

DEFINING AND DEVELOPING THE DESIGN CHAMPION ROLE: RESEARCH REPORT

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Table of contents

1. Introduction	2
2. Methodology	3
3. Key findings	4
4. Emerging themes	6
4.1 Need, role and responsibilities.....	6
4.2 Organisational level and time commitment.....	9
4.3 Tripartite governance structure.....	10
4.4 Timing and legislation	11
4.5 Reporting.....	11
4.6 Advisory role.....	12
4.7 Experience, skills and attributes.....	12
4.8 Knowledge exchange and succession	14
5. Challenges and opportunities	15
6. Case studies	18
6.1 Knowledge gap	18
6.2 Best practice examples.....	18
7. Opportunities for the ICE to promote the design champion role	19
8. Acknowledgements	20

1. Introduction

In November 2020, the UK's first 30-year [National Infrastructure Strategy](#) included the requirement that all projects were to have a board-level design champion in place by the end of 2021.

Each infrastructure project will have its own governance strategy, but all nationally significant schemes will usually be governed by a board. These boards typically include a majority of non-executive members who bring a diverse range of skills and expertise to meet the project objectives. Usually, appointments to infrastructure project boards will be made by the sponsoring government department.

A report by the National Infrastructure Commission (NIC), [Design Principles for National Infrastructure](#), reiterates the call for a board-level design champion. Developed in consultation with people working across infrastructure sectors, it sets out four design principles to guide the planning and delivery of major projects: climate, people, places and value. When value is mentioned on the following pages of this research report, it refers to the NIC's definition – value in terms of the entire project lifecycle and outcome-based solutions. It is a definition of value that is not only about cost but also about achieving multiple economic, environmental and social benefits beyond the main purpose of the infrastructure, including looking beyond the site boundary and problem-solving.

While the National Infrastructure Strategy recommended the creation of the design champion role, it did not specify the skills, experience and attributes the individual should have. The industry broadly welcomes this development but wants clarity on this to ensure that design champions will successfully add value in terms of public benefit on infrastructure projects.

The Institution of Civil Engineers (ICE) published a working paper, [Defining and Developing the Design Champion Role](#), in August 2022. The ICE commissioned Birdi & Partners, with Frame Projects, to support the development of further insight on this subject.

This research work set out to hear the views of organisations and individuals operating in the design, construction and infrastructure sectors on the role of a design champion and what skills, experience and attributes were required to be effective. The aim was to clarify what a design champion was, creating a shared understanding, with the ultimate outcome that design champions could then be appointed and have lasting impact on the design of infrastructure projects. This will create higher quality infrastructure for end users and for the climate, as well as benefiting the wider communities, stakeholders and places affected.

The ICE's knowledge team aims to use these insights to produce guidance for the industry enabling:

- The requirement for a design champion to be implemented
- Projects to recruit for this new role
- Projects to progress in line with the recommended NIC design principles

2. Methodology

Approach

Birdi & Partners and Frame Projects built on their experience as experts in infrastructure design and independent design review to develop an appropriate methodology in collaboration with the ICE.

A two-stage stakeholder mapping exercise was carried out, with potential stakeholders being independently longlisted and shortlisted before being invited to participate in the project. The final list was approved by the ICE. In this process, care was taken to ensure that those contributing would bring broad perspectives within the scope of the project, which allowed for approximately 25 interviews. Some 27 individuals were interviewed in total, representing a diverse and balanced spread that took into account:

- Sector (public/private)
- Type of work (rail, water, highways, waste, aviation, arts and culture)
- Discipline (engineers, architects, contractors, planners, urban designers, landscape architects, technologists, and policy, sustainability and community engagement specialists)
- Gender
- Ethnic background
- Seniority/experience

Harbinder Birdi, creative director of Birdi & Partners, then carried out semi-structured interviews, based on the following five questions:

1. What roles and responsibilities should a design champion perform?
2. What experience and technical expertise should a design champion hold?
3. Where do you think the design champion role would best fit among other roles in the organisational structure of infrastructure projects?
4. What are the qualities and skills that a design champion should have?
5. Are there examples of individuals who have performed a design champion role effectively on projects that you have been involved in?

