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ANALYSIS OF ARCHITECTURAL REPRESENTATION AS A RESEARCH METHOD: NATIONAL LIBRARY COMPETITIONS

FRANCISCO GOMES, JASON HASKINS

Abstract

Architectural competition research is often focused on the cultural scenarios, problem briefs, and proposed buildings elicited by the design competition. Today, a growing body architectural theory posits that the representations architects create are not merely neutral windows into a design proposal but in themselves hold evidence of the interests and intentions of their authors. These representations are particularly consequential in the design competition; the visual and illustrative choices contained in the proposals include drawing type selection, visual presence of urban context, use of the informal sketch, and degree to which prescriptive representation requirements have been modified or exceeded.

Focusing the study on national library competitions of the past three decades stabilizes one variable in this comparative analysis.

Research methods include the quantitative comparison of differences in the distribution and proportionality of types of presented information across multiple entries to a single competition, across submissions to similar competitions distributed over time, and across submissions authored by the same architect to different competitions. Significant findings include strong evidence of designers seeking to differentiate their graphic presentation even when consistency is demanded by the competition brief, a notable relationship between an increased quantity of explanatory text or a reduced quantity of non-required drawing types in the competition presentation and overall success in the competition. The direct reading of the illustrative techniques utilized in these competitions is a limited, but nevertheless important new perspective in understanding the value and meaning of the architectural competition in our society.

Key words:
Competition, Library, Architecture, Representation, Graphic

Introduction

Architectural competition research is often focused on the cultural scenarios, problem briefs, and proposed buildings elicited by the design competition. Undoubtedly, the socio-political contexts of human activities define an important perspective into their meaning, but close readings of design submission documents themselves can provide an alternative perspective to complement more conventional studies of design competitions.

Analysis of design competitions is understandably focused on the architectural solutions represented. It is commonly accepted that the primary goal of the jury is to see through the presentation techniques to the true content of the proposal.[1] The desire to diminish the influence of the graphic design presentation has had a significant impact on competition briefs, which have historically delimited the allowable presentation format with considerable precision and restriction. In fact, the Code for Architectural Design Competitions, issued by the American Institute of Architects, explicitly instructs professional design competition advisors to both organize and evaluate competitions to minimize the influence of the presentation:

> *Judgment must be based on scheme and not on presentation. … The professional advisor should remember that if a simple presentation is required it should be made mandatory. Only drawings absolutely necessary to the explanation of the scheme should be required.*[2]

However, over the past two decades a growing body of architectural theory has argued that the representations architects create are never simply neutral windows into a design proposal. Rather, the types of drawings, models and renderings chosen by the author to represent the design are meaningful and in themselves are evidence of the interests and intentions of their authors. The idea that descriptive methods can be usefully interpreted independently of the content they seek to communicate is experiencing active research in fields ranging from linguistics to advertising. [3] However, the study of rhetoric – a discourse with the power to persuade, inform, or motivate a particular audience – as a body of knowledge independent of the specific content of a particular argument can be traced back through the Western intellectual tradition to Aristotle. As with any other media, architectural drawing requires a set of analytic tools capable of examining its rhetorical techniques of visual design representation independent of the specific architectural proposal it contains.

1. Strong (1976). Strong comments on the conflict between RIBA design assessors' preference for simple and consistent presentations and the belief on the part of successful competitors that «extra care and style in the way the entry is submitted can draw it out of the general mass of entries and ensure that what merit a scheme has will be given every consideration.»

2. *Code for Architectural Design Competitions,* 1972.

3. Pennebaker (2011). Pennebaker's work in computational linguistics is especially relevant to the argument that the external features of communication – in this case language, particularly the allegedly content-free function words such as pronouns and prepositions – reveal and can be correlated with characteristics from age to social class to emotional state.

In his essay *Translations from Drawing to Building*, Robin Evans matter-of-factly notes that the direct products of building designers are not buildings, but graphic representations – in his words, «architects do not make buildings; they make drawings of buildings».[4] While it may be true that the goal of many competitions, although certainly not all, is the realization of a building project it cannot be denied that the immediate product of design competitions are graphic proposals. These representations are consequential and the visual and illustrative choices contained in the proposals, including the selection of drawing types, the visual presence of urban context or inhabitants, the inclusion of the informal sketch, the presence of explanatory text and diagrams, and the degree to which prescriptive representation requirements have been modified or exceeded, are all meaningful reflections of the values and cultural contexts surrounding architectural competition.

4. Evans, Robin. 1997

Research Subject

The scope of this analysis is limited to national library competitions between the years 1980 and 2010. The choice of a single building type stabilizes one variable in this comparative analysis. As a civic institution with important patriotic identity, the national library has often inspired the organization of international design competitions and encouraged the publication of their results. The institution has also been relatively stable and long lived in urban centers and capital cities, enabling comparisons across time that are not available to other types of buildings such as airports or commercial centers, which are more profoundly impacted by changing land regulations and technologies. The specific competitions examined included all national library competitions in the period between 1980 and 2010 for which visual presentations are published either in print or electronically. Although there can be no assurance that every national library competition that took place in this period of time exists in the available research, selection bias on the part of the researchers was avoided by including all known competitions for the building type. For two of these competitions, the Stockholm City Library and the Deichmann Library, the submitted competition boards in their original and complete format have been published. These two competitions were analyzed quantitatively and compared as representatives of two different competition types (single-stage versus multi-stage and open versus invited entrant pools).

National library competitions investigated in this research include:

Date	*Project*	*City*	*Type*	*Winning Author*
1981	Bibliotheque de France	Paris	1-stage Restricted	Dominique Perrault
1989	Library of Alexandria	Alexandria	1-stage Open	Snohetta
1996	Kansai-Kan National Diet Library	Kansai	1-stage Open	Fumio Toki
2002	La Grande Bibliotheque du Quebec	Montreal	1-stage Restricted	Patkau Architects
2007	National Library of the Czech Republic	Prague	1-stage Restricted	Future Systems
2007	The Stockholm City Library	Stockholm	2-stage Open	Heike Hanada
2009	Kortrijk Central Library (Belgium)	Kortrijk	1-stage Restricted	REX
2009	Deichmann Library	Oslo	1-stage Restricted	Lund Hagem Arkitektur

The sources and graphic material available for each of these competitions varies. In most cases, the available images have been edited for publication, often emphasizing the winning proposals and removing individual drawings from the specific arrangements in which they were originally submitted. [5] Two competitions of the 1980's, the libraries of Paris and Alexandria, have been extensively published in volumes devoted to the results of the competitions.[6] A number of entries can also be found in the published material of the individual practices who submitted proposals. With two more recent projects, the libraries in Stockholm and Oslo, electronic access to the entire set of submissions in their original layouts is available, enabling extensive and quantitative analysis techniques not possible with edited material.[7]

Research Question

The research directly examines the source graphic material of competition submissions to identify trends in proportion and distribution of different drawing types. Although many competition submissions include written description, architectural competition communication is primarily visual and methods of analyzing these visual techniques are needed to understand its rhetorical power.

By treating the competition material as a representative example of architectural communication, the research identifies the evolution of representation techniques and visual characteristics across the studied period of time. In addition, the project examines and identifies the relationship between the types of representation and competition success of the design submissions independent of the building designs themselves.

In short, the work undertaken examines the subject of national library competitions to answer the question of how visual architectural rhetoric is evolving over time and to identify which combinations of visual technique are most persuasive to a competition jury.

5. Haan and Haagsma (1988). Haag and Haagsma cite availability of submission material as a strong influence on the content of the volume: «... the choices were somewhat arbitrary: one important factor was the availability of sufficient material from participants other than the winners. It was frequently found that the organizers of a competition had kept only the winning designs. Other entries were at best returned to their senders, but usually destroyed.»

6. Zagari, Franco. 1990.
Jamet, Dominique. 1989.

7. «Sveriges Arkitekter - Stockholm Public Library International Architectural Competition.» Sveriges Arkitekter - Förstasidan. 2 January 2010. <http://www.arkitekt.se/asplund>. HAV Eiendom AS. Web. 2 January 2010. <http://www.haveiendom.no>.

Research Methods

Three types of comparisons were directed to applicable subsets of the national library competition material.

