Smart pi ECOsystem



Smart Public Information for the smart city.

Smart pi takes information from across the city and delivers it to the people who need it: as an announcement, on a display, through a help point or straight to a hearing aid, the moment it matters.

One ecosystem, designed to look, feel and work as one

Every product works on its own, and better together.

IN

Where information comes from

RTA · MIC · PBX · SPL · Fire panel

SMART PI CORE

Decides what to say, where and when

DVA · DVA-GTFS · EYE · DSP · SIP · FSM · LOG · NMS

OUT

How it reaches people: hear, see, ask

NAM · NAM-HP · EDC · EYE-HD · HLP

Smart pi EYE

Visual display systems

Realtime passenger information, wayfinding and messaging on every screen, from one web interface.

Every screen. One system.

Smart pi EYE puts the right information on the right screen: live departures on the platform, a disruption message on the concourse, flight times on the airport train, directions at the exit.

Screens don't hold any settings of their own. Every view is built centrally from your data feeds and your templates, so a new screen shows the right content the first time it connects, and a replacement player picks up exactly where the old one left off.

One web interface runs it all, from a single display at a bus stop to thousands of screens across a city, several transport agencies and more than one time zone. EYE already runs screens for Sydney Trains, Sydney Metro, Brisbane's ferries and Adelaide Metro.

Passenger information

Next and following services, departure boards and live carriage loads.

Wayfinding

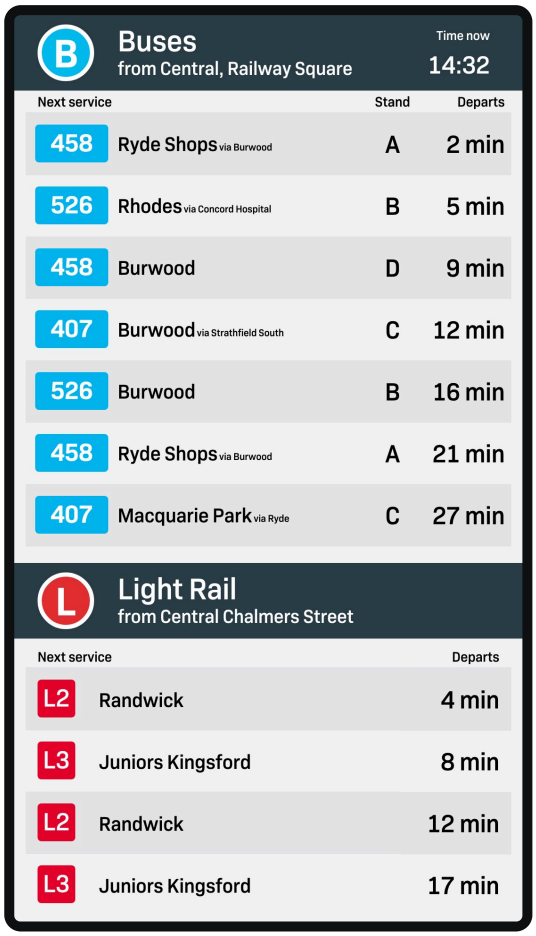
LED and LCD signs that move people where you want them, live.

Messaging

Planned notices, service alerts and urgent messages, to one screen or many.

Marketing

Images, video and campaigns alongside the live information.



TRANSPORT FOR NSW

Interchange display

Buses and light rail on one portrait screen.

10s

Every screen updates on the same 10-second beat, so screens side by side never disagree.

400+

Style settings for each screen type, from fonts and colours down to every badge.

20

LED wayfinding signs pixel-mapped from a single EYE-HD player.

1000+

Displays in one system, adding Nodes and Ingesters as it grows.

Screens in this brochure are real EYE templates rendered with sample data.

From the timetable to the platform

EYE is built from a few parts that each do one job. Start with one server, then split the roles out and add more as the network grows.

SOURCES
Your data
GTFS and GTFS-R from every agency, RSS for news, SIRI and custom formats through Smart pi RTA.