Summary notes and recordings of the interviews were provided to Frame Projects, which used them to cluster and synthesise views across the sample and then write up the findings for this report.

This methodology focused on qualitative research methods to capitalise on access to high-profile individuals. The interview format allowed the researchers to gather insights from those people with a deep understanding of the challenges and opportunities that the design champion role may bring. While more data-driven methods can produce useful statistics, this subject matter required a methodology where subtleties were not lost in translation. The researchers inferred consensus through repetition of opinions and used this to summarise the key findings in [Section 3](#). They also made sure to be transparent about where there were outlier views – these are detailed in [Section 4](#).

Outputs:

- This research report
- A draft job description
- An illustrative diagram of the tripartite governance structure
- The raw interview recordings and notes in an accessible digital format
- An indexing spreadsheet to help the ICE to navigate these raw materials

3. Key findings

Eight key findings came out of the interviews as follows (in no particular order):

1. There is a real need for design champions

There is broad support for a design champion role to be introduced on nationally significant infrastructure projects. Ultimately, their role is to ensure that the infrastructure we build is of a higher quality, and that it creates wider benefits to better serve the public, changing the feeling that infrastructure is imposed *on* them, rather than built *for* them. Infrastructure projects would benefit greatly from someone with the oversight and distance necessary to champion high-quality design. To achieve this, the responsibilities of the role would include helping to set the right brief and develop a project-specific vision and principles. A design champion could support the work to establish good design governance, including an appropriately resourced design team. Their ongoing role would be to ensure that vision and principles inform decision-making, and that there is adequate reporting on design progress and value. This would fill a crucial gap, helping to solve problems and create efficiencies.

2. They should be non-executives at board level

Design champions will be most effective as non-executives sitting at board level. The call for good design must come from the top and the design champion cannot be too involved in the detail if they are to maintain oversight of the bigger picture and hold project executives to account. To ensure genuine challenge, and because board places can be competitive, they must have the support of the chair. They would be a voice for design on the board in the same way that cost, programme or health and safety are represented. It is anticipated that one individual would perform the design champion role part-time, approximately four to six days per month, on each infrastructure project of a significant size.

3. They should be one part of a tripartite governance structure

The design champion will not be able to achieve much alone and will need to rely on a well-resourced executive design team. It is essential to have a clear relationship with the other governance structures in place. A tripartite structure is suggested, consisting of the design champion, the design executive, and an independent design review panel, all working together. All three elements are needed to ensure that the design champion has influence and can enable design quality.

4. Design champions should be a legal requirement right from the outset

For maximum added value, the requirement for a design champion should be baked into a Hybrid Bill or Development Consent Order from the outset. This would make the role a legal requirement, creating assurance that design is always high up on the agenda. It would ensure design champions are involved early on in projects so they can have greater impact.

5. They should report to government on progress

By virtue of the design champion role being required by legislation and the nationally significant scale of projects, design champions should be required to report to government. To support this reporting, the project should develop a method of measuring design quality and weighing decisions in the balance.

6. The role should be advisory

For a design champion to be able to promote design quality and challenge decisions that will compromise it, the role needs to be advisory. This means the champion does not make the final decisions or design the solutions, but offers impartial advice to those who do. It is necessary to make this distinction so that those who may take on the role understand their accountability. This will attract individuals with the right skills and attributes by clarifying the extent of their responsibility. While they need to understand the impact of their decisions on the design team, programme and budget, they must remain independent advocates for the best interests of end users, without indemnity requirements being a barrier to involvement.

7. Design champions must have the right skills and attributes

To be successful, the design champion must be respected, experienced and skilled, particularly in their critical judgement abilities. A design background is essential, but recruitment should be inclusive of all disciplines. They should have a broad knowledge of design, planning, engagement and procurement, and an appreciation of technical issues. Experience on relevant infrastructure projects would be advantageous, but it is more important that they have a good track record of seeing significant and successful projects of comparable scale and complexity through from start to finish. To have a holistic view and to break siloed working patterns, they should be a polymath rather than a specialist. The design champion should have recent experience working in professional design practice and be senior enough to understand the management of teams, programmes and budgets.