I. The types and technologies of drawings included in competition submissions have evolved over time; a number of cultural and professional trends can be traced in these changes. *Submissions to similar competitions over time* highlight differences that reflect cultural changes in the production of design. For this analysis in which competition sites, briefs, architects, and availability of unedited content are variable, limiting the evaluation to national library competitions in urban environments provides common ground for cross-evaluation.

   The methodology first identified the initial appearance of a characteristic representation through a chronological survey of all available graphic information for the nine competitions included in study. With each identified characteristic, the presentations of the succeeding competitions were polled for recurrence. Repeated recurrence of these unique representations after their initial appearance is evidence of an evolution in architectural culture or technology.

   The methodology identified a number of distinctive presentation techniques. The use of color, tone drawings, and digital tools reflects the adoption of emerging technologies by architectural practitioner. The increasingly common appearance of the rough hand sketch, the exploded isometric projection, explanatory text and graphic diagrams, and even the human hand in competition presentations reflect the evolution of architectural design culture and the emerging importance, in contemporary culture, of the individual architect-author.[8]

II. The attraction of architects to competitions for significant cultural buildings, aided by use of invited competitions and the desire of authorities to attract architects with international reputations, presented the opportunity for a second type of analysis. Comparisons of *submissions authored by the same architect to similar competitions* at different points in their career have the potential to offer insight into the balance between designers persistent interests and the specific conditions of the site, problem and brief. However, the available comparisons are inconsistent and very limited in quantity. The data for this methodology is anecdotal and did not support conclusions of any evident pattern or trend.

III. Finally, evaluation of the *entries to a single competition* with regard to representation characteristics reveals significant divergence in presentation, especially between entries which won or were passed

8. Collyer, Stanley. 2004. In enumerating motives for participation in architectural competitions, Collyer notes that «citation [in a competition] can be enough to raise the profile of a firm so that it may later be seriously considered on a shortlist for a future project in that field.» The distinction between competition participation with the goal of achieving a building commission versus participating to raise the profile of the architect or architectural practice, and the contemporary shift toward the latter, should not be understated. The presence of the author in architectural presentation has mirrored this evolution.

to a second stage and the non-premiated submissions. This technique, applied across all of the entries, generates quantifiable data exposing a number of compelling conclusions. Often, the differences in the distribution or proportionality of presented information has been markedly different in the winning entry of a competition.

The types of drawings and representation selected by the entire body of competitors in a particular competition are influenced by the state of the current architectural culture. The differences between individual entries also provides insight into the desires of the judging panel. In addition to differences in the design proposals themselves, there are often substantial differences in the presentations of the premiated entries which only become apparent with methodical quantitative analysis.

Two contemporary competitions were analyzed in detail: the 2007 Stockholm City Library competition and the 2009 Deichmann Library competition for Oslo. The competitions represent different competition procedures. The Stockholm City Library was a two-stage competition, with six submissions chosen from over 1100 entries for participation in second stage. The Deichmann competition was a single stage including nine invited entrants in addition to ten entrants selected from a competitive prequalification. In each case, there is significant and telling differentiation in the graphic presentations of the successful submissions.

To compare the graphic submissions, the presentations were analyzed by qualitatively and quantitatively with the following technique. Each presentation was laid out at scale in its entirety and the constituent drawings were identified by representation type as well as whether each component was required by the completion brief. With the presentation graphics sorted by type, the relative area and distribution of each representation type reveals substantive differences between the submissions not directly related to the architectural design proposals themselves, and which are not immediately apparent in their original format.

I: Submissions to Similar Competitions over Time: Competitions document the evolution of representation trends and technologies

Evaluation of national library competition presentations identified four unique characteristics with varying prevalence over time. The four traits include the presence of the author, representations of project inhabitants, the explicit presence of illustration or reproduction technology, and use of exploded isometric diagrams. These characteristics each have a unique pattern of adoption and evolution over time.

For instance, this analysis shows that the *presence of the architect as author*, traditionally suppressed in design representation, grew very explicit into the 1980's before diminishing again after the turn of the 21st century. The hand of the architect is made evident through the inclusion of rough sketches and handwriting which are the recognizable product of a handheld pen or pencil, emphasizing the role of the architect as creator. In Fumihiko Maki's submission to the 1981 Bibliotheque de France competition, the axonometric diagram literally includes a representation of the creator's hand – a technique that has been repeated many times since in architectural presentation. The competitions of the 1980's and 90's are heavily seeded with hand sketches utilized for both diagrammatic explanations of concepts and perspectival illustrations. [see Appendix I-A]

However, in more recent competitions, including the 2007 Stockholm City Library competition and the 2009 Deichmann Library competition the use of the sketch and the appearance of the hand has been eliminated almost completely. Only one of the six finalists for the Stockholm City Library, the entry by Mauri Korkka, included a clearly hand-drawn sketch in the first phase of the competition, a drawing type which was subsequently eliminated in their second stage submission. The rise and fall of this technique parallels the cultural prominence gained by the «starchitect» persona in the final decades of the 20th century and the strong criticism that arose in the architectural community in response.

In contrast to the clear appearance and disappearance of the architect's hand in competition presentation, the increasing *presence of inhabitants* in architectural drawing indicates a trend toward increasing humanism, with isolated exceptions.

The winning submission to the 1981 Bibliotheque de France by Dominique Perrault included figures in the building sections, perspectives and model. In this competition, representing inhabitants was neither the rule nor the exception, with a number of entries including figures in the perspectives and sketches. Some presentations, such as that of OMA and Siza Viera, include no indication of figures in their submitted schemes. The 1989 Library of Alexandria competition and the 1996 Kansai-Kan National Diet Library competition are similar; figures are included in the occasional drawing, but the focus remains on the architectural forms and spaces rather than their use.

After 2000, there is marked increase in the representation of people in competition submissions. All of the premiated entries for 2002 Grande Bibliotheque du Quebec competition, with the notable exception of the Hadid presentation, includes scale figures in every published drawing, even the plans. Similarly, the 2007 Stockholm City Library competition Phase II submissions are heavily inhabited. Of the 48 boards submitted

by the six Phase II entrants, only six boards do not include human figures and the winning entry, by Heike Hanada, accounts for five of these six uninhabited boards. The successful entry in the Stockholm competition is noteworthy for the unique lack of included figures rather than their inclusion. The entries to the 2009 Deichmann Library competition are evenly and heavily populated with figures with little difference between invited and prequalified presentations or awarded and non-awarded presentations. [see Appendix I-B]

Similarly, the *expressive use of technology* in architectural representation the 1980's and its subsequent evolution can be traced in these competition entries, which are often opportunities for architects to experiment with illustration techniques. Reprographic techniques were the first major technological influence on design competition presentation. The use of color in presentation was common in competitions of the pre-reprographic era when original drawings were submitted for review. With the advent of monochrome photographic and diazo processes, the high-contrast nature of the available reprographic technology encouraged an emphasis on line drawings over toned or washed renderings and use of these black-and-white processes severely diminished the use of color. The impact of electrostatic reproduction (xerography), can be seen in the 1981 Bibliotheque de France competition through the use of high-contrast montage in the submissions of Dominique Perrault, Francis Soler, and Rem Koolhaas.

The national library competitions of the 1990's document the effect of digital representation tools in architectural presentation. The 1989 Library of Alexandria competition captures two practices explicitly presenting the products of digital models in their design presentation. The winning entry of Snohetta balances xerographic images of ancient Egyptian heiroglyphics with high-saturation color isometric views of a digital three-dimensional model. Similarly, a single perspectival image in the presentation of Rocco Yim Sen Kee is rendered as a highly-pixelized line drawing to call attention to the digital production method. The evolution of digital drawing tools in the ensuing seven years after the Alexandria competition, combined with the technological theme of the library program, led to the use of recognizably digital renderings by majority of the competitors in the 1996 Kansai-Kan National Diet Library.