→

INGESTER
Reads the feeds
Pulls timetables and realtime updates in, and maps platform names and headsigns per feed.

→

NODE
Works out the view
Applies your business rules and builds what each screen should show.

→

EYE-HD
Drives the screen
Shows the view over HDMI. Only its name is set on the device.

→

The screen
LCD, LED or kiosk, landscape or portrait.

MASTER
Configuration and content
Screens, groups, templates, messages, modes and the media library, in one web interface. LDAP single sign-on and a REST API for other systems.

DATABASE
MariaDB
Shared by every role. Windows or Linux, on premises or in the cloud.

- Departures refresh on a shared 10-second beat. Messages, template changes and new settings are pushed to screens the moment you save them.

When something goes wrong, screens stay useful

- **Realtime drops out:** screens fall back to timetabled times, so passengers still see when the next service is due.
- **A service is disrupted:** GTFS-R alerts appear using wording you prepared in advance, filled in with the live details.
- **A screen loses its connection:** templates can show their own no-data or disconnected message instead of stale times.
- **A server fails:** a second instance behind VRRP or a load balancer takes over automatically.

Swap a player in minutes

Because nothing is stored on the screen, a failed EYE-HD is replaced by sliding in a new one and giving it the same name. Its screen, template and messages come straight back from the Node.

Screens can also be set up before they are installed, so they show the right content the first time they are switched on.

Better together

Smart pi RTA
Brings in SIRI and custom realtime formats as GTFS for EYE.

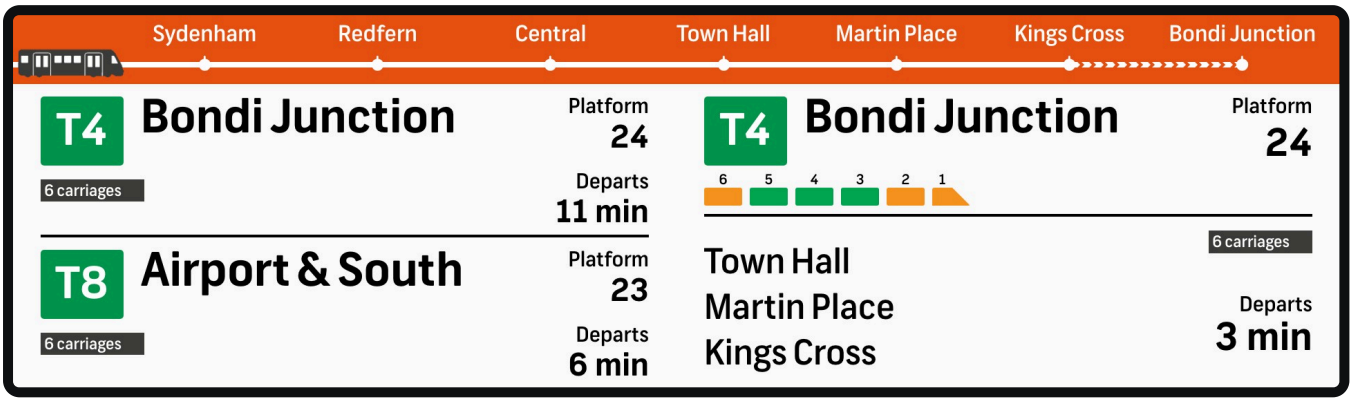
Smart pi DVA
Shows announcements as text, and lets screens trigger the matching audio.

Smart pi HLP
Help point buttons can read the screen's content aloud.