8. Design champions should facilitate knowledge exchange and succession

The design champion role should include responsibility for sharing relevant lessons learnt back into the project and with other infrastructure projects. This could be achieved by convening a network of design champions who meet regularly for cross-fertilisation of ideas, training and knowledge sharing. They should also mentor the next generation of design champions to ensure the legacy of the role and a smooth handover.

4. Emerging themes

Expanding on the key findings that came out of the research, the following provides further detail from the interviews on each of the eight themes/findings.

4.1 Need, role and responsibilities

Need

Too often, the public feels that infrastructure is imposed on them, rather than built for them. The design champion's role is to change this, ensuring that infrastructure better serves end users and the public by raising design quality and creating wider benefits. For example, a new reservoir must functionally provide for the water needs of the community and be well designed to have resilience in our changing climate. It could also create well-loved sports and leisure facilities for locals. There is an inherent tension in the difference between the more visible, above-ground infrastructure projects and the less visible or underground schemes. Design champions will need to be creative to resolve such tensions, finding other ways to deliver social value and working harder to celebrate the good-news stories of the project.

There was unanimous support among the interviewees for a design champion role to be introduced on infrastructure projects, particularly nationally significant schemes. Across various disciplines and perspectives – whether public sector or private, designer, client, contractor, architect or engineer – all agreed that there was a real need for someone with enough oversight and distance to spearhead and defend the value of design. A design champion would fill this important gap, helping to solve problems and create efficiencies, delivering on promises and changing perceptions.

Role

The role of a design champion is to champion the value of design on their project. This means that they understand and care deeply about good design, promoting a holistic approach and driving the value that a project will bring. This should be both in terms of meeting the design objectives of a specific infrastructure project and in terms of the wider, longer-term outcomes. Their role is therefore accountable, with clear benefits to the public.

Design champions should be able to translate technical design issues to make them accessible to both those on the board or to members of the design team who may not be specialist in that area. They should inspire and push the design team to be innovative, bringing creativity into infrastructure. They may also need to defend the needs of the design team to prevent high-quality design from being diluted.

To do this successfully, design champions must command respect. They should be completely independent, with an objective stance and no vested interests to detract from their authority. They also need to be highly experienced, skilled professionals who people listen to. They should have a track record of successfully advocating for the value of design to convince their audience of this. By virtue of the above, it is likely that they will be high-profile individuals.

Responsibilities

The responsibilities of a design champion, as suggested by interviewees, are:

Setting the right brief

- Design champions should be brought on board as early as possible to help shape the brief at board level, ensuring that the scope is right and that it is tailored to be project specific.
- While the brief is ultimately the client's responsibility, the design champion would provide independent advice to steer the process.
- They must understand the needs of end users, including operators and the local community, and integrate this, ensuring that the brief puts people at its heart.
- They will therefore need to have a deep understanding of the findings from stakeholder engagement and should be their voice in the design process.
- Design champions should have a deep knowledge of the relevant planning issues to help with achieving consent.
- They must have a long-term vision that includes the wider benefits and outcomes for society. They should build this potential into the brief.
- Design champions must embed ambitious low-carbon and climate resilience design objectives into the brief – especially considering the long timeframe of infrastructure.
- At a national level, the design champion should have an overview of infrastructure strategy and ensure that their project is co-ordinated and connected with it.

Developing a project-specific design vision

- The design champion should ensure that their project has its own design vision, as a project-specific response to the NIC's [Design Principles for National Infrastructure](#).
- The design vision should build on and maintain the NIC's design principles (climate, people, places, value).
- The design vision should be developed collaboratively with a multidisciplinary team to be accepted by all. It should also consider futureproofing, to allow for inevitable change over long project programmes.
- The design champion should ensure there is a robust strategy to ensure that project and design teams adhere to the design vision.
- To do this well, the design champion must have a good understanding of design and how to strike the right balance between functionality, cost, social value and beauty.

Developing design governance

- The design champion should act as a critical friend to the design executive in developing robust design governance for the project.
- Detailed design principles or codes are likely to be needed, building on the high-level commitments of the design vision.
- The design champion may need to advocate for a design review panel to be established, to provide independent, expert, multidisciplinary advice on the project as it develops. This is a key check/balance.
- Design champions will ensure that design is not isolated or losing the battle with other factors.
- The design champion should advise on the project procurement method to ensure it achieves its aspirations.
- Many interviewees mentioned the need for the design champion to advocate for retaining the design team, ensuring continuity for the duration of the project.

