8:14:34:85:62
- ESP: Brick per connessione WiFi
- ENV: Sensore ambientale (P,rH%, T, VOC, IAQ)
- RPS: Bricks di alimentazione con batteria ricaricabile 80mAh

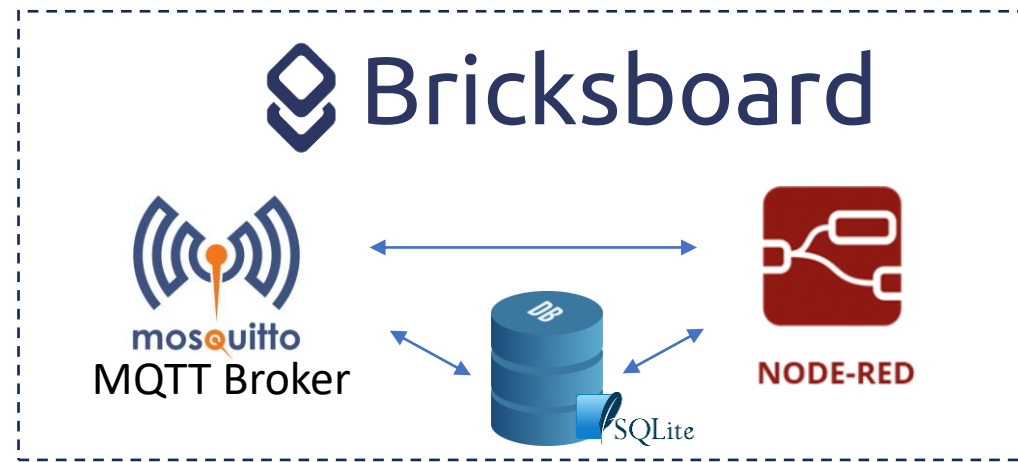
**In questo caso c'è un solo BLE-B montato assieme ad ESP e indirizzo del canale di comunicazione e del sensore coincidono**

**Il topic da usare per la comunicazione sarà: gw\_esp/ECA8143485/ECA8143485 /data**

# Bricksboard

## Comunicazione con Gateway

Vedi BLEB-GW Quickstart User guide per configurazione ESP e GW-ESP



### 2) Comunicazione con Gateway



Esempio:

Più Blebricks con sensori diversi inviano via BLE i dati al Broker tramite Gateway con BLE-B **FD:C7:92:7D:A6:12**

Diversi sensori usano BLE-B che hanno rispettivamente indirizzo: **D4:90:80:DA:13:24** - **D2:07:CB:A3:A0:7B** - **DB:FE:4F:63:5E:55**

**Il canale di trasmissione è Il Gateway con indirizzo **FDC7927DA6** mentre ogni sensore ha un proprio indirizzo**

**I topics da usare per la comunicazione con ognuno dei tre dispositivi saranno:**

- gw\_esp/FDC7927DA6 /D49E80DA13/data**
- gw\_esp/FDC7927DA6/D207CBA3A0/data**
- gw\_esp/FDC7927DA6 /DBFE4F635E/data**

# Bricksboard

## Comunicazione con Bricksdoor

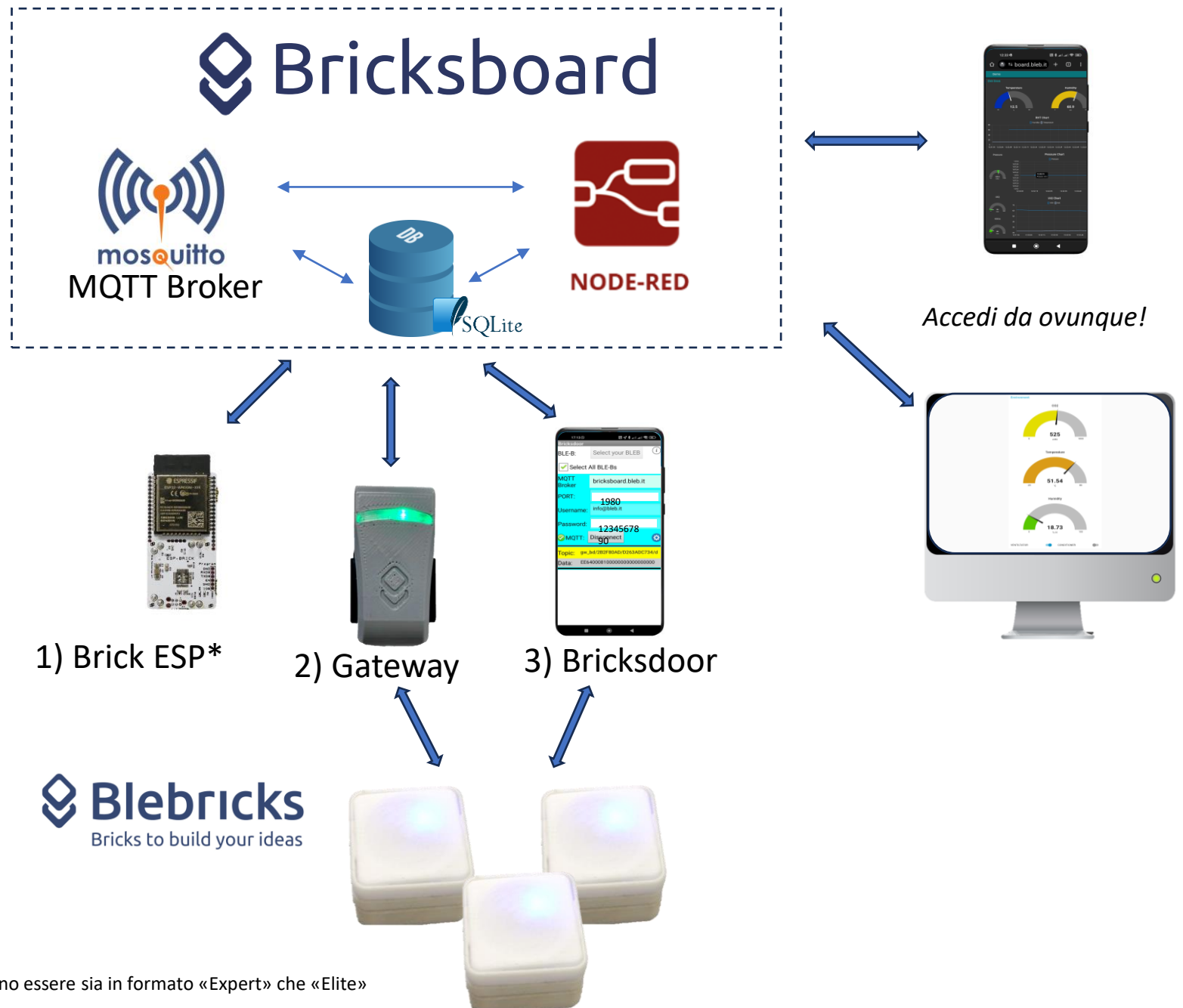


I topics da usare per la comunicazione con ognuno dei tre dispositivi saranno:

- gw\_esp/ 2B2F80AD /D49E80DA13/data
- gw\_esp/ 2B2F80AD/D207CBA3A0/data
- gw\_esp/ 2B2F80AD /DBFE4F635E/data

# Bricksboard

Scegli come  
comunicare  
e accedi da  
ovunque!



\*I Blebricks possono essere sia in formato «Expert» che «Elite»



# Bricksboard

Esempio

Costruiamo  
una stazione di  
rilevazione  
ambientale  
indoor

## Stazione di rilevazione ambientale indoor

Vediamo passo per passo come creare un **sensore ambientale** capace di misurare temperatura, pressione, umidità, rilevare la presenza di VOCs e determinare l'indice di qualità dell'aria indoor (IAQ).