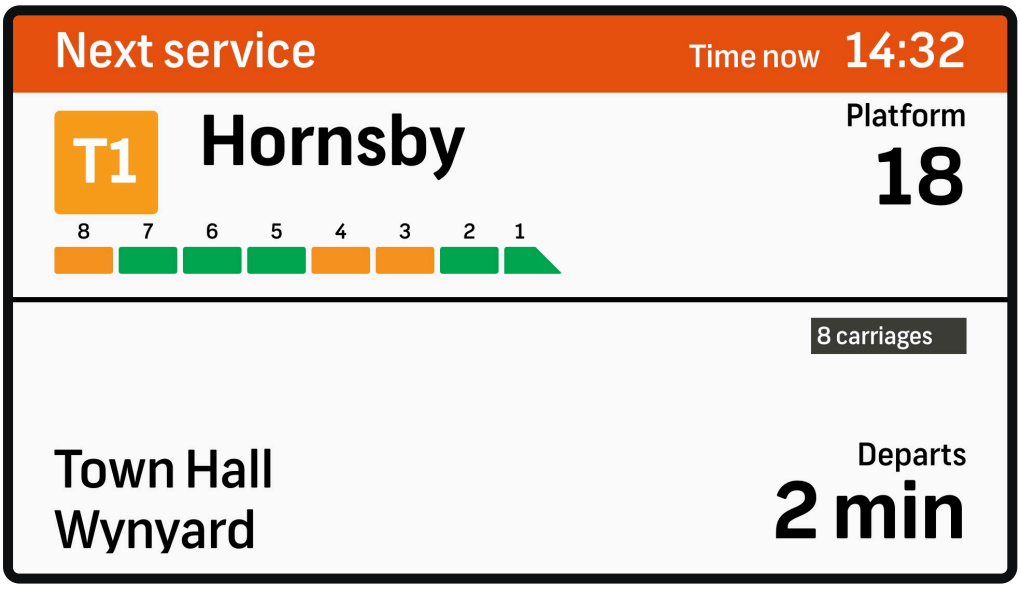
Smart pi NMS
Watches every player and alerts your team to faults.

Sydney Trains

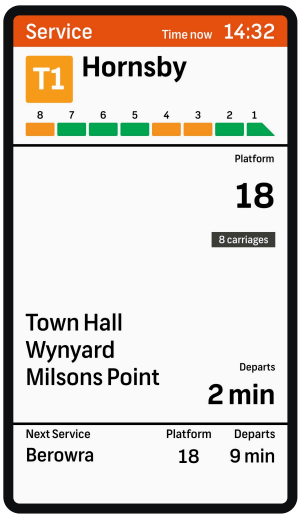
Platform screens built to the Sydney Trains design standard: the line, where the train is now, every stop, carriage count and how full each carriage is.



Platform bar · 1920 × 540
Two services side by side under the line diagram, with live carriage loads. A mirrored version suits back-to-back screens.



Platform display · 1920 × 1080
The next train, its stopping pattern and how full each carriage is, front to back.

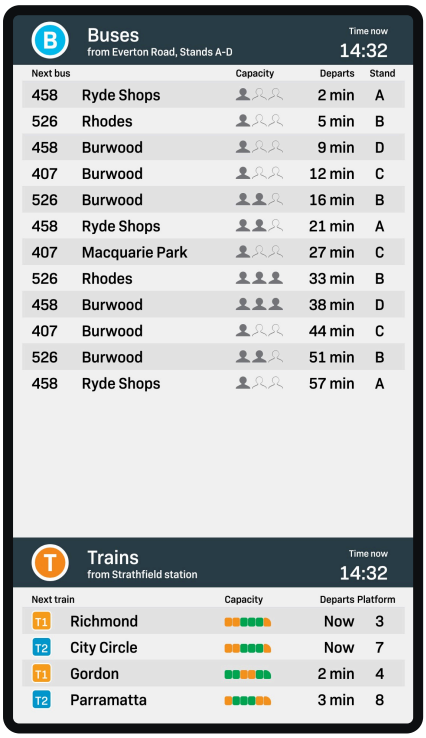


Portrait · 1080 × 1920
The same information for portrait screens.