Oversight of design in project delivery

- Design champions are responsible for keeping their project on track to deliver its design vision and principles.
- They should ensure the project executive disseminates and implements the design vision at all levels and project stages.
- They are responsible for design remaining at the forefront of decision-making, in balance with cost and programme.
- This is not just about the way the project looks, but also about the way it works. Design champions should shape both, ensuring consistency in quality and picking up blind spots along the way.
- The design champion will need to understand and influence where time and resources are invested at each stage of a project, to achieve the aspirations of its design vision.

Relationship with the executive design team

- The technical nature of infrastructure projects means they are often dominated by specialists. Design champions should bring joined-up thinking across the various disciplines and departments, always keeping the end ambitions in mind.
- They will need to be knowledgeable about all perspectives on the team to break down siloes and promote collaborative working.
- They should listen to and ask questions of the design team. This means creating a space where all can safely voice their ideas.
- To benefit from the project team's expertise, and save time and money, an environment must be created where everyone feels confident that they can flag any concerns.

- They should help to appoint specialists when required – for example, flagging when the design review panel should be consulted, or understanding when new expertise is needed on the design team.
- Design champions should be empathetic with creative leadership skills, including the ability to motivate design teams by reminding them of the long-term positive legacy of projects.

Challenging decisions for better outcomes

- Design champions must be people who are confident to challenge assumptions.
- They must feel they have the authority to ask the questions that others avoid, in order to reach better design outcomes. This may include calling out misplaced power.
- This may also involve challenging those who follow codes, such as applying minimum standards to the letter and being overly risk-averse, restricting the potential of the project.

Measuring and evidencing design value

- Design champions should work with the executive team to ensure the value of design is understood, so this can be balanced with financial value in decision-making processes.
- This could be done through outcomes-based key performance indicators (KPIs). These can be both qualitative and quantitative.
- The executive team should report to the board and the design champion on how it is meeting its design vision and present KPIs relating to the project's design value.
- Interviewees did not have any examples of how to measure the value of design because this and the design champion role are both relatively new ideas that have not been successfully implemented yet.

4.2 Organisational level and time commitment

Executive versus non-executive level

In its document [Design Principles for National Infrastructure](#), the [NIC Design Group](#) sets out that there is “a need for championing of good design at board level on projects”. It was useful to discuss this in the interviews because it is clear that there is not yet a shared understanding of what this means – particularly whether the design champion should be executive or non-executive.

Four out of the 27 people interviewed felt that the design champion role should be embedded at executive level, closer to the day-to-day work, and invested full-time to have a real understanding of the project's needs.

However, the other 23 interviewees thought that design champions on infrastructure projects would be most effective as non-executives at board level. The consensus was that the call for good design must come from the top. The design champion should therefore be a non-executive, not involved in the detail of the project or designing the technical solutions, which should be the responsibility of the

design executive and the project design teams. This role therefore does not replace the executives, who would be supported and held to account by the design champion.

A design champion at board level would enhance the diversity of its thinking, adding a voice for design and creativity that cuts across all subjects and is not often represented on boards. For this to work, the design champion must have the backing of the chair – which does not mean they should always be in agreement, but that they support genuine challenge. However, as places on boards can be competitive, the design champion will need to prove their value. This will help in terms of gaining cross-party support and ensuring the role is not later disbanded and can fulfil its purpose.

Time commitment

Interviewees largely thought that four to six days per month would be adequate for a non-executive design champion sitting at board level. This is partly down to the anticipated workload, and partly to the amount of time that individuals with the required skillset would be able to commit. This could be reviewed quarterly, with the design champion's engagement likely to reduce over time as the project progresses.

To ensure continuity and clear accountability, it was felt that the role should be filled by one person per project of a nationally significant scale. In large organisations, such as National Highways, one individual could not be expected to provide design governance on all projects, and so the work should be shared out between design champions. Some interviewees thought that the role could be split between two individuals with complementary skills.