Per creare il dispositivo fisico con i Blebricks ci sono tante possibilità per coprire le diverse esigenze, vediamo alcuni esempi:



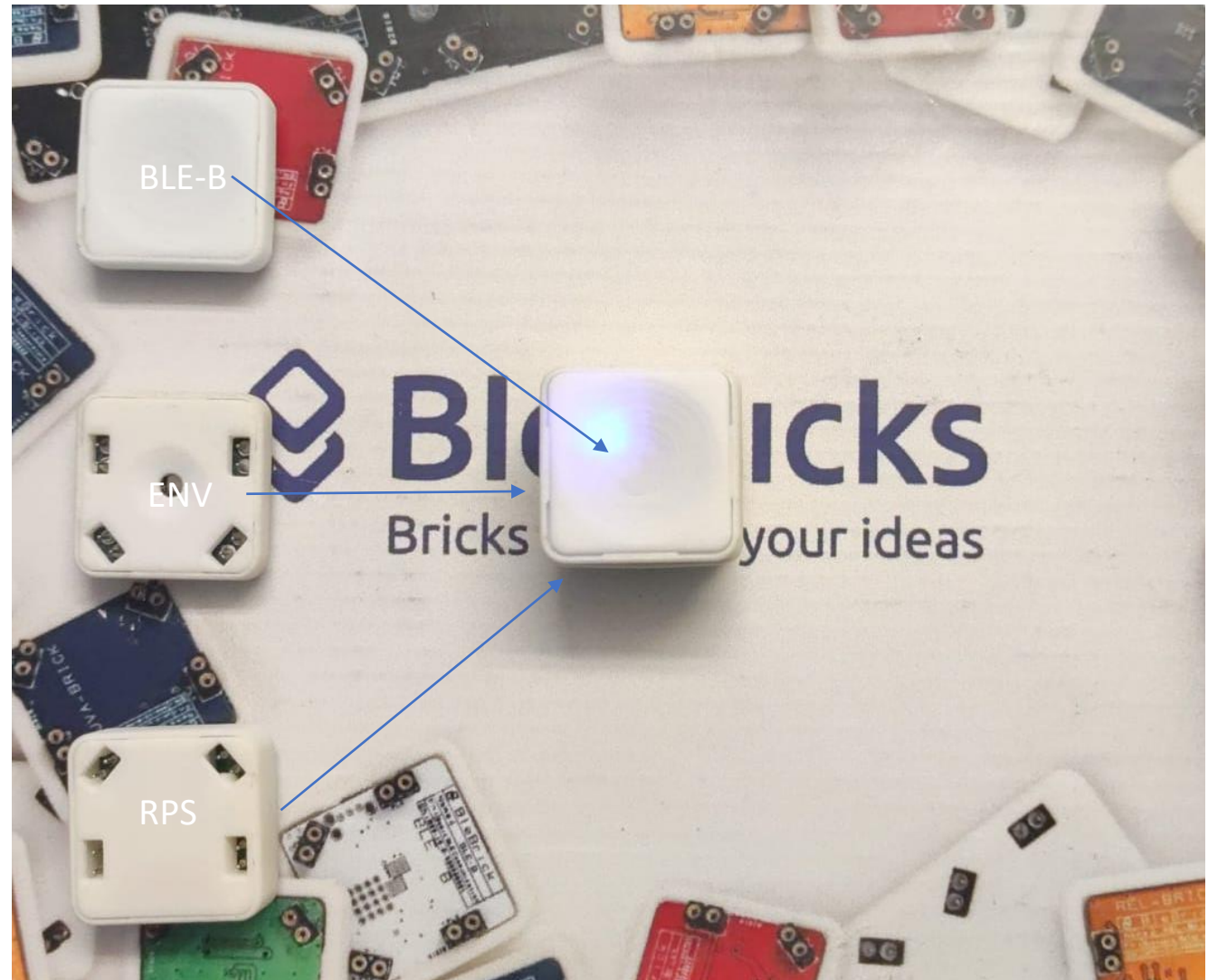
# Bricksboard

Esempio

Costruiamo il sensore

- BLE-B
- ENV
- RPS

## Costruiamo il sensore con Blebricks "Elite":





# Bricksboard

## Esempio

## Costruiamo il sensore

- BLE-B
- ENV
- RPS
- Eventuali Basi

## Costruiamo il sensore con Blebricks "Elite":



# Bricksboard

## Esempio

Costruiamo il sensore

## Costruzioni alternative con Blebricks "Expert

- BLE-B
- ENV
- RPS/SPS
- Eventuali Basi







# Bricksboard

## Esempio

Costruiamo il sensore

- BLE-B
- ENV
- RPS/SPS
- IB9
- H-SMK



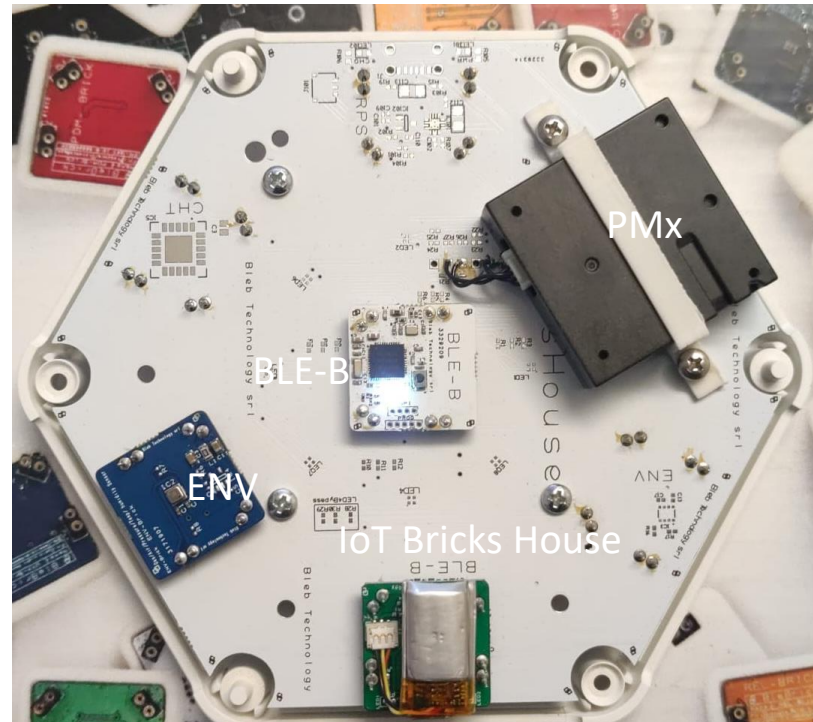


# Bricksboard

## Esempio

Costruiamo il  
sensore

- BLE-B
- ENV
- BPS/RPS
- IoT HEX-Box





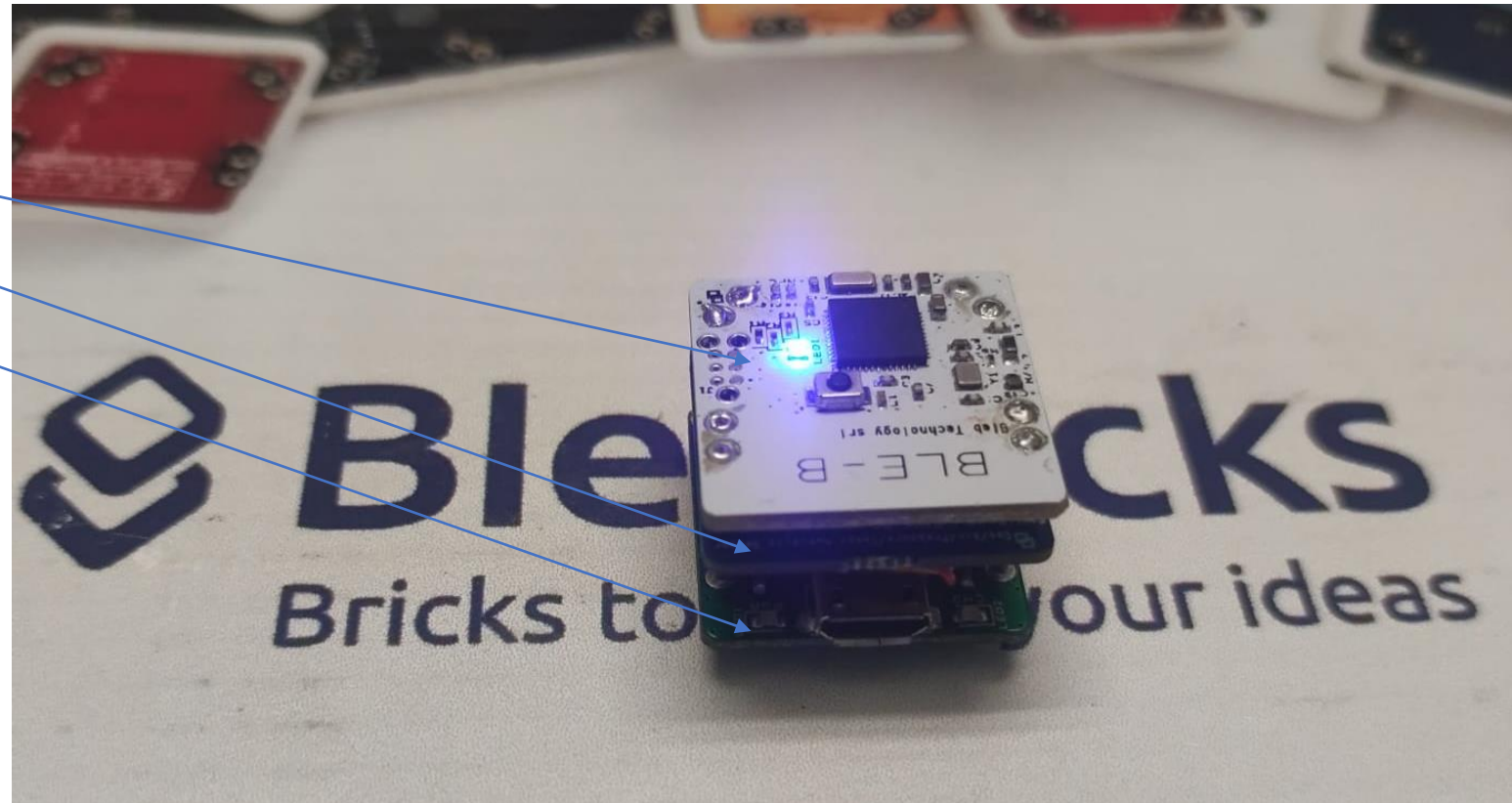


# Bricksboard

Esempio  
Sensore con  
Blebricks  
Expert

**Supponiamo che il sensore sia stato realizzato connettendo 3 Blebricks Expert:**

- BLE-B
- ENV
- RPS





**Bricksboard**

**Connettiamo in  
rete il sensore**

**Connettiamo in rete il sensore con uno dei  
tre metodi descritti:**

- 1) ESP
- 2) Gateway
- 3) App Bricksdoor

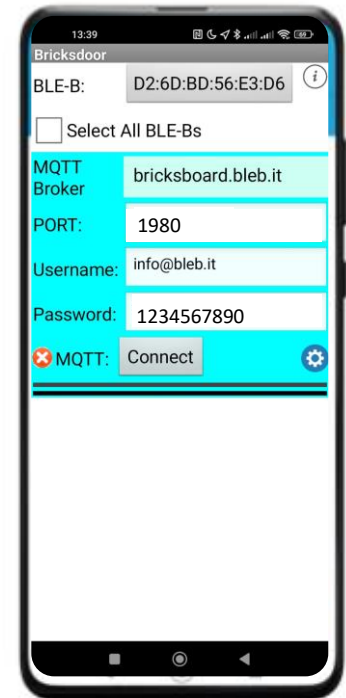
Scarica e installa .apk della [App Bricksdoor](#) demo  
fornita “as is” e realizzata con App Inventor.

# Bricksboard

## Esempio

Connettiamo in  