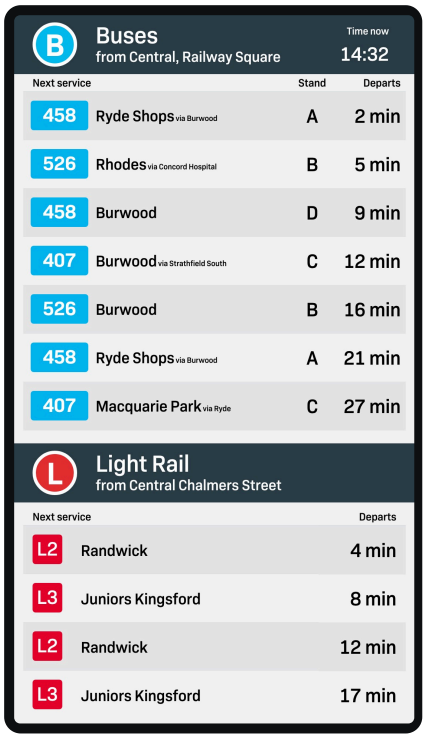
Templates built for Transport for NSW, rendered by EYE with sample times and loads.

Interchanges and bus stands

At an interchange one screen covers every mode. Each section of a template filters by agency, mode, stop and route, with its own heading and icon.



Station interchange · 1080 × 1920
Twelve buses with stands and capacity, then trains with platforms.



Buses and light rail · 1080 × 1920
Two modes, each from its own stop.

Why it works at an interchange

- Add a GTFS feed for every agency and mode.
- Capacity shows where people will find a seat.
- Stands and platforms tell people where to go next.
- Services past a set time show the clock time instead of minutes.

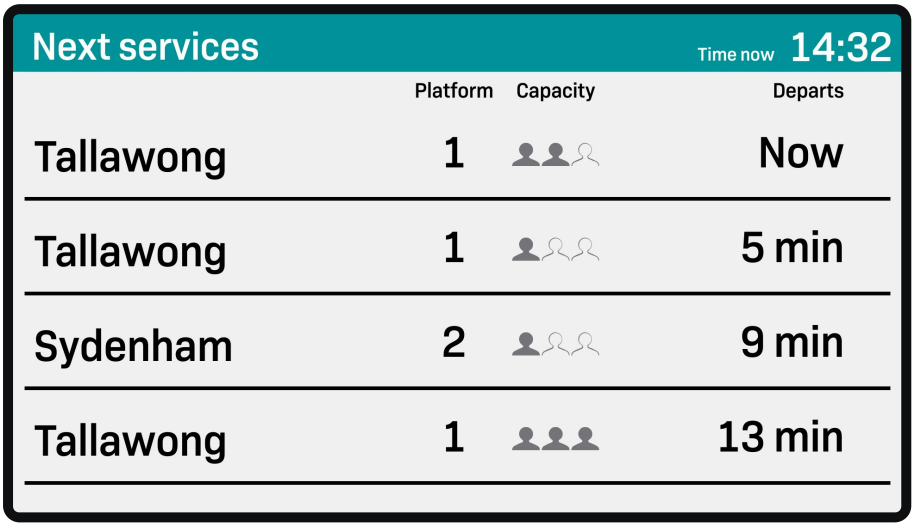


Bus stand · 1920 × 1080
Eight buses in large type for reading from a distance.

Templates built for Transport for NSW, rendered by EYE with sample times and loads.

Sydney Metro

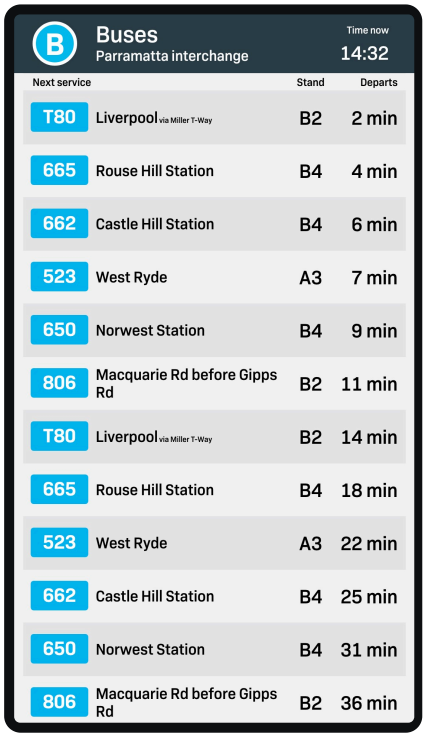
A cleaner look for a driverless metro: next services with space on board, stopping patterns at interchanges, connecting buses, and flight times for passengers heading to the airport.