4.3 Tripartite governance structure

Clarity on where the design champion role fits into the project governance structure, and how the relationships work, will be essential. A tripartite structure is recommended from the interviews. This would involve the design champion working closely with the design executive and a design review panel to comprise the three sides of a strong design governance triangle, thus achieving better decision-making.

It was widely noted that the design champion cannot achieve much on their own – they will need resources and support from the teams around them. The design review panel must be well managed. The design executive should include technical specialists, each of whom disseminates the ambitions for high-quality design from the design champion (and others) throughout their area of work. They should also report periodically to the design champion on key issues.

Without the support of a good executive team and design review panel, there is a risk that the design champion would have limited influence, jeopardising the reputation of the role and its future on other projects.

4.4 Timing and legislation

There was broad consensus across the interview pool that design champions would provide the greatest value in the earlier stages of projects. A large part of their responsibilities would be carried out at the beginning, before any design has taken place, including helping to shape the brief and establish best-practice processes.

One of the main advantages of being on board from the outset is that the design champion would be part of early discussions that establish where it is important to invest. This would provide a clear basis for value engineering decisions, when the design is scrutinised for opportunities to save money. The design champion would be able to advocate for high-quality design to be safeguarded in the most important instances – those previously agreed as non-negotiable owing to their impact on end users and the wider public.

If the design champion role is introduced too late, there is a risk they would not be able to make a meaningful impact as all of the strategic decisions would already have been made. The role could then be perceived as a ‘box-ticking’ exercise – carried out purely to satisfy regulations, without real meaningful authority or impact – and the individual could become frustrated by their lack of agency. However, if they are in place right from the outset, it will create assurance that design is always high up on the agenda.

Three interviewees recommended that the best way to ensure that design champions were in place as early as possible was to make the role a legal requirement by ‘baking it’ into the Hybrid Bill or Development Consent Order.

It was acknowledged that many infrastructure projects are already under way, but that measures should still be taken to implement a design champion as soon as possible on all schemes that are not nearing completion.

4.5 Reporting

By virtue of the design champion role being established by legislation, and the nationally significant scale and funding of projects, design champions should be required to report to government. This would also require the champion to work with the design executive to develop metrics on design quality that provide a means of measuring progress and weighing decisions in the balance.

There is a precedent for design governance in legislation with High Speed 2, where it is a legal requirement in the Hybrid Bill to have a design review panel in place. Professor Sadie Morgan, the chair of the HS2 Independent Design Panel, meets with the Department for Transport/secretary of state quarterly to report on strategic design issues.

4.6 Advisory role

For a design champion to promote design quality and challenge any decisions that will compromise it, the role must be advisory. This means the champion does not make the final decisions but offers impartial advice to those who do, acting as a 'critical friend'. When necessary, they will need the confidence to challenge the board's decisions to ensure good design is protected and pioneered.

The design champion is not expected to design the detailed solutions or carry out procurement themselves. It is necessary to make this distinction for those who may take on the role to clarify their accountability. It should be clarified if professional indemnity insurance will be required. This will help to encourage individuals with the right skills and attributes to get involved and remain a voice for high-quality design without onerous insurance requirements being a barrier to their involvement. An advisory role will also ensure that they are completely independent and able to advocate for the best interests of end users without concern for their own position.

To effectively perform this role, the design champion must be given sufficient authority and, in turn, understand the impact of their influence. They should take the challenges that the project and the design team face into consideration, such as budget, buildability and project programme. They must also recognise the politics of decision-making in terms of what it will look like to the wider world, including public perceptions, government and stakeholders.

4.7 Experience, skills and attributes

Professional background

Design champions can come from varied backgrounds and should be recruited from a wide pool of talent. This will bring diversity of thought. There was strong agreement among interviewees that a polymath – someone who knows about many subjects – would be preferred to a specialist. Infrastructure projects already have many specialists by virtue of their technical nature, and the design champion should be someone who can see many perspectives and cut across disciplines to drive collaborative working.

They must have a design background, but interviewees generally agreed that design champions could come from any design profession – architects, engineers, planners, urban designers and so on – and that it should not matter which institutions they belonged to.