While the use of digital tools has become ubiquitous in architectural production in the 21st Century, in national library competitions beginning with the 2002 La Grande Bibliotheque du Quebec, the overt expression of digital drawing production has diminished. Perhaps because digital production is no longer notable, presentations are often rendered to simulate the appearance of traditional techniques with extensive raster post-processing of views generated from digital models. For example, the Nicola Braghieri entry to the 2007 Stockholm City Library includes

considerably manipulated perspective images which replicate hand-crafted paper collage techniques such as surface texture and simulated distressed edges, and even adds a postage stamp in the corner to give the appearance of a postcard. The winning Heike Hanada entry, on the other hand, takes the approach of rendering interior perspectives in a single matte white surface without any indication of the building material color or textures. In these drawings, however, desaturated color from the background and from isolated interior elements is included, giving the images the appearance of photographs of physical models made from white cardboard. [see Appendix I-C]

The use of the *isometric diagram*, often exploded apart to illustrate components of the scheme as separated, has grown in competition presentation over time. This technique is well suited to explanatory analysis emphasizing both the individual components of a design as well as the relationships they have one to another. In fact, this technique is borrowed from machine assembly drawings developed during the industrial revolution to illustrate the dense and complex assemblies of many pieces typical of mechanical equipment. [see Appendix I-D]

The evidence from the body of national library competition submissions indicates that the exploded isometric drawing type, which appeared in isolated cases in the 1981 Bibliotheque de France competition, has grown explosively in popularity over time and shows no signs of abating. Of the Phase 2 submissions to the 2007 Stockholm City Library competition, 67% of the entries included isometric diagrams. 79% of the submissions to the 2009 Deichmann Library competition included these drawings, and notably, 100% of the pre-qualified entrants utilized this technique to explain their design ideas.

The appearance across time of the four identified traits of representation in national library competitions (the presence of the architect as author, indication of project inhabitants, the explicit presence of technology, and use of isometric diagrams) reflect trends in both architectural and national cultures. While the presence of the architects hand has since waned, it reflects a time in which popular culture celebrated the architect as a person over the design product. The representation of people in architectural presentation shows a sustained upward trend, but notable exceptions were often premiated indicating the possibility that countering a broad trend of might draw additional attention or give a sense of differentiation to a design presentation. The use of digital technology has only grown over time, but the explicit and visible celebration of technology in design presentation peaked in the 1980's when the use of these technologies was a differentiating factor and has since subsided significantly. The use of the isometric diagram, on the other hand, seems to be reaching a climax in contemporary practice.

Design competitions are contests between architects who share a distinct culture, including cultures of representation. The four traits traced across the body of national library competition presentation in this research illustrate the sometimes conflicting conditions architects face in both adopting common technological or representational techniques and trying to distinguish their design presentation in a competitive venue.

II. Submissions Authored by the Same Architect to Similar Competitions: Competitions record the evolution of the single practice or author

The comparison of entries to similar competitions undertaken at different times by the same architect or architectural practice provides insight to how the general trends interact with the specific attitudes of a particular architect. Only two examples of this condition exist within the available national library competition material.

The Future Systems entry for the 1981 Bibliotheque de France competition is remarkably similar to their 2007 winning proposal for National Library of the Czech Republic competition. Although the building organization and site relationships differ, the formal language of both the building and presentation is quite consistent despite the 25 year period elapsed between the two projects [see Appendix II].

Similarly, a comparison is possible between the winning Snohetta submission to the 1981 Library of Alexandria competition, a project undertaken at the very beginning of the architects careers, and their entry to the 2009 Deichmann Library competition on a site adjacent to their recently completed opera house in Oslo. Like the Future Systems example, over 25 years passed between the two projects, but this case shows considerable difference between the two projects, including in their graphic presentation.

With only two very divergent comparisons, no significant conclusions should be taken from this data. Nevertheless, with the increasing availability of full competition submission panels it is expected that the future will offer additional comparisons of this type and may provide a fruitful avenue for further examination.

III. Submissions to a Single Competition: Competitions contain evidence of representation bias

For two recent competitions, The 2007 Stockholm City Library competition and the 2009 Deichmann Library competition, the competition organizers have published the entire body of unedited submissions. The common contemporary requirement that electronic files be submitted along with physical boards, and the affordability of publishing large amounts of graphic information on internet servers rather than in print,

has created for the first time conditions in which the graphic material is available in its originally submitted format. Unlike the edited published material available in earlier competitions, the possibility of accessing the original layouts of the submitting architects allows new avenues of comprehensive and quantitative analysis.

A comparison of the six Phase II entries to the 2007 Stockholm City Library competition with the nine invited entries and the ten prequalified entries to the 2009 Deichmann Library competition show the equalizing influence of the competition brief, the relationship between competition success and conformity with the requirements of the brief, the use of inventive illustrative techniques to deliver unique or particular identity to a presentation, and the critical role of explanatory content in premiated competition submissions.

The competition brief typically specifies both the *amount and configuration of required submitted material*, as well as the required type and scale of drawings required to be included in the presentation. The goal of these requirements is to ensure certain critical content is available to the review jury in comparable formats and scales. The intent of restricting the presentation format is to equalize the presentations, allowing the project design differences to emerge by limiting the degree to which the illustration formats differ. In both the Stockholm and Oslo library competitions, as in most architectural competitions, the format controls only a portion of the allowed presentation surface; analysis of the submitted presentations isolating required representation from supplemental representation reveals considerable differences.

The Phase II Stockholm Library submissions utilize between 44% and 95% of their surface area for required representation, including orthographic plans and elevations, exterior and interior perspectives, and functional data. Of the six Phase II entries, the mean surface area devoted to required information for the top three entries is 82% (median 93%), as compared to a mean of 64% (median 73%) for the bottom three. Although the sample size available is inadequate for meaningful statistical analysis, the relationship between minimizing supplemental information and competition success is nevertheless clear. [see Appendix III-B]

Because the Deichmann Library competition had two distinct populations of architects in approximately equal numbers, invited and prequalified, analysis of the area devoted to required representation with these submissions provides additional insight. Although the relationship between a reduced amount of supplementary illustration and competition success identified in the Stockholm library competition is also true of the entire Deichmann Library submission pool (area devoted to required drawings by premiated entries is 70% mean and 71% median; area devoted to required drawings by non-premiated entries is 68% mean and 68%

median), in this case the prominant differences are between the invited and prequalified presentations. The ratio of supplemental representation to required representation is substantially higher in the prequalified pool than it is in the presentations of the architects whose existing reputations elicited an invitation for the competition. The prequalified entrants utilized the increased quantity of supplementary material to include more interior perspectives and more isometric projections, perhaps to distinguish their design presentations, while the invited entrants devoting the available space to more and larger versions of the required plans and exterior perspectives. [see Appendices III-C and III-D]

The relationship is clear but the cause can only be speculative. Using more of the presentation area for required drawings corresponds to successful evaluation by competition juries. The expectation that the review team judge the content of the presentation rather than the presentation itself could persuade reviewers to favor those entries which conspicuously avoid non-required representations.

The contemporary Stockholm and Oslo library competitions show a correlation between success and *unique or particular presentation characteristics*. The tendency to distinguish the design submission through illustration techniques is stronger in open competitions with bigger pools of entries, the case of the Stockholm competition, and with pre-qualified designers who must proactively pursue competition participation than with architects who were approached and invited by the competition organizers, as seen in the Oslo library competition.

Even when consistency is directly enforced by the competition brief, architects have found ways to deliver particular emphasis. A survey of one of the required second stage photomontages in the Stockholm City Library competition illustrates the impulse to influence the graphic presence of different aspects of the urban context, in this case aided by image manipulation software. The competitors modified the color saturation, contrast, number and locations of pedestrians and cars, removed trees, and even added weather effects to the sky to adjust the graphic emphasis between the existing building and the proposed addition. [see Appendix III-A]

The Oslo competition submissions also contain evidence of presentation techniques which distinguish the awarded entries from the field. Layout design, such as a unifying green band along the bottom of the Snohetta boards, or the two full board exterior rendering which bookend the Schmidt Hammer Lassen entry, are unique within the field of entrants. Similarly, the winning Lund Hagem entry is the only entry to superimpose drawings with rendered images, placed a white-line section and elevation over a highly saturated exterior rendering of the proposed project at sunset.