rete il sensore  
App Bricksdoor

- **Connessione con App Bricksdoor**
- Scegliamo se trasmettere al Broker i dati del:
  - BLE-B selezionato
  - Tutti i BLE-B
- Inseriamo le credenziali ricevute per email
- Clicchiamo su “Connect”



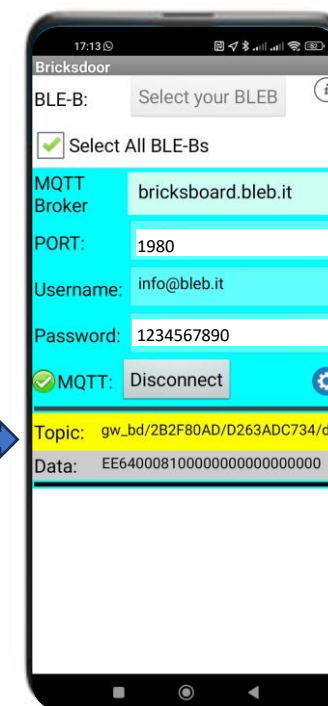
# Bricksboard

Esempio

Connettiamo in  
rete il sensore  
App Bricksdoor

## Connessione con App Bricksdoor

Il Topic viene mostrato direttamente sulla App:  
**Annotalo per usarlo dopo!**



Bricksboard

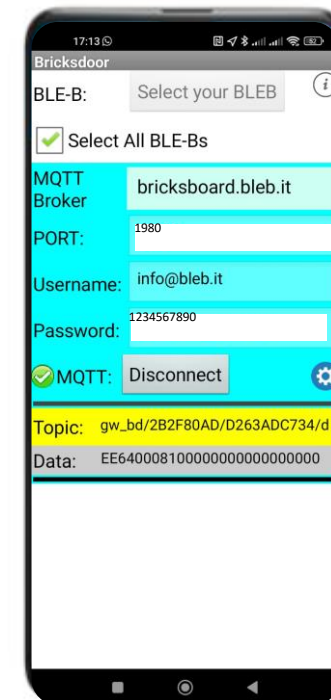
Esempio

Punto di  
partenza

- Sensore con 3 Blebricks Expert



- Smartphone con App Bricksdoor per comunicare in rete



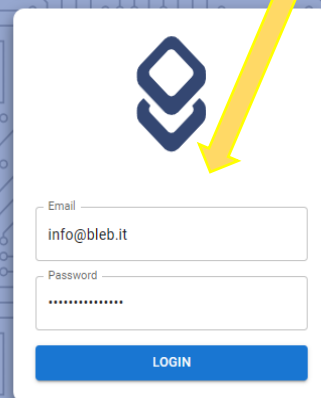


Bricksboard

Accedi alla  
piattaforma  
Bricksboard

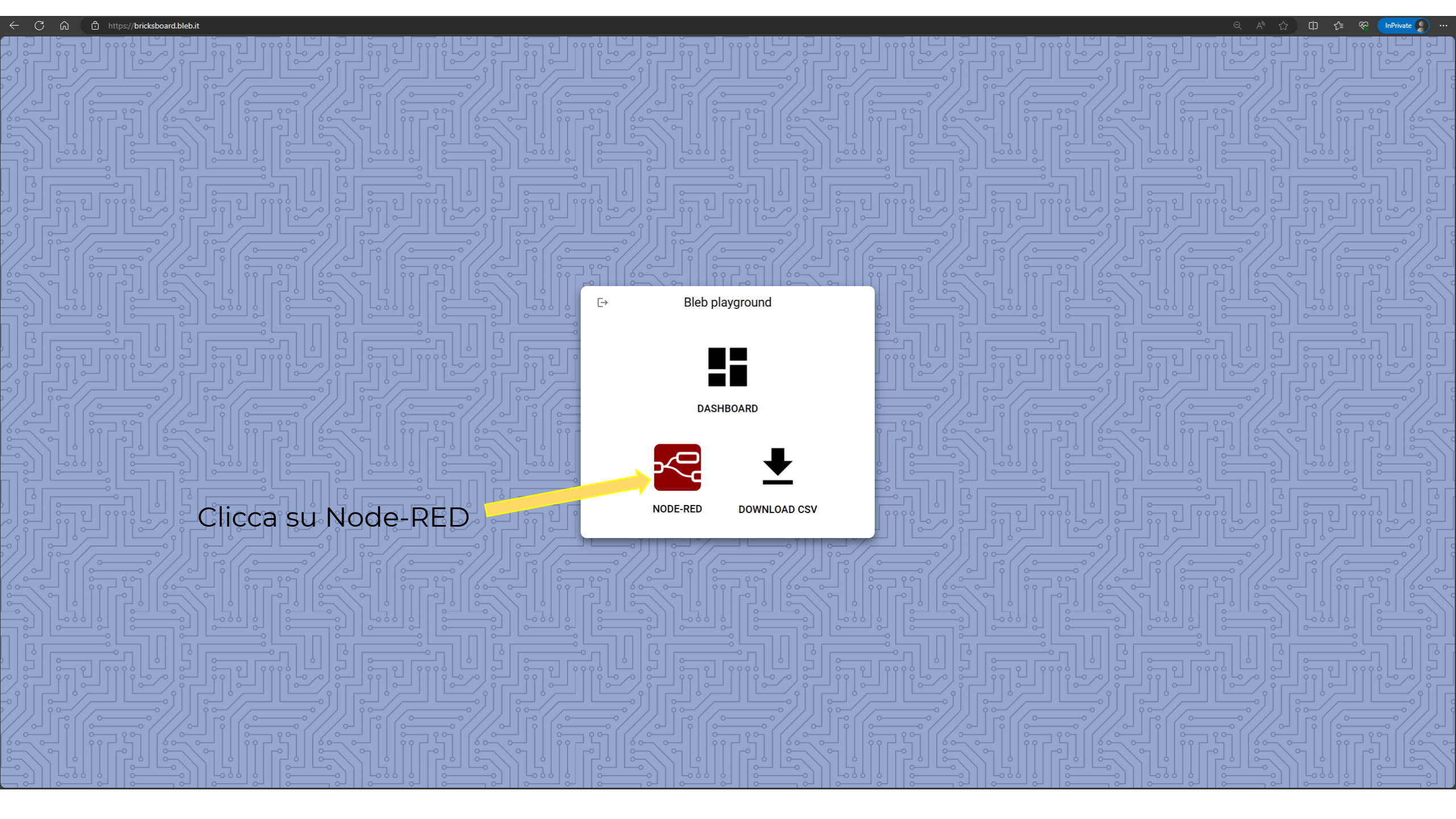
Accedi a:

[bricksboard.bleb.it](https://bricksboard.bleb.it) e inserisci le credenziali ricevute per email





The image shows a login form for Bricksboard. At the top is the Bricksboard logo, which consists of two interlocking blue squares. Below the logo are two input fields: 'Email' and 'Password'. The 'Email' field contains the text 'info@bleb.it'. The 'Password' field is masked with dots. Below these fields is a blue button labeled 'LOGIN'. A yellow arrow points from the text 'bricksboard.bleb.it' in the text above to the 'Email' input field.