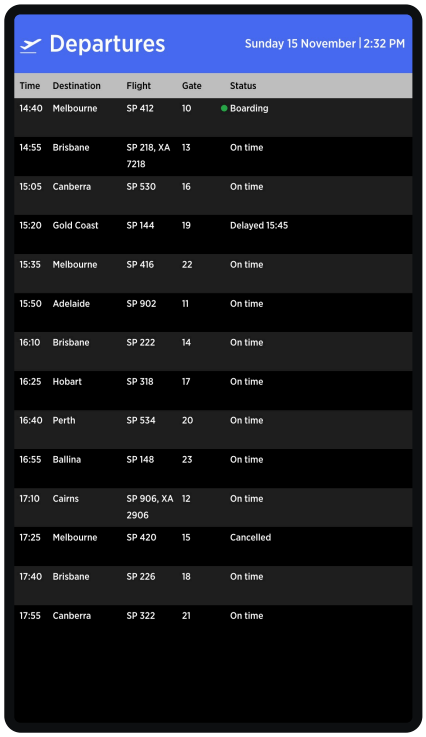
Concourse · 1920 × 1080
Next services with platform and space on board.



Interchange · 1080 × 1920
The next train, its stops and the services after it.



Connecting buses · 1080 × 1920
Twelve buses across three stands.

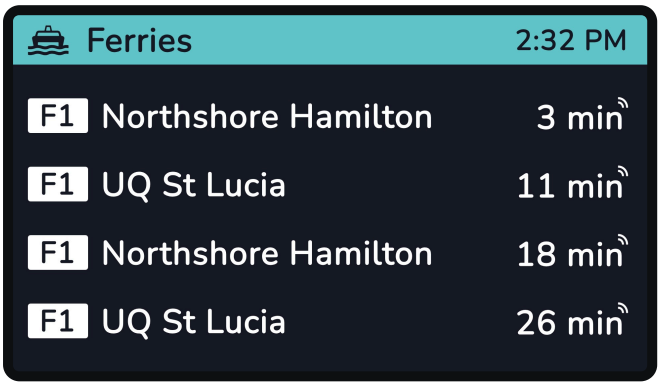


Flight departures · 1080 × 1920
Codeshares, gates and status, from a flight feed.

Templates built for Sydney Metro, rendered by EYE with sample times, flights and loads.

Brisbane ferries and Adelaide Metro

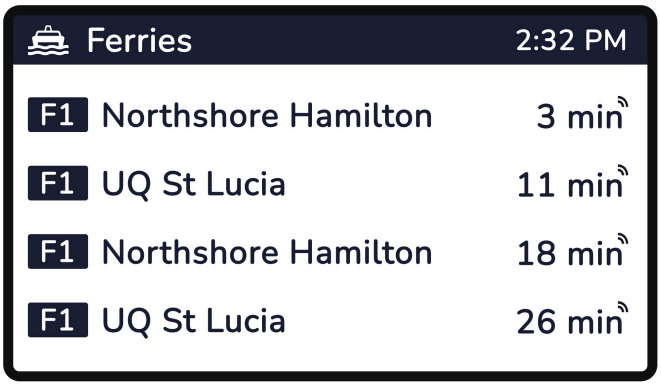
From river wharves to suburban interchanges, the same system runs very different screens.