In addition to the minimization of non-required drawings and the use of distinguishing graphic techniques, there is a notable relationship between *increased use and distribution of explanatory text* and success in the Stockholm and Oslo library competitions. In the Stockholm competition, 14% of the winning entry by Heike Hanada is devoted to explanatory text and drawing labels. In contrast, the remaining entries devote an average of only 6.8% of the presentation area (4.0% median) to explanation. The winning entry also distributes the text in small blocks throughout the graphic presentation, allowing the design to be explained to the reviewer in smaller doses as the graphic material is studied. [See Appendix III-B]

The Oslo library competition also substantiates this relationship between high quantities of distributed text explanation and success. The winning Lund Hagem entry devotes 9.4% of the presentation to text, in contrast to the remaining entries, which devote 2.5% of the presentation area (2.1% median) to text. As with the winning Stockholm library example, this entry also distributes this text throughout the presentation, with 5 of the 6 boards including paragraphs of explanatory text. [See Appendices III-C and III-D]

There is, however, a marked contrast in the use of text explanation between the prequalified entrants and the invited entrants. The prequalified entrants, on average, deploy text over 4.1% of the presentation area (3.7% median). The presentation by the invited architects, on the other hand, use an average of only 1.4% of their presentation boards for text (0.0% median, with five of the nine entries foregoing text completely). The lack of explanation by the invited architect could be interpreted as a subset of their tendency to avoid representations that are not required in the brief – additional text explanation on the presentation boards, after all, is not a feature required by the brief. However, it appears that explaining the ideas and characteristics of the project through text aids in jury recognition rather than carrying the potential penalty associated with the use of supplemental graphic illustration.

Conclusions

The visual and illustrative characteristics of design submissions to national library competitions reveal significant differences in selection and technique which correlate to degree of success, status of the authors, and time period of production. These representations are consequential and may be usefully interpreted as a complement to the features of the design projects described in these graphic submissions.

The selection of drawing types, the visual presence of inhabitants, the inclusion of the gestural hand sketch, the quantity and distribution of explanatory text and diagrams, and the degree to which prescriptive representation requirements have been modified or supplemented, are all

characteristics which reflect the conditions and communicative intent of their creation. Except in the case of invited competition submissions by well-known architects, the positive relationship between text and competition success suggests that the written word is still an essential complement to visual representation in communicating an architectural argument. The observation that design submissions which focused on the drawings required by the brief were evaluated favorably implies that design juries are not persuaded by elaborate graphic exposition. In fact, it appears that the evaluators – perhaps being mindful of the admonition not to be persuaded by presentation – may actually be favoring those submissions which are not supplementing their submission with extra drawings.

With the increasing digital publication of original and complete competition presentations, the intermediate bias of a publication editor is eliminated and the potential to read meaning directly from the designers' presentations is enhanced. A number of other visual traits not undertaken in this study, such as color characteristics (hue, value and saturation), text content, and use of transparent rendering techniques hold promise for future analysis to further expose undiscovered patterns in the data of architectural presentation.

The visual and illustrative representations of national library competitions are not neutral practices; on the contrary, they are both meaningful and consequential. Descriptive and explanatory drawings, through their various types and media, possess latent qualities which have been strategically deployed by their architect-authors in the communication of a competition proposal. Representations are expressions of ideology and intent; their use imparts additional meaning and context to the design projects they seek to describe. By looking at, rather than through, the architectural presentation, additional insight into the practice, history, and rhetorical power of architectural representation is realized.

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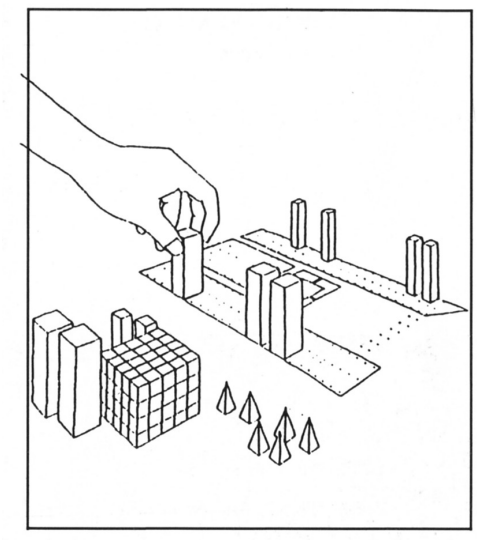
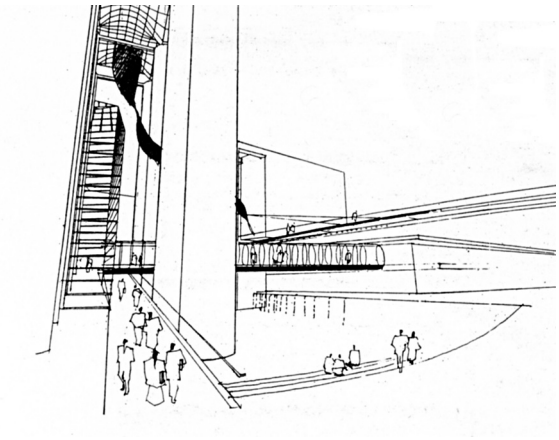
Separate documents

Appendix I - III

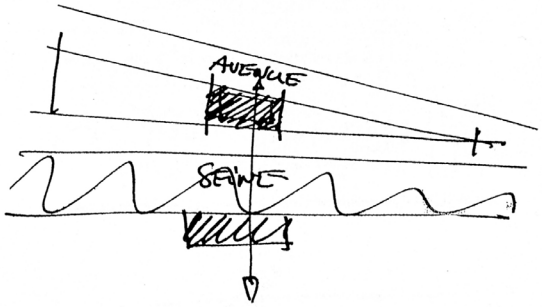
Appendix I-A Presence of the Author_



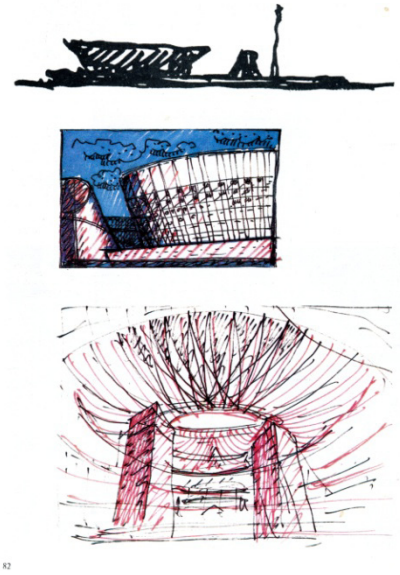
Biblioteque de France Competition: Fumihiko Maki Entry



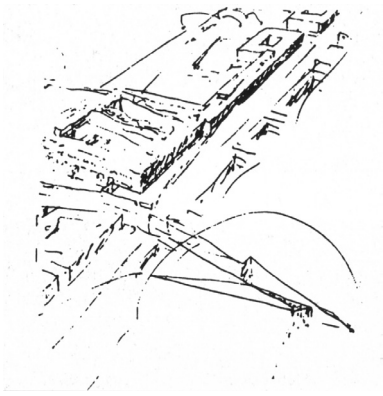
Library of Alexandria Competition: Rocco Yim Sen Kee Entry



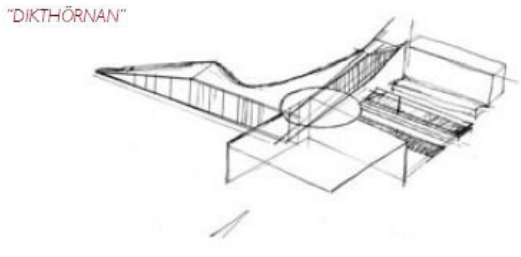
Biblioteque de France Competition: Dominique Perrault Entry