Se non sei già registrato registrati inviando richiesta a [Bricksboard@bleb.it](mailto:Bricksboard@bleb.it)




Clicca su Node-RED

 Bleb playground

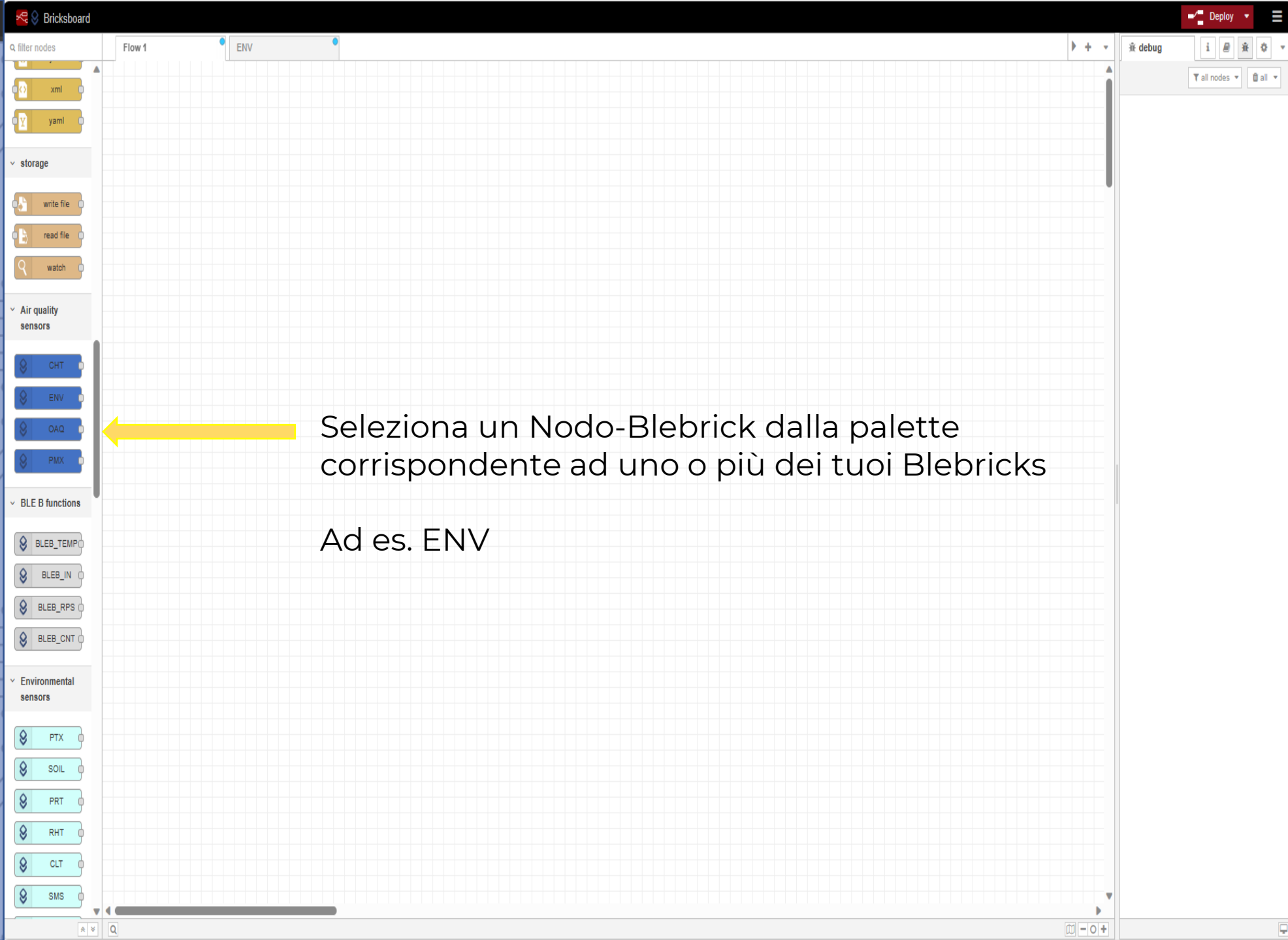
  
DASHBOARD

  
NODE-RED

  
DOWNLOAD CSV

# Bricksboard

Seleziona il  
Nodo Blebricks



The screenshot shows the Bricksboard web interface. On the left is a vertical palette of nodes categorized into: 'filter nodes' (xml, yaml), 'storage' (write file, read file, watch), 'Air quality sensors' (CHT, ENV, OAQ, PMX), 'BLE B functions' (BLEB\_TEMP, BLEB\_IN, BLEB\_RPS, BLEB\_CNT), and 'Environmental sensors' (PTX, SOIL, PRT, RHT, CLT, SMS). The 'ENV' node in the 'Air quality sensors' category is highlighted with a yellow arrow. The main workspace shows a workflow diagram with a 'Flow 1' container and an 'ENV' node. The top right has a 'Deploy' button and a 'debug' panel. The bottom right has a search bar and a 'Q' icon.

Seleziona un Nodo-Blebrick dalla palette corrispondente ad uno o più dei tuoi Blebricks

Ad es. ENV

# Bricksboard

Seleziona il  
Nodo Blebricks

The screenshot displays the Bricksboard web interface. On the left, a sidebar lists various node categories: 'filter nodes' (xml, yaml), 'storage' (write file, read file, watch), 'Air quality sensors' (CHT, ENV, OAQ, PMX), 'BLE B functions' (BLEB\_TEMP, BLEB\_IN, BLEB\_RPS, BLEB\_CNT), and 'Environmental sensors' (PTX, SOIL, PRT, RHT, CLT, SMS). The 'ENV' node under 'Air quality sensors' is highlighted with an orange border. A yellow arrow points from the text 'Passando il mouse sul nodo si può leggere la descrizione delle sue funzionalità' to the ENV node. A tooltip is visible over the ENV node, providing detailed information about its functionality as an Air Quality Blebrick sensor.