BRISBANE FERRIES

Wharf display, dark · 1920 × 1080

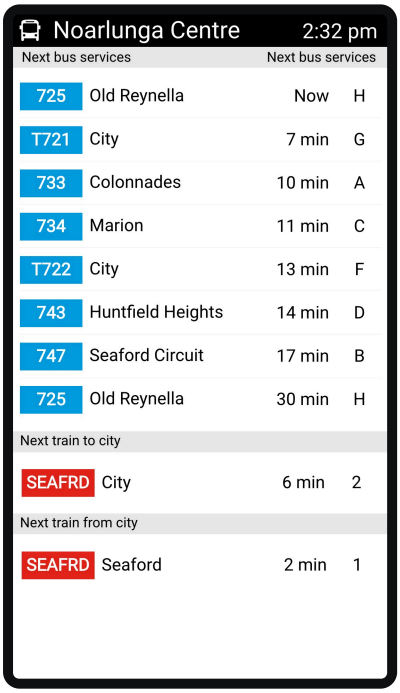
Large type for reading from the pontoon.



BRISBANE FERRIES

Wharf display, light

The daytime version of the same template.



ADELAIDE METRO

Interchange · 1080 × 1920

Buses with their stands, then the next trains each way.

Light and dark, day and night

Templates can come in matching light and dark versions. Modes switch every screen in a group between them on a schedule, or on demand from a desktop or phone.

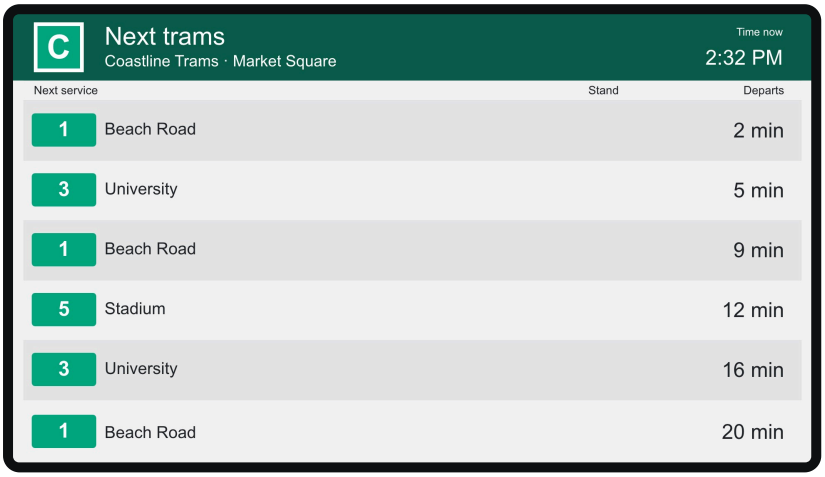
Disconnected, not blank

The Brisbane templates carry their own wording for no data and lost connections, so a wharf screen never shows times that are out of date.

Templates built for Brisbane ferries and Adelaide Metro, rendered by EYE with sample times.

Concepts for any operator

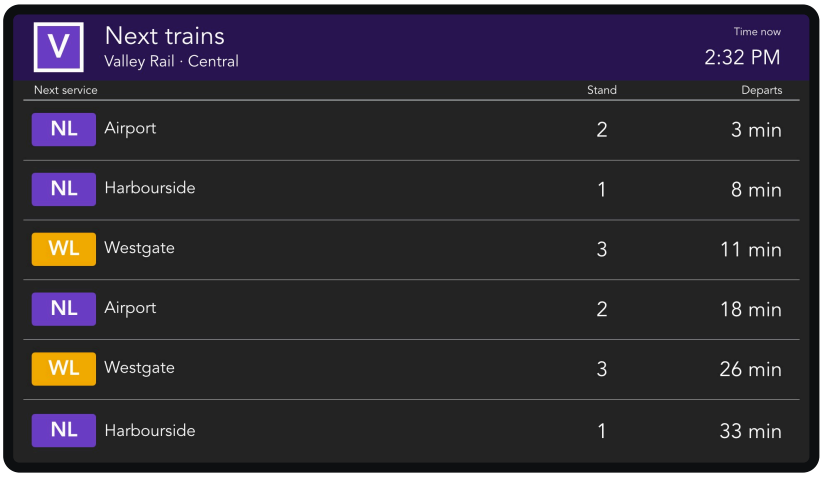
These two operators are made up. Each look was built only by changing template settings and styles, with no new software, and that is how a template in your brand starts.