Library of Alexandria Competition: Manfredi Nicoletti Entry

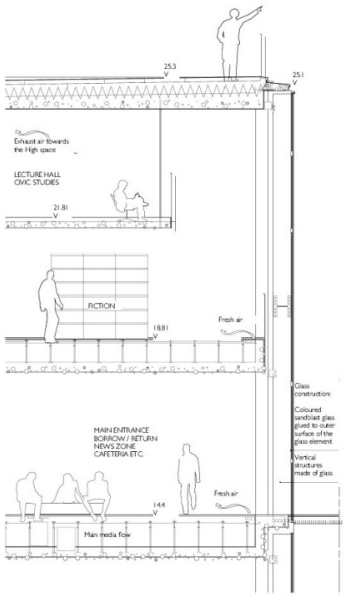


Biblioteque de France Competition: Alvaro Siza Entry

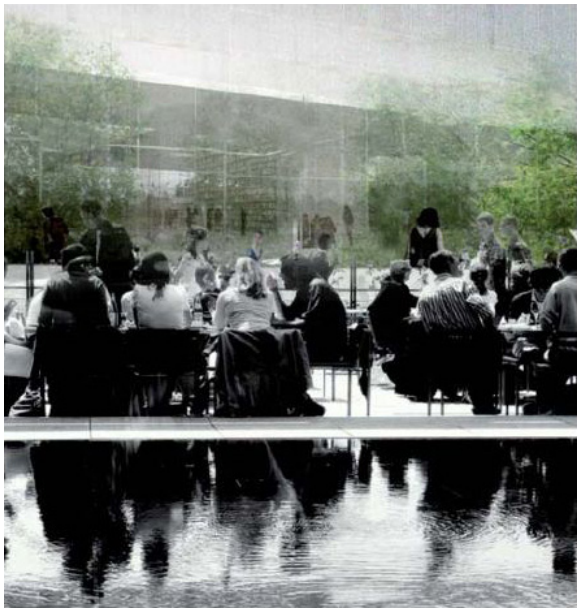


Library of Alexandria Competition: Mauri Korkka Entry

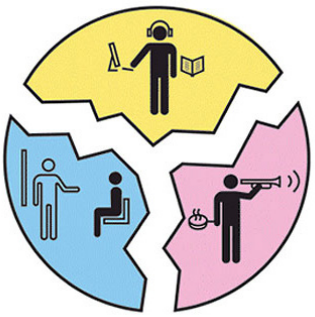
Appendix I-B Representation of Inhabitation



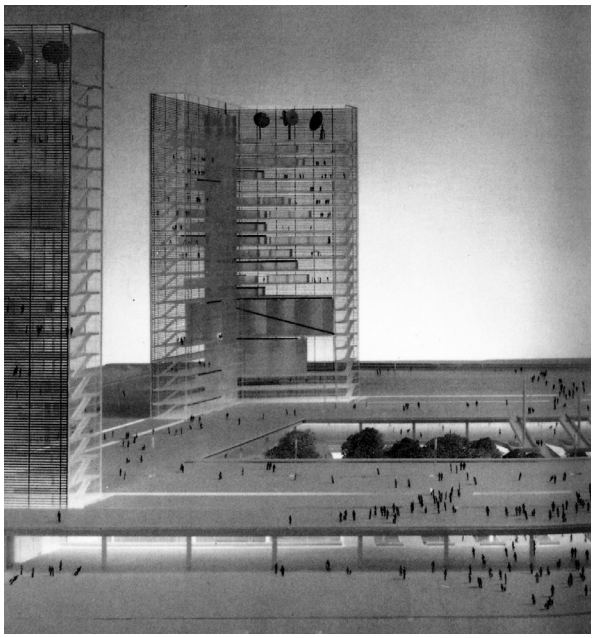
Stockholm City Library Competition: Mauri Korkka Entry



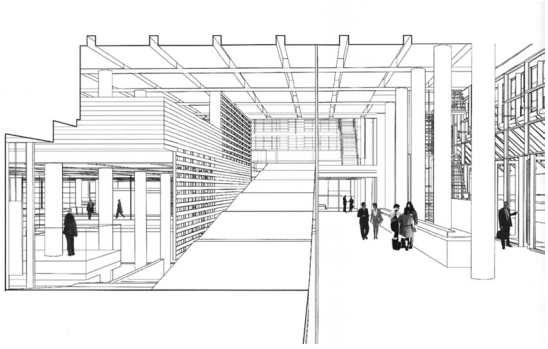
Deichmann Library Competition: Lund Hagem Entry



Kortrijk Central Library: REX Entry

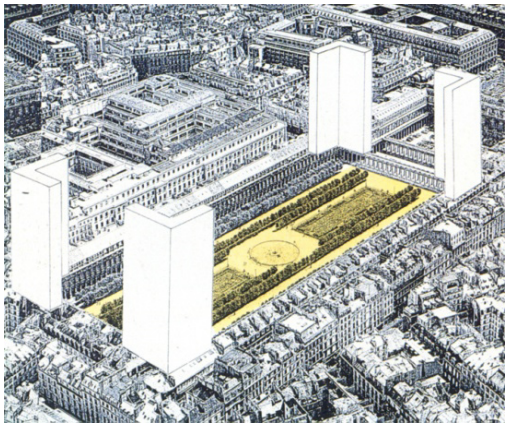


Biblioteque de France Competition: Dominique Perrault Entry

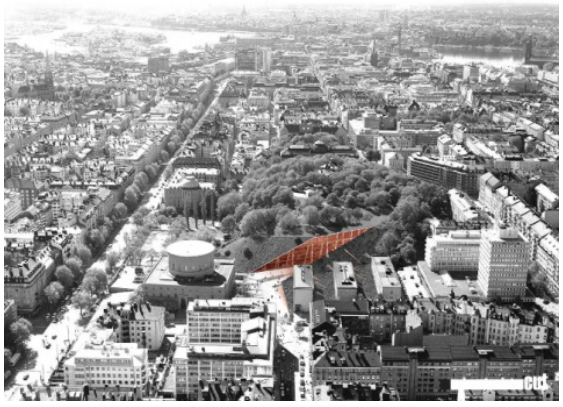


La Grande Biblioteque du Quebec: Patkau Entry

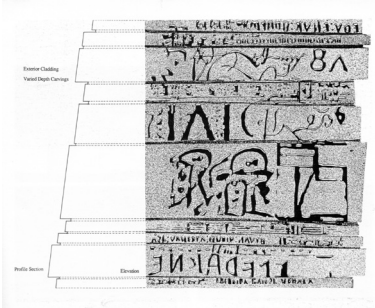
Appendix I-C Presence of Technology



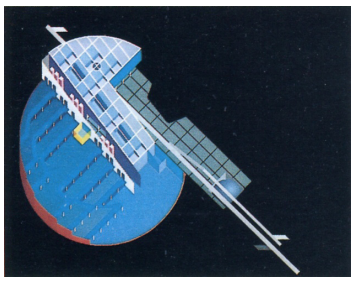
Biblioteque de France Competition: Dominique Perrault Entry