Technical experience

Nine interviewees thought it was essential for the design champion to have previous experience working on the relevant type of infrastructure project to adequately inform their decisions. However, the other 18 interviewees felt that finding an individual with strategic design and advocacy skills, which could be transferrable from a related sector, should take priority. At the same time, the design champion would need an appreciation of technical issues, and it would be advantageous if this was

from a relevant sector. This could come from extensive experience of adding value on a project that was widely seen as successful, outside of the infrastructure industry. A relevant example is Sir Nicholas Serota, who is widely respected for the role he played as design champion on the board of the Olympic Delivery Authority (see [Section 6.2](#) for more detail).

There was broad agreement that the design champion should be actively working in professional design practice or a comparable project delivery organisation, at least part-time. This would ensure that their advice was based on practical experience, rather than being purely academic. They should not be a full-time ambassador. Some noted that other experience, such as university-level teaching or being established members of design review panels, would be helpful.

Track record of delivery

Critical judgement abilities and evidence of delivery are paramount. It is essential that the design champion has successfully seen projects through from start to finish. They will need this track record to earn the respect of the board and to ensure that they have the stamina for the role, as infrastructure projects often have long programmes. Candidates who have ‘jumped ship’ before a project fails should be avoided. They should also have experience in directing teams and managing budgets, programmes and clients. They are likely to be working at a senior level with expansive experience in the design and delivery of major projects in a range of sectors.

Knowledge

Design champions should have a broad knowledge of design, planning, engagement and procurement. The design champion will ideally have experience working with a range of clients, consultants, contractors and supply chains, and will have a collaborative, multidisciplinary attitude. It would also be helpful to have an appreciation of public-sector funding stages and mechanisms.

Skills and attributes

The most adept design champions will be able to deploy different behaviours to enact change, adapting their approach to the situation as required. The qualities identified by interviewees can be grouped under four main themes, as follows:

Strategic thinker – someone who:

- Is able to see a project holistically
- Recognises the national significance of the project and how it ties into other strategies
- Has a clear understanding of the long-term project vision and how to deliver it
- Understands the relationships between all parties and their interests
- Understands the liabilities of their decisions, including the impact on the project programme, cost and the design team’s morale

Leader – someone who:

- Knows which battles to try to win
- Promotes the good that the project is doing for the public
- Is an ambassador for design
- Can shape the design vision and strategy
- Has strong design advocacy skills
- Keeps the design team inspired and holds them to account
- Knows where to be prudent and where to invest public money

Designer – someone who:

- Thinks outside of the box
- Values all disciplines that contribute to developing a scheme
- Understands creativity and how designers will achieve it
- Has good judgement, including (but not only) with regard to aesthetics
- Pushes for innovation, including in inclusive, accessible and climate-resilient design

Integrator – someone who:

- Is people-focused, empathetic and understanding
- Respects others and builds trust
- Understands teams, promotes skills and knows when to advocate for more time to solve problems
- Is diplomatic
- Encourages meaningful community and stakeholder engagement, and ensures that this informs the design

4.8 Knowledge exchange and succession

There was strong consensus on the need for design champions to contribute to a knowledge exchange forum. They should be supported by a wider network where all design champions on infrastructure projects meet regularly for training, cross-fertilisation of ideas and mentoring.

Training will help them to keep abreast of emerging relevant changes or issues in the industry. The design champions themselves could also feed into this as each will have a different expertise that others could learn from.

Such a network would enable design champions to gain insights from each other's experiences. This cross-fertilisation would help to manage risk as they would have a heightened awareness of what has been successful elsewhere or what to be careful of. They could then share relevant lessons learnt to the benefit of the projects they look after. It was highlighted by a few interviewees that a support network would help in preventing burnout and retaining design champions.

Because of the long timelines of infrastructure projects, the next generation of design champions will need to be nurtured, ready to take over when the first cohort is ready to step down. As such, there was broad consensus that mentoring the next generation should be part of the design champion job description. Such guidance will benefit younger candidates and ensure the legacy of the role and a smooth handover to successors.

5. Challenges and opportunities

Interviewees spoke about the challenges that design champions, or those commissioning them, are likely to face, as well as the wider opportunities that the role may create.