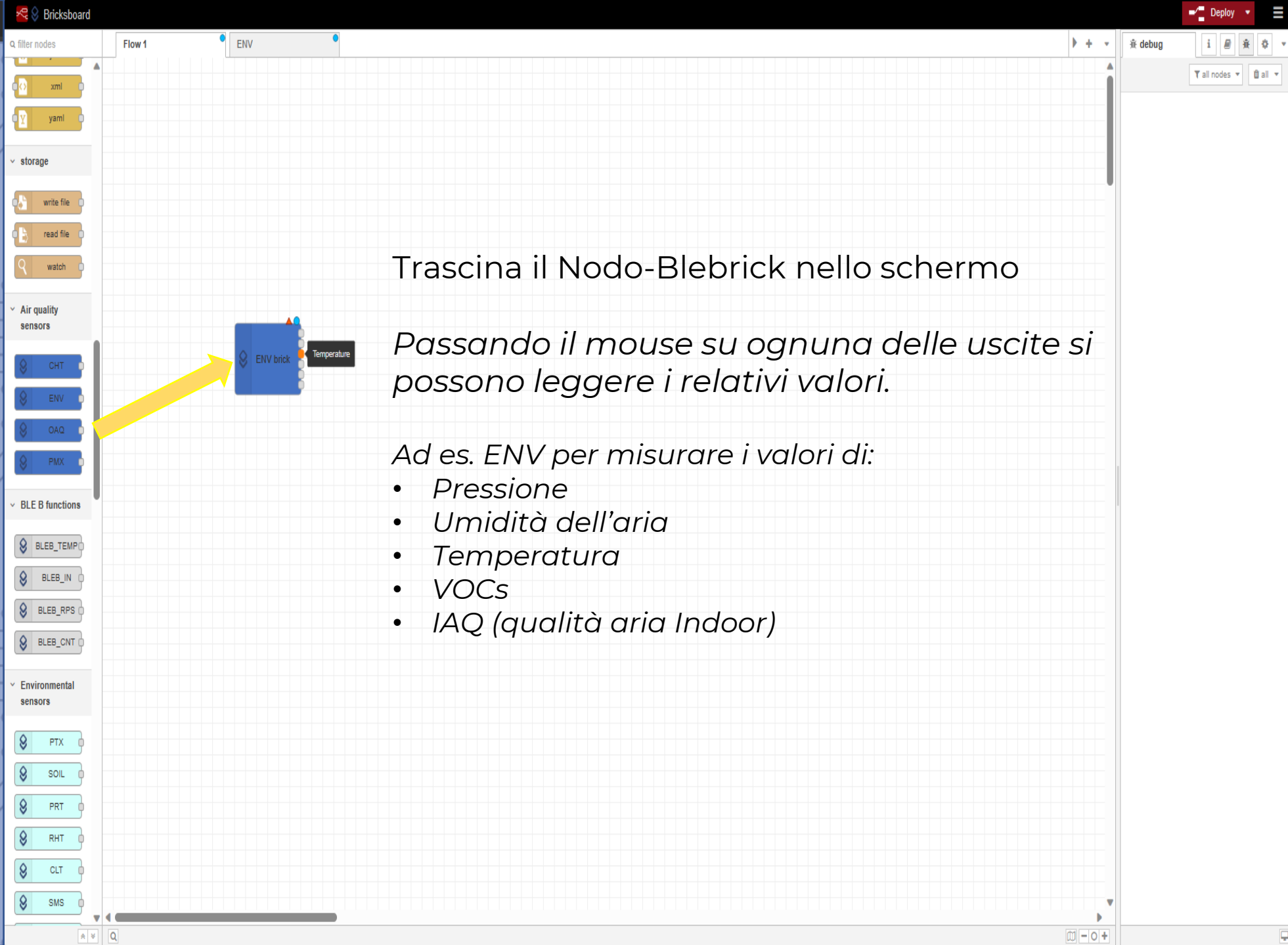
**ENV**

ENV is a Air Quality Blebrick sensor also acting as Environmental Sensor. The node connects to an MQTT broker and parses data received from the ENV Blebrick to detects the presence of VOCs (Volatile Oxide Compounds) and estimate the indoor air quality index (IAQ), while also providing an indication of its accuracy. It also measures air humidity (%rH), pressure (hPa), and temperature (°C). The IAQ accuracy is actually reflecting the current state of the background calibration process, such as IAQ Accuracy=0 means stabilizing, IAQ Accuracy=1 means the background history of BSEC is uncertain, IAQ Accuracy=2 means BSEC found a new calibration data and is currently calibrating, IAQ Accuracy=3 means BSEC calibrated successfully.

@blebtechnology/node-red-blebricks : ENV

# Bricksboard

## Trascina il Nodo Blebricks



The screenshot shows the Bricksboard web interface. On the left, a sidebar lists various node categories: 'filter nodes' (xml, yaml), 'storage' (write file, read file, watch), 'Air quality sensors' (CHT, ENV, OAQ, PMX), 'BLE B functions' (BLEB\_TEMP, BLEB\_IN, BLEB\_RPS, BLEB\_CNT), and 'Environmental sensors' (PTX, SOIL, PRT, RHT, CLT, SMS). A yellow arrow points from the 'ENV' node in the 'Air quality sensors' category to a workspace area. In the workspace, a flow named 'Flow1' contains an 'ENV brick' node. A tooltip for the 'ENV brick' node is visible, showing 'Temperature' as one of its outputs. The top of the interface includes a browser address bar with 'https://bricksboard.bleb.it', a 'Deploy' button, and a 'debug' panel on the right.

Trascina il Nodo-Blebrick nello schermo

*Passando il mouse su ognuna delle uscite si possono leggere i relativi valori.*

*Ad es. ENV per misurare i valori di:*

- Pressione
- Umidità dell'aria
- Temperatura
- VOCs
- IAQ (qualità aria Indoor)



# Bricksboard

Fai doppio click  
sul nodo per  
configurarlo

The screenshot shows the Bricksboard web interface. On the left is a sidebar with a search bar and a list of categories: 'xml', 'yaml', 'storage' (containing 'write file', 'read file', 'watch'), 'Air quality sensors' (containing 'CHT', 'ENV', 'OAQ', 'PMX'), 'BLE B functions' (containing 'BLEB\_TEMP', 'BLEB\_IN', 'BLEB\_RPS', 'BLEB\_CNT'), and 'Environmental sensors' (containing 'PTX', 'SOIL', 'PRT', 'RHT', 'CLT', 'SMS'). The main workspace is a grid where a flow named 'Flow 1' is being edited. It contains an 'ENV' node. A yellow arrow points to a small red triangle on the top right of the 'ENV brick' node, indicating that it needs to be configured. The top right of the interface has a 'Deploy' button and a 'debug' panel.

Il triangolino rosso richiama attenzione sulla necessità di configurare il nodo  
=> Fai doppio click sul nodo

# Bricksboard

## Configura il Broker

Seleziona il Broker  
Se usi quello della piattaforma, seleziona BLEB MQTT Broker e configuralo con le credenziali ricevute per email

The screenshot displays the Bricksboard web interface. On the left, a sidebar contains various node categories: 'udp request', 'udp in', 'udp out', 'sequence' (split, join, sort, batch), 'parser' (csv, html, json, xml, yaml), 'storage' (write file, read file, watch), 'Air quality sensors' (CHT, ENV, OAQ, PMX), and 'BLE B functions'. The main workspace shows a 'Flow 1' canvas with a single 'ENV brick' node. On the right, the 'Edit ENV node' panel is open, showing the 'Properties' tab. The 'Broker' dropdown menu is expanded, with a yellow arrow pointing to the 'Bleb MQTT Broker' option. Below this, the 'Topic' field is visible. At the bottom right, an 'info' panel shows the 'ENV brick' details, including its Node ID ('6d87491060029588') and Type ('ENV').

Bricksboard

Flow 1

Q filter nodes

udp request

udp in

udp out

sequence

split

join

sort

batch

parser

csv

html

json

xml

yaml

storage

write file

read file

watch

Air quality sensors

CHT

ENV

OAQ

PMX

BLE B functions

ENV brick

Edit ENV node

Delete

Cancel

Done

Properties

Name

Broker

Add new mqtt-broker...

Bleb MQTT Broker

Add new mqtt-broker...

Topic

info

Search flows

Flows

Flow 1

Subflows

Global Configuration Nodes

ENV brick

Node

"6d87491060029588"

Type

ENV

show more

Hold down **ctrl** when you **click** on a node port to enable quick-wiring

Enabled

# Configura la porta del Broker

Inserisci il numero della porta  
ricevuto per email

Edit ENV node > Edit mqtt-broker node

Delete

Cancel

Update

Properties

Name

Bleb MQTT Broker

Connection

Security

Messages

Server

mosquitto

1882

☒ Connect automatically

☐ Use TLS

Protocol

MQTT V3.1 (legacy)

Client ID

Leave blank for auto generated

Keep Alive

60

Session

☒ Use clean session

Flows

Flow 1

Subflows

Global Configuration Nodes

Bleb MQTT Broker

Node

"a1d2cd11e0678f1"