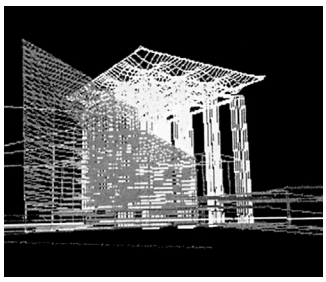


Stockholm City Library Competition: Paleko Arch Studija Entry

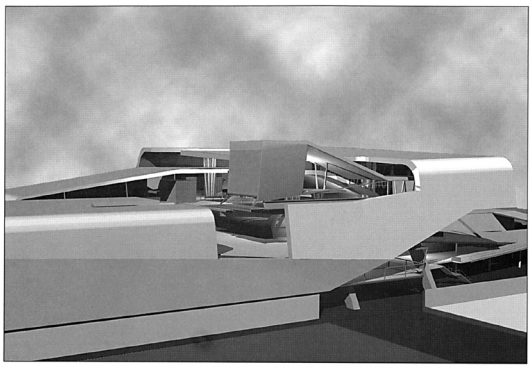


Library of Alexandria Competition: Snohetta Entry

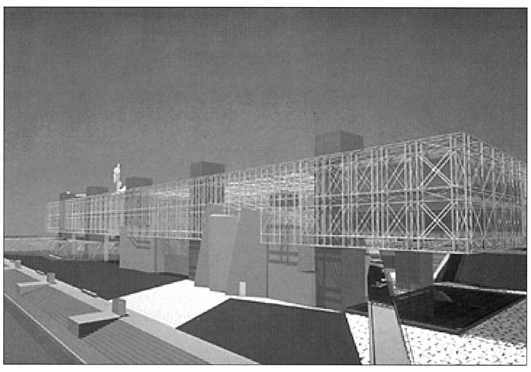




Library of Alexandria Competition: Rocco Yim Sen Kee Entry

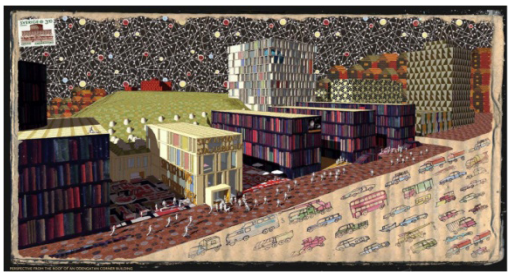


Kansaj-Kan National Diet Library Competition: Neil M. Denari Entry



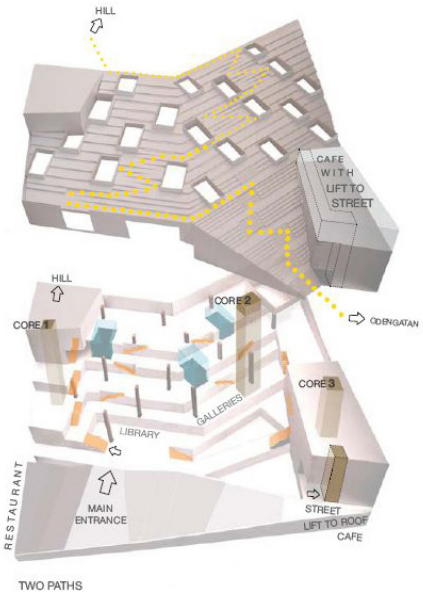
Kansaj-Kan National Diet Library Competition: Mario Arnaboldi Entry

La Grande Biblioteque du Quebec: Patkau Entry

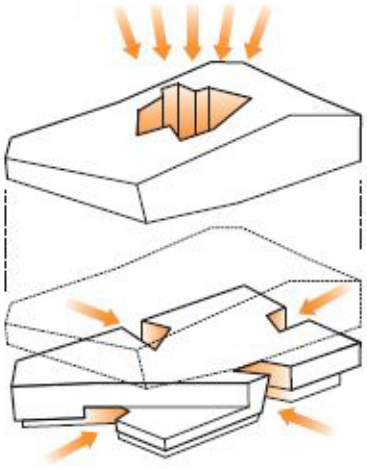


Stockholm City Library Competition: Nicola Braghieri Entry

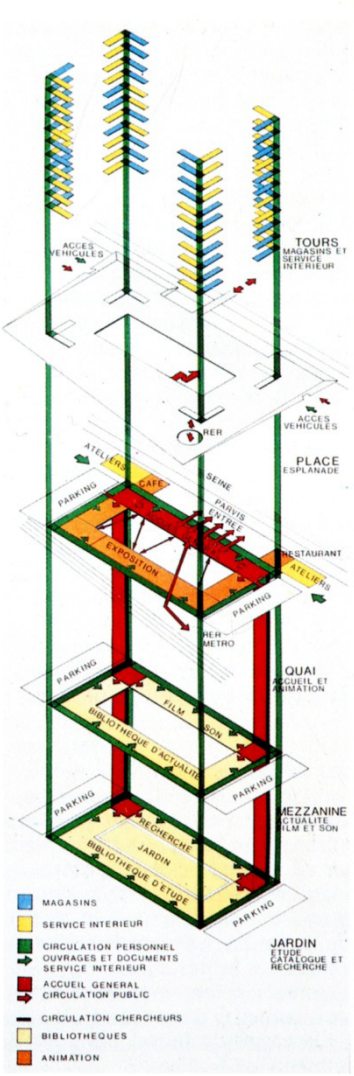
Appendix I-D Diagram and Exploded Axonometric



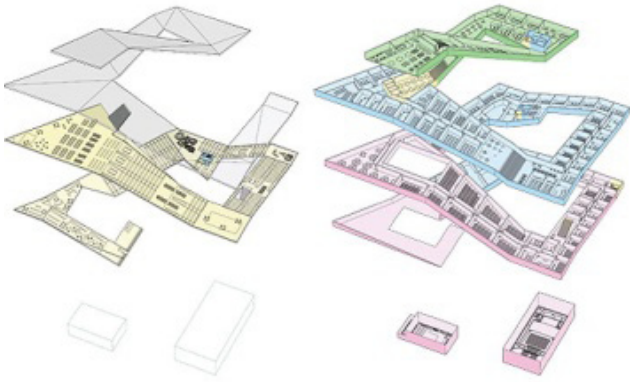
Stockholm City Library Competition:
Stephen Taylor Entry



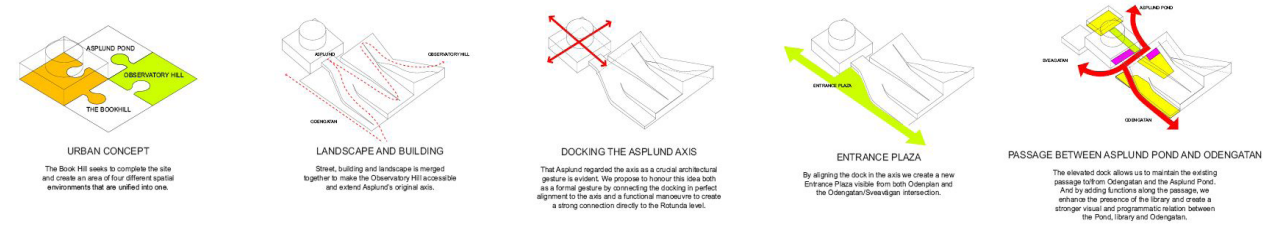
Deichmann Library Competition:
Lund Hagem Entry



Biblioteque de France Competition:
Dominique Perrault Entry



Kortrijk Central Library: REX Entry



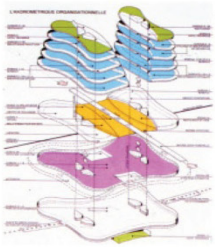
Stockholm City Library Competition: JAJA Architects Entry

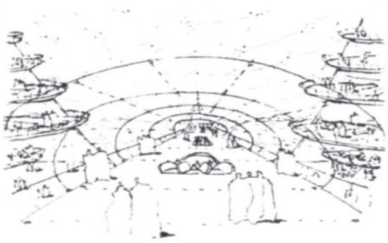
Appendix II Evolution of Single Author Over Time: Future Systems

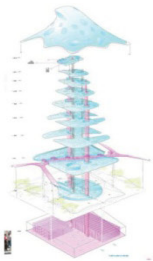
Two national library competition proposals separated by over 25 years by the London based practice of the late Jan Kaplicky and Amanda Levete show the influences of technology in graphic production. The higher fidelity of the later images is clear, but it is also evident that the form vocabulary, the types of representations, and the diagrams and model techniques were determined by the authors independently from the available presentation technology. One marked difference is in the use of color in the later proposed structure - a color palette once applied only to clarify the diagram has migrated to the surfaces of the proposed building.

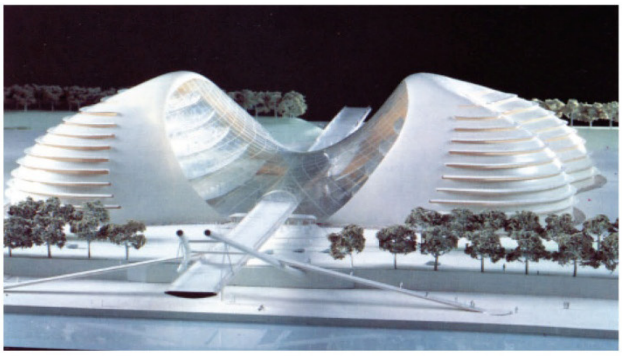
Bibliotheque de France, 1981

National Library of the Czech Republic, 2007









Appendix III-A Stockholm City Library Competition: Manipulation of required perspective view by Phase II entrants

Appendix III-B Stockholm City Library Competition: Representation Analysis

STOCKHOLM LIBRARY COMPETITION
PROJECT REQUIREMENTS (STAGE TWO)

Competition entries must be anonymous. All submitted drawings and other documents must have the entry's motto in the bottom right hand corner.

