

LEFT: JPA Design's most recent luxury sleeper cabin design, for the Belmond Grand Hibernian

Designers ponder the many challenges unique to sleeper car designs, from catering for many uses to a heightened expectation of luxury

# Sleeping beauties

While every railcar design project involves catering for a range of needs, the considerations multiply when passengers will not only sit in the car but spend the night there too. Many sleeper cars are also sold as a luxury experience, rather than simply as a mode of transport.

"The guest experience in luxury trains is based on the romance and nostalgia of rail travel from a bygone era, which requires opulent, beautiful and highly atmospheric interiors," says Alex Duncan, design director for interiors at JPA Design London. "As well as working out how to fit everything into cabins with a floor area of under 10m<sup>2</sup> (108ft<sup>2</sup>), the challenge is to ensure that the experience compares favorably with a five-star hotel while complying with safety standards and weight constraints."

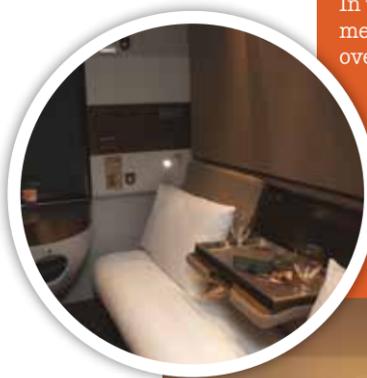
Seats and beds have various comfort requirements. To optimize both, design firm tangerine suggests that one solution could be a separate mattress that can be deployed at night. Matt Round, chief creative officer at the firm, also points out the challenges of accommodating different user groups and functionalities in a limited space. "For example, business travelers require somewhere quiet to work, while families need somewhere to be entertained," he says.

#### In the zone

"Differentiated spaces such as business corners, family areas and lounges are a possible solution on this kind of train," says Philippe Georget, artistic director at MBD Design. "Passengers expect adaptive comfort, unique lighting, a social atmosphere and scalable privacy in a really secure environment. They want to use the journey to rest, work, enjoy culture, etc. The role of a designer is to answer these challenges and go

### ◀ NIGHT RIVIERA SLEEPER

In the UK, GWR debuted new cabins, lounges and menus on its Night Riviera Sleeper in 2017. The overnight service links the West Country and London. Technological improvements include USB charging points and plug sockets, keycard access, wi-fi and air-conditioning. Bottom bunks have been redesigned to convert into sofas for use during the day, and for improved storage underneath. The cabins also feature sinks, a bedside table, a waste bin and a wardrobe. Each train features one accessible cabin and toilet.



LEFT: A concept by tangerine for an adaptable berth with a moveable partition, enabling flexible arrangements for families

BELOW: The DD Sleepers coach designed by RCP for Sofanor

BOTTOM: The new suite design on the Caledonian Sleeper

user groups," he suggests. "Films could keep younger passengers entertained, business travelers could hold online meetings, and tourists could look at popular sites at their destination or go through their photos."

Duncan of JPA Design remains very optimistic about the future of sleeper trains. "There will be a move toward elevating the overnight experience both for those in cabins and those only paying for a seat," he says. "No longer will it be acceptable to share a bunk bed with a stranger or sit bolt upright all night in a standard seat. Cabins will be for individuals or couples, while seats will recline or even be fully lie-flat as in business and first class aircraft cabins. In Asia and other regions where huge numbers of passengers face long, exhausting train journeys, the push will be to elevate the experience by creating high-capacity, convertible and comfortable seating and sleeping facilities that offer some privacy." ✕

### ◀ THE CANADIAN

In April 2018 VIA Rail Canada announced a C\$46m (US\$35m) investment to upgrade 25 railcars for the Canadian, a long-distance service. The work, to be carried out by Cad Railway Industries, includes updating the interior design, boosting seat comfort and making the cars ready for wi-fi.

"The work will extend over the next two years and create about 100 jobs at our Lachine [Canada] plant," said Fausto Levy, chairman of the board, president and CEO of Cad. "It will also result in large orders for components from our Canadian suppliers."

VIA Rail also recently awarded Bombardier a C\$54m (US\$41m) contract to upgrade 17 long-haul railcars to offer two wheelchair lifts, two accessible spaces with anchoring devices, an accessible washroom and display screens, including in the washrooms. VIA Rail says the new layout will comply not only with current accessibility standards, but also with future ones in development.



beyond, offering things such as catering, secure luggage compartments, noise isolation, dedicated charging and social areas."

"Security is passengers' first requirement," comments Régine Charvet Pello, CEO at RCP design global. "Passengers require personal safety, as well as security for their property. They also want physical comfort and the ability to rest, sleep and eat. The challenge is to offer an attractive, comfortable, individual and intimate solution in an extremely constrained space. The stairs to access upper berths and the ergonomics of opening the berths are some of the biggest design challenges we face."

#### Operator considerations

The additional demands on a sleeper train result in further maintenance requirements, points out Weiwei He, rail lead and head of China business at tangerine. "Operators need to maintain not only seats, but also beds, tables, dining equipment and accompanying amenities," he says.

He adds that operators should take the opportunity to create brand engagement at every moment, from online communication to the onboard meal service. "For example, amenities including a shoe shine service or suit press would help business travelers feel prepared and ready for their meetings, leaving a positive lasting impression of the overall service," he says.

On luxury projects, JPA Design has found sourcing suitable compliant materials a challenge.



"Because these exclusive projects are by their nature rare, and the volumes of materials involved are comparatively minimal, sourcing compliant and visually appropriate materials, fittings and fixtures requires a lot of effort," says Duncan. "Thankfully there are still a few artisans and specialist manufacturers who can create what is required, and a few fabric, carpet and leather manufacturers who will make bespoke and compliant products."

ABOVE: A sleeper car concept by MBD Design

TOP LEFT: GWR's Night Riviera Sleeper

He adds that the substrates and paneling used for interior linings must be finished with specially formulated treatments that have to be tested and certified, while the result must look immaculate and withstand heavy use. "Here we rely on close collaboration with highly skilled fit-out contractors," says Duncan. "Additionally, the mechanics of elements such as fold-down bunks that convert into armchairs have to be designed and engineered to withstand the applicable crashworthiness criteria while offering the highest comfort, elegance and safety."

#### The outlook

In the future, tangerine's Round expects greater personalization to be delivered through digital touchpoints. "For instance, biometrics could be used for room access and windows could deliver journey information and additional services as interactive surfaces – even targeted for different

### ◀ CALEDONIAN SLEEPER

A fleet of 75 new railcars is on its way to refresh the experience on Serco's Caledonian Sleeper. The phased transition will begin in October 2018 on the Lowlander route between London and Glasgow/Edinburgh, UK. The cars, representing an investment of more than £100m (US\$130m), are being manufactured by CAF.

New features include keycard entry, more accessible rooms, charging panels and wi-fi, while toilets, uniforms and the food and beverage offer have also been refreshed.

Accommodation options include suites with a double bed and en-suite, Club rooms with a twin or single bed and en-suite, Classic twin or single rooms, and Comfort seats.