Type

mqtt-broker

show more

Hold down **ctrl** when you **click** on a node port to enable quick-wiring

Enabled

1 node uses this config

On all flows

# Bricksboard

Seleziona il  
Broker da  
usare

Inserisci le credenziali ricevute per email

Poi clicca su Update

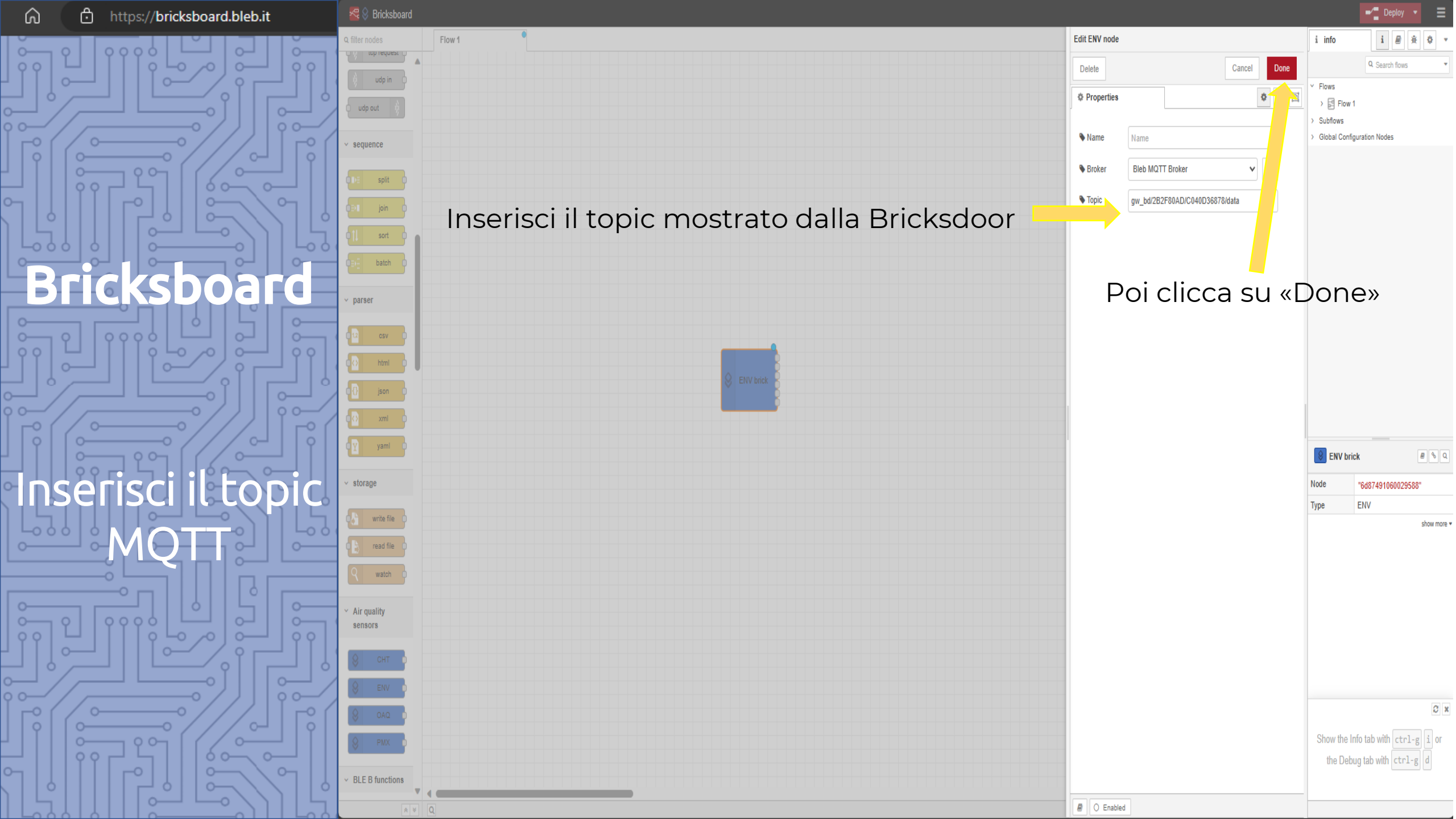
The screenshot displays the Bricksboard web interface. On the left, a sidebar lists various node categories: 'sequence' (split, join, sort, batch), 'parser' (csv, html, json, xml, yaml), 'storage' (write file, read file, watch), 'Air quality sensors' (CHT, ENV, OAQ, PMX), and 'BLE B functions'. The main workspace shows a 'Flow 1' canvas with a single 'ENV brick' node. On the right, the 'Edit ENV node > Edit mqtt-broker node' configuration panel is open. It features tabs for 'Delete', 'Cancel', and 'Update'. The 'Properties' section includes a 'Name' field set to 'Bleb MQTT Broker'. Below are tabs for 'Connection', 'Security', and 'Messages'. The 'Username' field is filled with 'info@bleb.it' and the 'Password' field is masked with dots. A yellow arrow points from the text 'Inserisci le credenziali ricevute per email' to the 'Username' field, and another yellow arrow points from the text 'Poi clicca su Update' to the 'Update' button. The bottom right corner shows a status bar with 'Enabled', '1 node uses this config', and a dropdown for 'On all flows'.

Bricksboard

Inserisci il topic  
MQTT

Inserisci il topic mostrato dalla Bricksdoor

Poi clicca su «Done»





# Bricksboard

Trascina un  
nodo di  
visualizzazione

Scorri la palette «Dashboard», seleziona e trascina un nodo di visualizzazione  
Ad. es. di tipo «Gauge»

Il triangolino rosso ricorda che è da configurare

The screenshot shows the Bricksboard web application interface. On the left is a palette of nodes categorized into 'CMS', 'RMS', 'VMS', 'Proximity detector', and 'dashboard'. The 'dashboard' category is expanded, showing various UI elements like 'button', 'dropdown', 'switch', 'slider', 'numeric', 'text input', 'date picker', 'colour picker', 'form', 'text', 'gauge', 'chart', 'audio out', 'notification', 'ui control', and 'template'. A yellow arrow points from the 'gauge' node in the palette to a 'gauge' node already placed on the 'Flow 1' canvas. The 'gauge' node has a small red triangle on its top right corner. On the right side, an 'info' panel shows details for the selected 'gauge' node, including its ID ('c50a70df6ae807f6') and type ('ui\_gauge'). At the bottom right, there is a prompt to 'Export the selected nodes, or the current tab with ctrl-e'.

Node	Type
"c50a70df6ae807f6"	ui_gauge

Export the selected nodes, or the current tab with `ctrl-e`

# Bricksboard

## Configura il nodo di visualizzazione

Inserisci un nome per il gruppo di visualizzazione  
Es: Sensore ENV

The screenshot displays the Bricksboard web application interface. On the left, a sidebar lists various bricks and dashboard components. The main workspace shows a flow editor with two nodes: 'ENV brick' and 'gauge'. The 'Edit gauge node' panel is open on the right, allowing configuration of the gauge widget. A yellow arrow points to the 'Group' dropdown menu, which is open, showing '[Home] Default' and 'Add new dashboard group...'. The 'gauge' node is also visible in the bottom right corner of the interface.

**Edit gauge node**

Delete Cancel Done

**Properties**

Group [Home] Default [Add new dashboard group...]

Type Gauge

Label gauge

Value format {{value}}

Units units

Range min 0 max 10

Colour gradient [Green] [Yellow] [Red]

Sectors 0 optional optional 10

Fill gauge from centre. ☐

Class Optional CSS class name(s) for widget

Name

**Info**

Node "c50a70df6ae807f6"

Type ui\_gauge

Your flow configuration nodes are listed in the sidebar panel. It can be accessed from the menu or with **ctrl-g**

# Bricksboard

Configura il  
nodo di  
visualizzazione

Inserisci un nome per il  
gruppo di visualizzazione  
Es: Sensore ENV

Poi clicca su «Add»

The screenshot shows the Bricksboard web interface. On the left is a sidebar with a list of components categorized into 'Proximity detector' (CMS, RMS, VMS), 'dashboard' (button, dropdown, switch, slider, numeric, text input, date picker, colour picker, form, text, gauge, chart, audio out, notification, ui control, template), and 'ENV brick'. The main workspace displays a flow named 'Flow 1' containing an 'ENV brick' and a 'gauge' node. A configuration panel for the 'gauge' node is open on the right, titled 'Edit gauge node > Add new dashboard group config node'. It features a 'Properties' section with a 'Display group name' field containing 'Sensore ENV', a 'Tab' dropdown set to 'Home', and a 'Width' input set to '6'. A red arrow points from the instructional text to the 'Display group name' field, and a yellow arrow points from the same text to the 'Add' button. The bottom right of the interface shows a table with node information:

Node	Type
"986648f80e162311"	ui_group

Below the table, there are instructions: 'Show the Info tab with ctrl-g i or the Debug tab with ctrl-g d'. At the very bottom, it indicates '0 nodes use this config'.