CONCEPT

Coastline Trams

Light board from the Default template, in the operator's green.



CONCEPT

Valley Rail

Dark board from the Smart pi template, in the operator's purple.

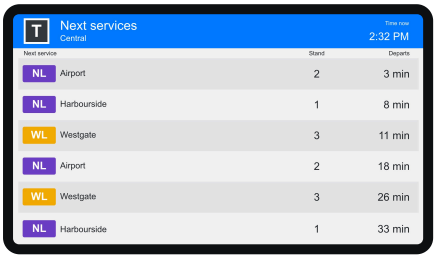
What we need to build yours

- Your colours, typefaces and line or mode icons.
- The screen sizes and orientations you use.
- Which modes and stops each screen should show.
- Any wording for alerts, disruptions and lost connections.

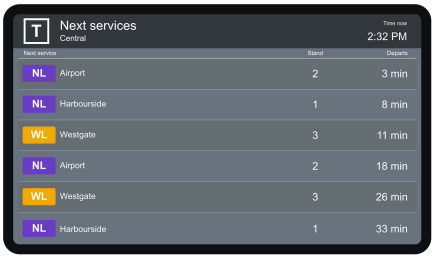
Concepts for fictional operators, rendered by EYE with sample data.

Your look, to the pixel

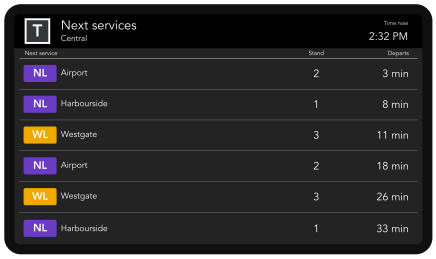
Start with one of the three standard templates, included free, or have one built in your own brand. Administrators simply pick a display type and EYE renders it correctly on every screen.