Challenges

Finding the right individuals for the design champion role

- As they are likely to be high-profile individuals, it may be challenging to find enough people with the right balance of independence, expertise, skill and availability to be design champions for each infrastructure project.
- People with these skills are usually gainfully employed. They may have to be teased from the private sector to serve for the good of the public.
- It may be difficult to find candidates who are not conflicted in any way, particularly as the same large contractors are often used for this scale of project.
- Many with the right project experience may be from large organisations that are often risk-averse and not willing to challenge.
- There are many [design review](#) panel members who may want to undertake this role, but they can range in quality – vetting should be strict before entry. (Design review provides an independent, impartial and multidisciplinary review of design quality on schemes, usually pre-planning. Typically, 20-30 individuals make up a pool of experts covering a diverse range of specialities, from which four panel members plus a chair are selected to attend each review.)
- Headhunting may be the most effective method of finding the right individuals.

Measuring the value of design

- Projects often have a 'blinkered bottom line', limited to financial value.
- Many interviewees acknowledged that good design can be difficult to measure during design development; project timescales are usually too long to wait until the project is completed and end users report back on their experiences post-occupancy.
- How do you measure the qualitative outputs of the creative process when cost and programme are so easy to measure?
- Public-sector funding mechanisms can be unpredictable.

Putting the tripartite governance structure in place

- This may be difficult to implement on schemes that are already under way.
- Establishing a culture of design challenge may not be easy in an industry that can be risk-averse owing to the perceived costs in relation to design innovation.
- There may be resistance to the introduction of more design governance, which can be seen as a barrier to progress.

Lack of understanding of design

- The term 'design' is subjective. Many people assume it refers only to aesthetics, without recognising that design also includes the successful functioning of a project to meet end-user and wider stakeholder needs.
- Understanding of design is needed as a basis for project procurement, assembly of teams, clear briefs, project organisational structure and a creative environment to enable a project's successful delivery.
- The design champion will have to take ownership of, and fight for, the importance of design in its broadest sense.
- This knowledge gap was identified and explored in the ICE's 2021 [What Makes Good Design?](#) report. In collaboration with the NIC Design Group, a survey of 900 UK civil engineers was carried out to review their experiences of design, based on the NIC's design principles. The report included a recommendation for the ICE to create an evidence base on the value of design.

Terminology

- One interviewee suggested that it may help to change the title from 'design champion' to 'chief design officer' to give the role the same status as chief operating officer or chief financial officer.

Logistical challenge

- Changes on large infrastructure schemes can be costly, and budgets are often tight and well-scrutinised owing to the use of public money.

Opportunities

Bringing diversity to board composition

- Some interviewees felt that infrastructure project boards were often made up of members who were too similar. A design champion would bring diversity of thought.
- This is really needed – ensuring reporting at board level not only on cost and programme but also design.

Bringing creativity to the fore in infrastructure

- The design champion should use this opportunity to demystify what good design can do.
- Just as the construction industry has gone through changes to address health and safety, and now sustainability, this will ensure more proactive and measurable efforts towards design value.
- Design champions could be pivotal in enabling faster and better decision-making on infrastructure projects as they can be independent mediators between parties that are involved in delivering the project.

Delivering better infrastructure to serve the public and end users

- Having the regular presence of a design champion could be transformational if done well.
- Higher quality design will have lasting value. This is also a more sustainable approach.
- During value engineering, design champions can ensure that the effect is felt least by end users.
- This is an opportunity to deliver better infrastructure than we currently do in the UK, in all senses – function, appearance and wider benefits. Design champions will further this ambition and help to create schemes that everyone involved can be proud of.

National and international impact

- Establishing the design champion role would be groundbreaking best practice and should be promoted in the UK and internationally.
- There is an opportunity to export or import individuals and create a global network.
- This may demonstrate the value of design and the design champion role to other sectors, creating spill-over benefits such as innovation in other organisations or industries. For example, the initiative may be taken on by local authorities or mayoral corporations delivering their own projects that would benefit from in-house monitoring of design quality to keep schemes on track.

An attractive role for the right candidates

- This role would be attractive to high-calibre individuals in the industry who would be keen to put their years of experience to use for the public good, facilitating creativity at a senior level.
- This is likely to help with job satisfaction, leading to higher rates of staff retention, and having less impact on project programmes and quality.