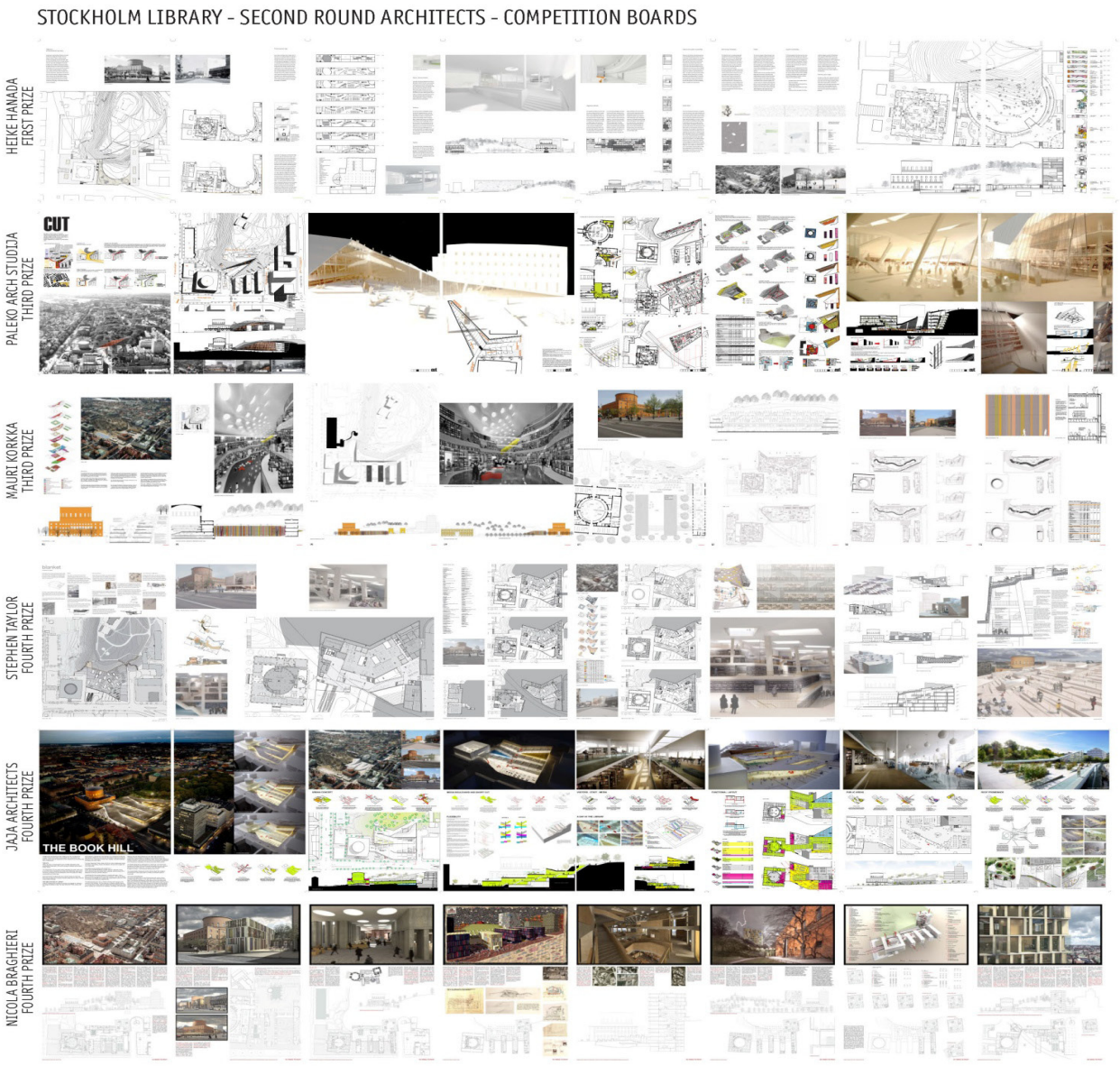
1. Entries must be presented on cardboard or similar in portrait A1 format (59.4 x 84.1 cm) and may include a maximum of 8 posters.
2. Three copies of the same posters, reduced to A3 format, must be submitted.
3. Three sets of CD-ROMs with pdf files of the posters and dwg files of the entries must be submitted. Be especially careful to remove any author information, etc., from electronic files to ensure complete anonymity is maintained.
4. Sealed envelope with the entry motto written on it and containing the project organisation.
5. Digital model
6. Physical model

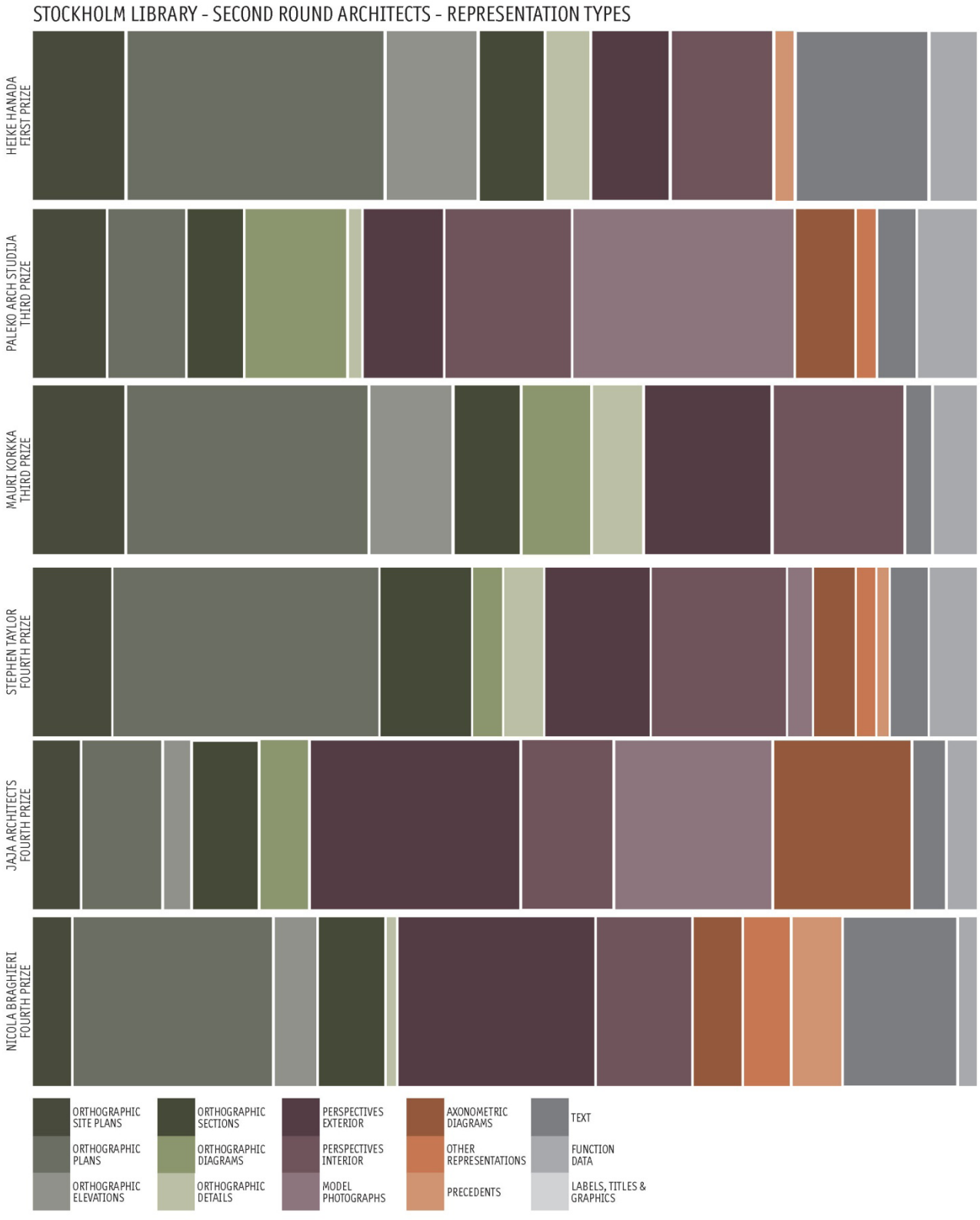
Other documents will not be assessed or exhibited.