# Bricksboard

## Configura il nodo di visualizzazione

Optional  
Dai un nome a:  
strumento di misura: Es. Temperature  
all'unità di misura: Es. °C  
e indica il range: Es. -20 , +60

Poi clicca su «Done» in alto a dx  
Il triangolo rosso sulla «gauge» scompare  
e appare il nuovo nome dello strumento  
«Temperature»

The screenshot displays the Bricksboard web application interface. On the left, a sidebar contains various widget categories: CMS (CMS, RMS, VMS), Proximity detector (PDM, CAP, UWS, PROTECTOR), and dashboard (button, dropdown, switch, slider, numeric, text input, date picker, colour picker, form, text, gauge, chart, audio out, notification, ui control, template). The main workspace shows a flow named 'Flow 1' with two nodes: 'ENV brick' and 'gauge'. A yellow arrow points from the text 'Dai un nome a: strumento di misura: Es. Temperature' to the 'gauge' node. On the right, the 'Edit gauge node' panel is open, showing configuration options. The 'Label' field is set to 'Temperature', the 'Units' field is set to '°C', and the 'Range' is set to 'min -20 max 60'. The 'Done' button is highlighted in red. The bottom right corner shows a hint: 'Hold down ctrl when you click on a node to add or remove it from the current selection'.

Bricksboard

Flow 1

Optional  
Dai un nome a:  
strumento di misura: Es. Temperature  
all'unità di misura: Es. °C  
e indica il range: Es. -20 , +60

Poi clicca su «Done» in alto a dx  
Il triangolo rosso sulla «gauge» scompare  
e appare il nuovo nome dello strumento  
«Temperature»

Edit gauge node

Delete Cancel Done

Properties

Group [Home] Sensore ENV

Size auto

Type Gauge

Label Temperature

Value format {{value}}

Units °C

Range min -20 max 60

Colour gradient

Sectors -20 optional optional 60

Fill gauge from centre. ☐

Class Optional CSS class name(s) for widget

Name

Node "c50a70df6ae807f6"

Type ui\_gauge

Hold down ctrl when you click on a node to add or remove it from the current selection

# Bricksboard

Collega i nodi

The screenshot shows the Bricksboard web interface. On the left is a sidebar with a search bar 'filter nodes' and a list of components categorized into 'Proximity detector' (PDM, CAP, UWS, PROTECTOR), 'dashboard' (button, dropdown, switch, slider, numeric, text input, date picker, colour picker, form, text, gauge, chart, audio out, notification, ui control, template), and other sensors (CMS, RMS, VMS). The main workspace, titled 'Flow 1', contains a blue 'ENV brick' node and a black 'Temperature' node. A yellow arrow points from the 'Temperature' node to the 'ENV brick' node. The right sidebar shows a tree view with 'Flows' > 'Flow 1' selected, and an 'info' panel at the bottom with a 'click' button and a note: 'click and drag on a node port to move all of the attached wires or just the selected one'.

Poni il mouse sul nodo di temperatura, verifica che corrisponda e collegalo allo strumento con il tasto sinistro del mouse





https://bricksboard.bleb.it

Bricksboard



Deploy



filter nodes

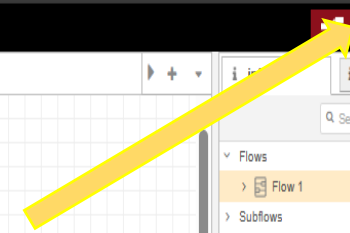
Flow 1



Search flows

- Flows
  - Flow 1
  - Subflows
  - Global Configuration Nodes

Clicca su Deploy



# Bricksboard

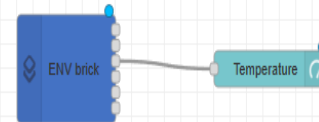
- CMS
- RMS
- VMS

Proximity detector

- PDM
- CAP
- UWS
- PROTECTOR

dashboard

- button
- dropdown
- switch
- slider
- numeric
- text input
- date picker
- colour picker
- form
- text
- gauge
- chart
- audio out
- notification
- ui control
- template

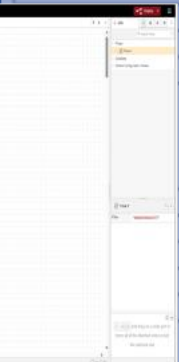


Flow 1

Flow "bf6eb6594d46517f"

click and drag on a node port to move all of the attached wires or just the selected one

# Clicca «Deploy»





https://bricksboard.bleb.it

# Bricksboard

## Clicca «Deploy»

Clicca su Home

Bricksboard

filter nodes

CMS

RMS

VMS

Proximity

PDM

CAP

UWS

PROTECTOR

dashboard

button

dropdown

switch

slider

numeric

text input

date picker

colour picker

form

text

gauge

chart

audio out

notification

ui control

template

Flow 1

ENV brick

Temperature

info

Search flows

Flows

Flow 1

Subflows

Global Configuration Nodes

Flow 1


Flow


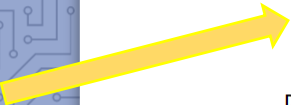
"bf6eb6594d46517f"


click


drag on a node port to move all of the attached wires or just the selected one

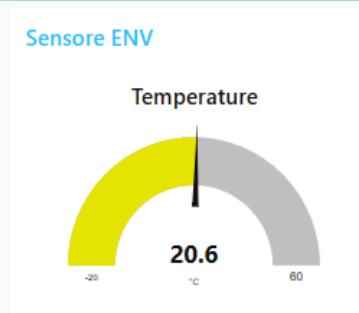
Clicca su «DASHBOARD»

 Bleb playground

  
DASHBOARD

  
NODE-RED

  
DOWNLOAD CSV



# Bricksboard

Puoi vedere ovunque la tua Dashboard collegandoti all'indirizzo della tua pagina, memorizzalo sul tuo browser!

## Ed ecco la tua Dashboard!

Bricksboard

Aggiungi altri  
nodi e fai  
piattaforme  
più complesse!

Bricksboard

Flow 1

ENV

inject

debug

complete

catch

status

link in

link call

link out

comment

function

function

switch

change

range

template

delay

trigger

exec

filter

network

mqtt in

mqtt out

http in

http response

http request

Humidity

Temperature

ENV brick

connected

dashboard

Layout

Site

Theme

Tabs & Links

Demo

ENV Brick

Home

Sensore ENV

There are 2 widgets not in a group. Click here to create the missing groups



# Bricksboard

Aggiungi altri  
nodi e fai  
piattaforme  
più complesse!

The screenshot displays the Bricksboard web interface, which is a visual programming environment for IoT projects. The interface is divided into several sections:

- Top Bar:** Includes a home icon, a search bar with the URL <https://bricksboard.bleb.it>, and a "Deploy" button.
- Left Panel (Nodes):** A sidebar containing a search bar and a list of nodes categorized into "common", "function", and "network".
  - common:** inject, debug, complete, catch, status, link in, link call, link out, comment.
  - function:** function, switch, change, range, template, delay, trigger, exec, filter.
  - network:** mqtt in, mqtt out, http in, http response, http request.
- Flow Editor:** The central workspace where a flow named "Flow 1" is being built. It contains an "ENV brick" node (blue) which is connected to three sensor nodes (teal): "Humidity", "Pressure", and "Temperature". The "ENV brick" node has a "connected" status indicator.
- Right Panel (Dashboard):** A sidebar showing the "dashboard" view. It includes tabs for "Layout", "Site", and "Theme". Below these are "Tabs & Links" with a tree structure:
  - ▼ Demo
    - > ENV Brick
  - ▼ Home
    - > Sensore ENV

# Bricksboard

Aggiungi altri  
nodi e fai  
piattaforme  
più complesse!

The screenshot displays the Bricksboard web interface, which is a visual programming environment for IoT projects. The interface is divided into several sections:

- Top Bar:** Includes a home icon, a search bar with the URL <https://bricksboard.bleb.it>, and a red "Deploy" button.
- Left Panel (Node Library):** Contains a search bar "filter nodes" and a list of nodes categorized into:
  - common:** inject, debug, complete, catch, status, link in, link call, link out, comment.
  - function:** function, switch, change, range, template, delay, trigger, exec, filter.
  - network:** mqtt in, mqtt out, http in, http response, http request.
- Central Canvas:** Shows a flow diagram titled "Flow 1". It features a blue "ENV brick" node connected to four sensor nodes: "Humidity", "Pressure", "Temperature", and "VOCs". The "ENV brick" node has a green "connected" status indicator.
- Right Panel (Dashboard):** Includes a "dashboard" tab, a "Layout" section with "Site" and "Theme" options, and a "Tabs & Links" section with a tree view showing "Demo" (containing "ENV Brick") and "Home" (containing "Sensore ENV").

# Bricksboard

Aggiungi altri  
nodi e fai  
piattaforme  
più complesse!