6. Case studies

Expanding on the key findings that came out of the research, the following provides further detail from the interviews on each of the eight themes/findings.

6.1 Knowledge gap

Eleven out of 27 interviewees could not think of any examples of individuals who had performed a design champion role effectively on projects they had been involved in. In the main, the lack of case studies is because the role is relatively new and has not yet been implemented on infrastructure projects from brief to post-occupancy. Seven of these 11 interviewees said there was an urgent need for relevant exemplars as a powerful way of showing what is possible and getting people on board for change. Case studies from other sectors and countries could provide useful lessons.

6.2 Best practice examples

The other 16 interviewees cited the following individuals as examples of those who had performed a similar role to a design champion well.

Sir Nicholas Serota, as a board member of the Olympic Delivery Authority (ODA), was responsible for ensuring the delivery of venues, infrastructure and legacy for the 2012 Summer Olympic and Paralympic Games in London.

- This was by far the most frequent name cited as a positive example of a design champion.
- As Serota came from an economics and arts background, he was cited as an example of an individual championing design without having architecture or engineering training.
- He appreciated design and the value that design review panels could bring, creating a strong precedent for the tripartite governance structure that design champions could sit within.
- He was also supported by a chair (**Sir John Armit**) who recognised the value of design.
- The Commission for Architecture and the Built Environment (CABE) was charged with facilitating a design review panel on behalf of the ODA.
- Serota was noted by many interviewees as an especially successful advocate for design, who led the design vision and put a clear strategy in place for the monitoring of projects.
- Serota's previous position as CABE deputy chair had provided applicable experience in how to influence a board. Mutual respect was built by showing interest in, and understanding of, the whole project team.
- It was noted that the highly visible Olympic project contrasted with many infrastructure projects, where much of the cost and effort can be below ground and not in public view.

Clare Donnelly (architect) on Thames Tideway Tunnel (TTT), alongside **Roger Bailey** (engineer), **Phil Stride** (technical water expert) and **Nathan Coley** (artist).

- There were no design champions on the TTT project, but project directors saw the value of good design, with Donnelly and Bailey advocating for it at board level.

- Donnelly was instrumental in the procurement of suitable architects and artists to take the design from concept/outline to planning approval and construction.
- She was also pivotal in engaging with local authorities to sign off the Development Consent Orders (planning conditions).
- Donnelly maintained a role onsite in which she was able to inspect works to ensure that they met the client's requirements.
- When Stride left the project, he did not need to be replaced as by this time the chief engineer would listen to the architects and table requirements at board level.
- Coley set some key design anchors to ensure his proposals were not value engineered beyond an ability to deliver on their intent.

7. Opportunities for the ICE to promote the design champion role

Interviewees were broadly in agreement that the ICE was the right organisation to pioneer and manage a new design champions network for infrastructure projects. The NIC Design Group could support the headhunting and interviewing of prospective candidates and become a peer group for future design champions. However, interviewees felt that the ICE had the right connections and authority to promote the design champion role and help clients to appoint them on their projects.

The potential next steps for the ICE, as drawn from the interviews, are to:

- Create a function for supporting and managing design champions
- Develop a communications strategy to introduce the need for, and benefits of, design champions in the infrastructure industry
- Create a simple process for appointing a design champion to help those running infrastructure projects. This needs a clear process diagram.
- Produce a guide to help executives, design review panels and boards to understand where the design champion role fits into the project governance structure, the remit of the role, and the expected responsibilities
- Develop a methodology for the recruitment of design champion candidates, including younger candidates to be mentored as the next generation
- Create a register of design champions, from which each infrastructure project can select the most appropriate candidate
- Establish a knowledge exchange forum through which design champions meet regularly for training, skills exchange and mentoring
- Develop a toolkit to support design champions in their work. This should include how to work with project teams to establish metrics for measuring design value on their projects, balancing the qualitative with the quantitative and prioritising value for end users and wider communities. This could build on the Infrastructure Client Group's [Project 13](#), a partner initiative of the ICE. Another useful example is National Highways' report on design review, [On the Road to Good Design](#).

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This report was put together by a research team including Harbinder Birdi (Birdi & Partners) and Deborah Denner, Kirsty McMullan and Reema Kaur (Frame Projects).