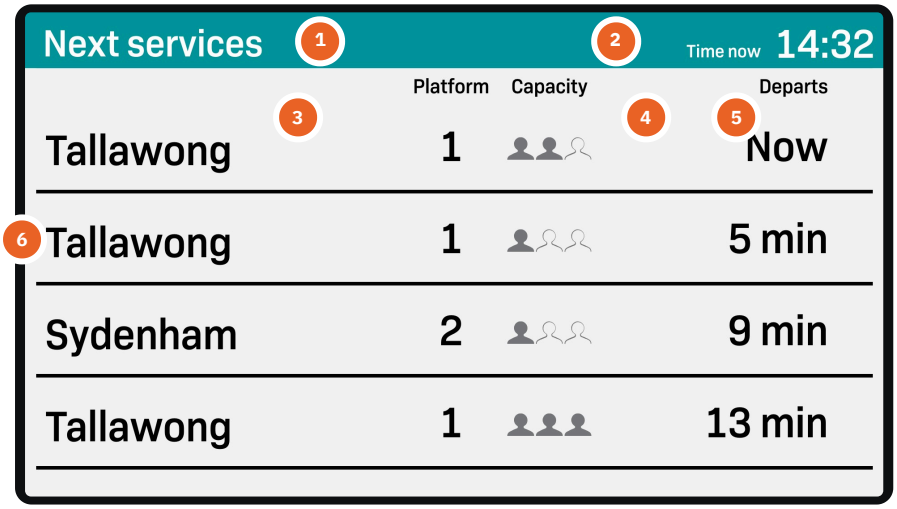
Default



Dark



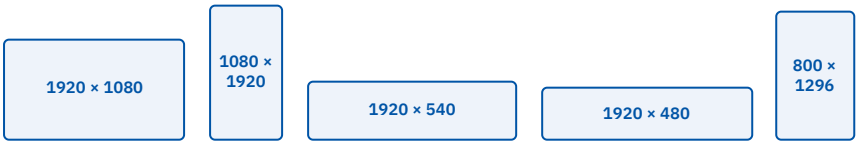
Smart pi



1. **Heading and location**, with a title per screen so one template serves many stops.
2. **Clock** in 12 or 24 hour time, kept in step with the server.
3. **Destination** in your typeface, with a via line and route badge.
4. **Platform, stand and capacity** columns, each shown or hidden per template.
5. **Departure** in minutes, then clock time beyond a threshold you choose.
6. **Every row** styled down to its spacing, borders and colours.

Any screen shape

Templates already in service cover landscape and portrait screens, stretched bar displays and custom sizes, including mirrored layouts for back-to-back screens.



A player behind every screen

EYE-HD is a small industrial media player with no moving parts. It runs from the screen's own USB power and needs only a network connection, so there is no PC to maintain at each display.



Front
USB, network and a status screen that shows the player's name and address.



Rear
HDMI to the screen, audio and control on one DB-25, and 5 V power.

Front

- 3 × USB
- Gigabit Ethernet
- Status screen

Rear

- HDMI up to 1920 × 1080, resolution detected from the screen
- DB-25: 2 × balanced audio out, 2 × GPI/O
- Micro USB, 5 V DC at 500 mA

Unit

- 145 × 130 × 27 mm
- 500 g
- 0 to 70 °C
- Indoor and outdoor versions
- Rackmount kit: up to 9 players in a 19" rack

Your player, or ours

With EYE-HD

RECOMMENDED

- **One-word set-up:** type the screen's name and it provisions itself from the server.
- **See every screen:** regular screen grabs and a display history by date.
- **Control the display:** power, brightness, contrast and input on Hyundai IT screens over RS-232.
- **Look after it remotely:** firmware updates, backup, restore and logs from the web.
- **Built in:** GPI/O and balanced audio for help points and announcements.

With your own players

- Content, templates, messages and modes still come from the EYE server.
- Useful where players are already installed.
- Without EYE-HD's provisioning, screen monitoring and display control.

From the first screen to the whole network

1 — Connect your data
We connect your GTFS and GTFS-R feeds, or bring other formats in through Smart pi RTA.

2 — Choose your look
Use a standard template, or we build one in your brand for each screen type and size.

3 — Prepare the screens
Screens and groups are set up in the web interface, before the hardware is installed.

4 — Switch on
Each EYE-HD is given its name, and its screen comes up with the right content straight away.

5 — Run and grow
Send messages, schedule modes and add screens, Nodes and Ingesters whenever you need them.

Built for

Rail and metro · Bus and ferry interchanges · Airports · Stadiums and venues · Campus and corporate · Smart cities

Typical server sizing

	Master	Ingester	Node	Database (LARGEST)	Staging
	Configuration and content	Realtime feeds in	Display capacity and logic	MariaDB, shared by all	Everything on one server
CPU CORES	4+	8+	8+	16+	8+
MEMORY	8 GB+	16 GB+	16 GB+	32 GB+	16 GB+
STORAGE	50 GB+	50 GB+	50 GB+	100 GB+	50 GB+

Minimums per server. Start with everything on one server, then add Nodes and Ingesters as the system grows. Windows or Linux, on premises or in the cloud.

SMART PI EYE

See EYE with your own data

Ask for a demonstration with your feeds, your screens and a template in your brand.



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Scan to visit smart-pi.info

Smart pi ECOsystem

Smart pi is a T&M Media Pty Ltd brand · ABN 67 612 111 369
Screens are real EYE templates shown with sample data. Specifications may change without notice.