The screenshot displays the Bricksboard web interface at <https://bricksboard.bleb.it>. The interface is divided into several sections:

- Left Panel (Node Library):** Contains a search bar and a list of nodes categorized into 'common', 'function', and 'network'.
  - common:** inject, debug, complete, catch, status, link in, link call, link out, comment.
  - function:** function, switch, change, range, template, delay, trigger, exec, filter.
  - network:** mqtt in, mqtt out, http in, http response, http request.
- Flow Editor:** The central workspace where a flow named 'Flow 1' is being built. It features a search bar for 'filter nodes' and tabs for 'ENV' and 'ENV'. A blue 'ENV brick' node is connected to five sensor nodes: Humidity, Pressure, Temperature, VOCs, and IAQ. The 'ENV brick' node is marked as 'connected'.
- Right Panel (Dashboard):** Includes a 'dashboard' tab, a 'Layout' section with 'Site' and 'Theme' options, and a 'Tabs & Links' section with a tree view showing 'Demo' > 'ENV Brick' and 'Home' > 'Sensore ENV'.

# Bricksboard

Aggiungi altri  
nodi e fai  
piattaforme  
più complesse!

Bricksboard interface showing a flow diagram and a sidebar with various nodes.

**Flow Diagram:**

- ENV brick** (connected) is linked to:
- Humidity**
- Pressure**
- Temperature**
- VOCs**
- IAQ**
- RHT Chart**

**Left Sidebar (Nodes):**

- common**
  - inject
  - debug
  - complete
  - catch
  - status
  - link in
  - link call
  - link out
  - comment
- function**
  - function
  - switch
  - change
  - range
  - template
  - delay
  - trigger
  - exec
  - filter
- network**
  - mqtt in
  - mqtt out
  - http in
  - http response
  - http request

**Right Sidebar (Dashboard):**

- dashboard
- Layout
- Site
- Theme
- Tabs & Links
  - Demo
    - ENV Brick
  - Home
    - Sensore ENV

# Bricksboard

Aggiungi altri  
nodi e fai  
piattaforme  
più complesse!

Bricksboard

Flow 1

ENV

filter nodes

common

- inject
- debug
- complete
- catch
- status
- link in
- link call
- link out
- comment

function

- function
- switch
- change
- range
- template
- delay
- trigger
- exec
- filter

network

- mqtt in
- mqtt out
- http in
- http response
- http request

ENV brick

connected

Humidity

Pressure

Temperature

VOCs

IAQ

RHT Chart

Pressure Chart

dashboard

Layout

Site

Theme

Tabs & Links

- Demo
  - ENV Brick
- Home
  - Sensore ENV



# Bricksboard

Aggiungi altri  
nodi e fai  
piattaforme  
più complesse!

Bricksboard

Q filter nodes

Flow 1

ENV

common

- inject
- debug
- complete
- catch
- status
- link in
- link call
- link out
- comment

function

- function
- switch
- change
- range
- template
- delay
- trigger
- exec
- filter

network

- mqtt in
- mqtt out
- http in
- http response
- http request

ENV brick

connected

Humidity

Pressure

Temperature

VOCs

IAQ

RHT Chart

Pressure Chart

IAQ Chart

dashboard

Layout

Site

Theme

Tabs & Links

- Demo
  - ENV Brick
- Home
  - Sensore ENV

# Bricksboard

Imposta la  
grafica della  
tua Dashboard

The screenshot displays the Bricksboard web interface. On the left, a sidebar contains a 'filter nodes' search bar and three categories of nodes: 'common' (inject, debug, complete, catch, status, link in, link call, link out, comment), 'function' (function, switch, change, range, template, delay, trigger, exec, filter), and 'network' (mqtt in, mqtt out, http in, http response, http request). The main workspace shows a flow diagram with an 'ENV brick' connected to five sensors: Humidity, Pressure, Temperature, VOCs, and IAQ. These sensors are further connected to five corresponding charts: RHT Chart, Pressure Chart, IAQ Chart, and two unlabeled charts. On the right, a 'dashboard' sidebar menu is visible, with a yellow arrow pointing to the 'Dashboard' option. The menu items include Information, Help, Debug messages, Configuration nodes, Context Data, Dashboard, and Sensore ENV.

Clicca sulla freccia  
e seleziona «DASHBOARD»

# Bricksboard

Imposta la  
grafica della  
tua Dashboard

Bricksboard

Flow 1

ENV

filter nodes

common

- inject
- debug
- complete
- catch
- status
- link in
- link call
- link out
- comment

function

- function
- switch
- change
- range
- template
- delay
- trigger
- exec
- filter

network

- mqtt in
- mqtt out
- http in
- http response
- http request

Humidity

Pressure

Temperature

VOCs

IAQ

RHT Chart

Pressure Chart

IAQ Chart

ENV brick

Clicca su  
«layout»

dashboard

Layout Site Theme

Tabs & Links

- Demo
  - ENV Brick
- Home
  - Sensore ENV

group edit layout

# Bricksboard

Imposta la  
grafica della  
tua Dashboard

Dashboard layout editor : Home

Cancel Done

Sensore ENV

Width: 12

Temperature gauge

Humidity gauge

RHT Chart chart

Pressure gauge

Pressure Chart chart

IAQ gauge

IAQ Chart chart

VOCs gauge

Disponi il tuo layout spostando le diverse unità di visualizzazione

Poi clicca su «Done»

dashboard

Layout Site Theme

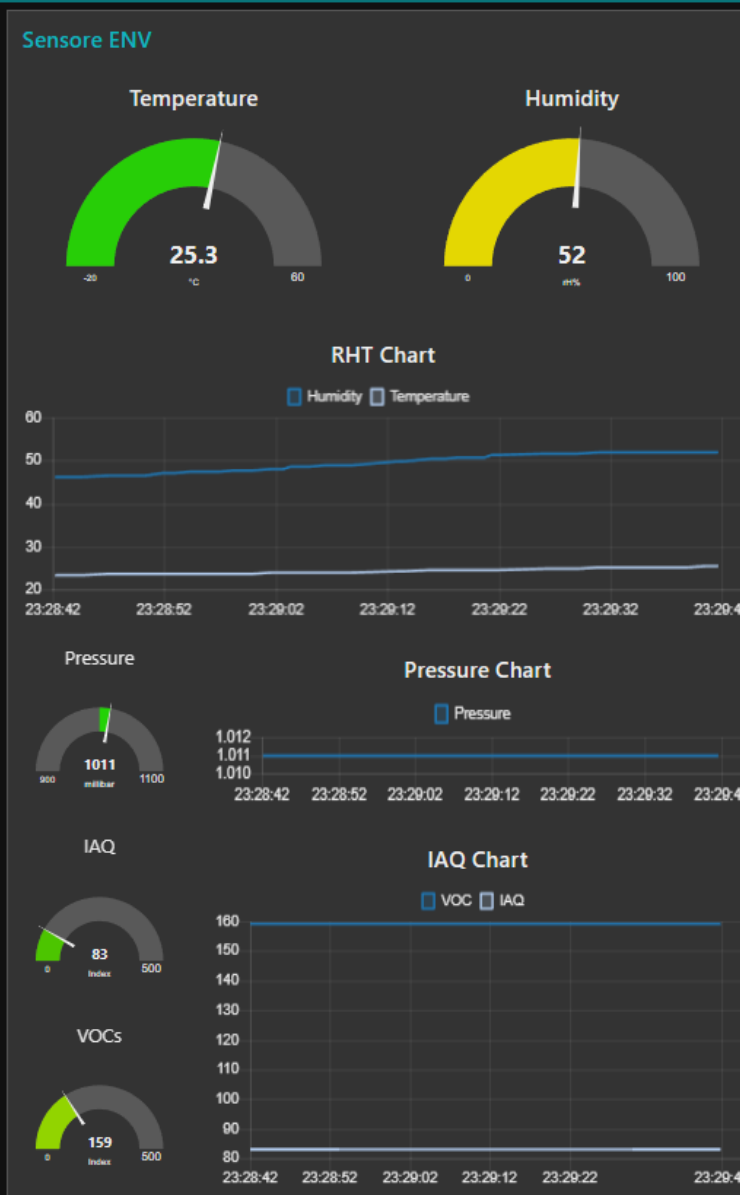
Tabs & Links

- ▼ Demo
  - > ENV Brick
    - ▼ Home
      - > Sensore ENV



# Bricksboard

Ed ecco la tua  
Dashboard  
realizzata con  
più sensori





# Bricksboard

Connetti altri  
Blebricks e altri  
nodi

Connetti altri Blebricks, ad esempio:

Con il Brick e nodo GPS puoi localizzare ovunque i tuoi dispositivi su Google Maps

Con il Brick e nodo LCD puoi visualizzare i dati dei tuoi sensori anche su un Display locale

Aggiungi tanti altri Blebricks e sensori integrati nella piattaforma Bricksboard!



# Bricksboard

Crea la tua piattaforma IoT in modo  
semplice e veloce!