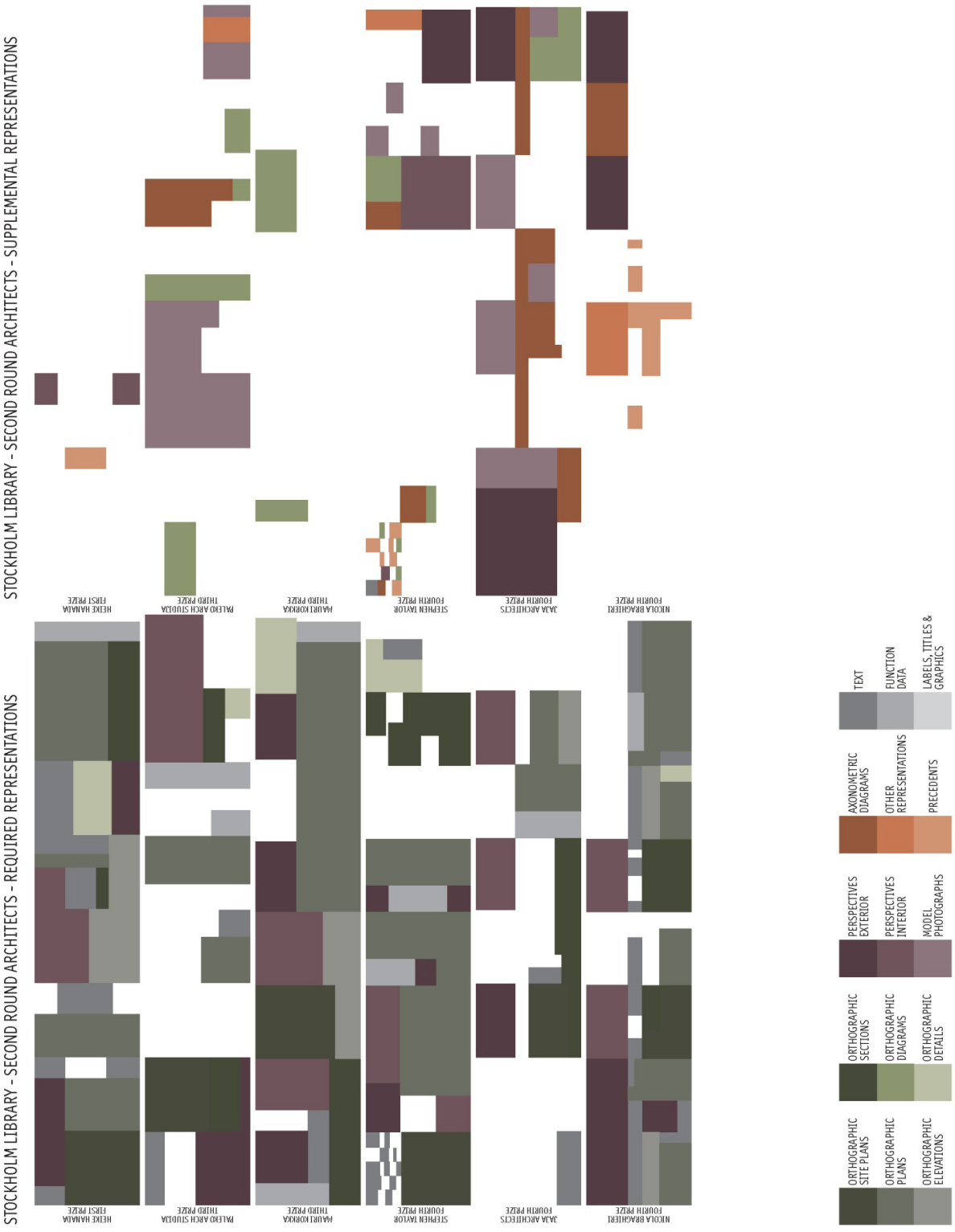
The competition entry must present the following:

1. Site plan on a scale of 1:500 showing the adjacent park areas
2. Relevant plans, sections and facades on a scale of 1:500 (levels should be shown on all plans, sections and at main entrances)
3. Entrance square(s) with the main entrance and connection to the Asplund building on a scale of 1:200
4. Representative cross-section from Odengatan towards the hill on a scale of 1:200
5. Exterior perspectives as a montage of issued photographs from photo points A and B, and C aerial photograph (see competition brief stage 1, electronic appendix 7), adding photo point P (from Hagagatan) to show the connection to the Asplund building
6. Two interior perspectives, one of which must show the arrival environment inside the main entrance. (indicating where they were taken from on the plan)
7. Relevant details from facades showing choice of material and design dimensions
8. Description of the proposal as regards its main architectonic concept, relationship to the Asplund building, the hill and the surroundings as well as logistics and power supply information.
9. Library functions, presented on a separate form with gross floor area (GFA) and main usable areas (MUA) areas and colour-coded for the different floors.
10. Presentation of a digital model of the entry in accordance with the attached CD-ROM with special instructions
11. Presentation of the proposal as a simple white physical model on a scale of 1:500

The proposals will be exhibited for the general public at several different locations. Authors should therefore present their entries so that two of the posters can be duplicated and used for these exhibitions displaying clear and brief information about the entry (e.g. perspective, site plan, brief description). The digital and physical models will also be used for exhibition purposes. The physical model should be made so that people who can not see the proposals can touch it.


STOCKHOLM LIBRARY - SECOND ROUND ARCHITECTS - COMPETITION BOARDS
HEIKE HANADA
FIRST PRIZE
PALEKO ARCH STUDIJA
THIRD PRIZE
CUT
MAURI KORKKA
THIRD PRIZE
STEPHEN TAYLOR
FOURTH PRIZE
JAJA ARCHITECTS
FOURTH PRIZE
THE BOOK HILL
NICOLA BRAGHIERI
FOURTH PRIZE


STOCKHOLM LIBRARY - SECOND ROUND ARCHITECTS - REPRESENTATION TYPES
HEIKE HANADA FIRST PRIZE
PALEKO ARCH STUDIJA THIRD PRIZE
MAURI KORKKA THIRD PRIZE
STEPHEN TAYLOR FOURTH PRIZE
JAJA ARCHITECTS FOURTH PRIZE
NICOLA BRAGHIERI FOURTH PRIZE
ORTHOGRAPHIC SITE PLANS
ORTHOGRAPHIC PLANS
ORTHOGRAPHIC ELEVATIONS
ORTHOGRAPHIC SECTIONS
ORTHOGRAPHIC DIAGRAMS
ORTHOGRAPHIC DETAILS
PERSPECTIVES EXTERIOR
PERSPECTIVES INTERIOR
MODEL PHOTOGRAPHS
AXONOMETRIC DIAGRAMS
OTHER REPRESENTATIONS
PRECEDENTS
TEXT
FUNCTION DATA
LABELS, TITLES & GRAPHICS


STOCKHOLM LIBRARY - SECOND ROUND ARCHITECTS - SUPPLEMENTAL REPRESENTATIONS
STOCKHOLM LIBRARY - SECOND ROUND ARCHITECTS - REQUIRED REPRESENTATIONS
HEIKE HANADA FIRST PRIZE
PALERO ARCH STUDIA THIRD PRIZE
MAURI KORKKA THIRD PRIZE
STEPHEN TAYLOR FOURTH PRIZE
JAJA ARCHITECTS FOURTH PRIZE
NICOLA BRAGHIERI FOURTH PRIZE
ORTHOGRAPHIC SITE PLANS
ORTHOGRAPHIC PLANS
ORTHOGRAPHIC ELEVATIONS
ORTHOGRAPHIC SECTIONS
ORTHOGRAPHIC DIAGRAMS
ORTHOGRAPHIC DETAILS
PERSPECTIVES EXTERIOR
PERSPECTIVES INTERIOR
MODEL PHOTOGRAPHS
AXONOMETRIC DIAGRAMS
OTHER REPRESENTATIONS
PRECEDENTS
TEXT
FUNCTION DATA
LABELS, TITLES & GRAPHICS

Appendix III-C Deichmann Library Competition, Invited Entrants: Representation Analysis

DEICHMANN LIBRARY COMPETIONION (OSLO)
PROJECT REQUIREMENTS FOR MATERIAL SUBMITTED

Competition entries must be anonymous and all material submitted must be labelled with an identification code motto. No kinds of information may be included that could compromise this anonymity. Entries should be presented in a clear and easily understood way.

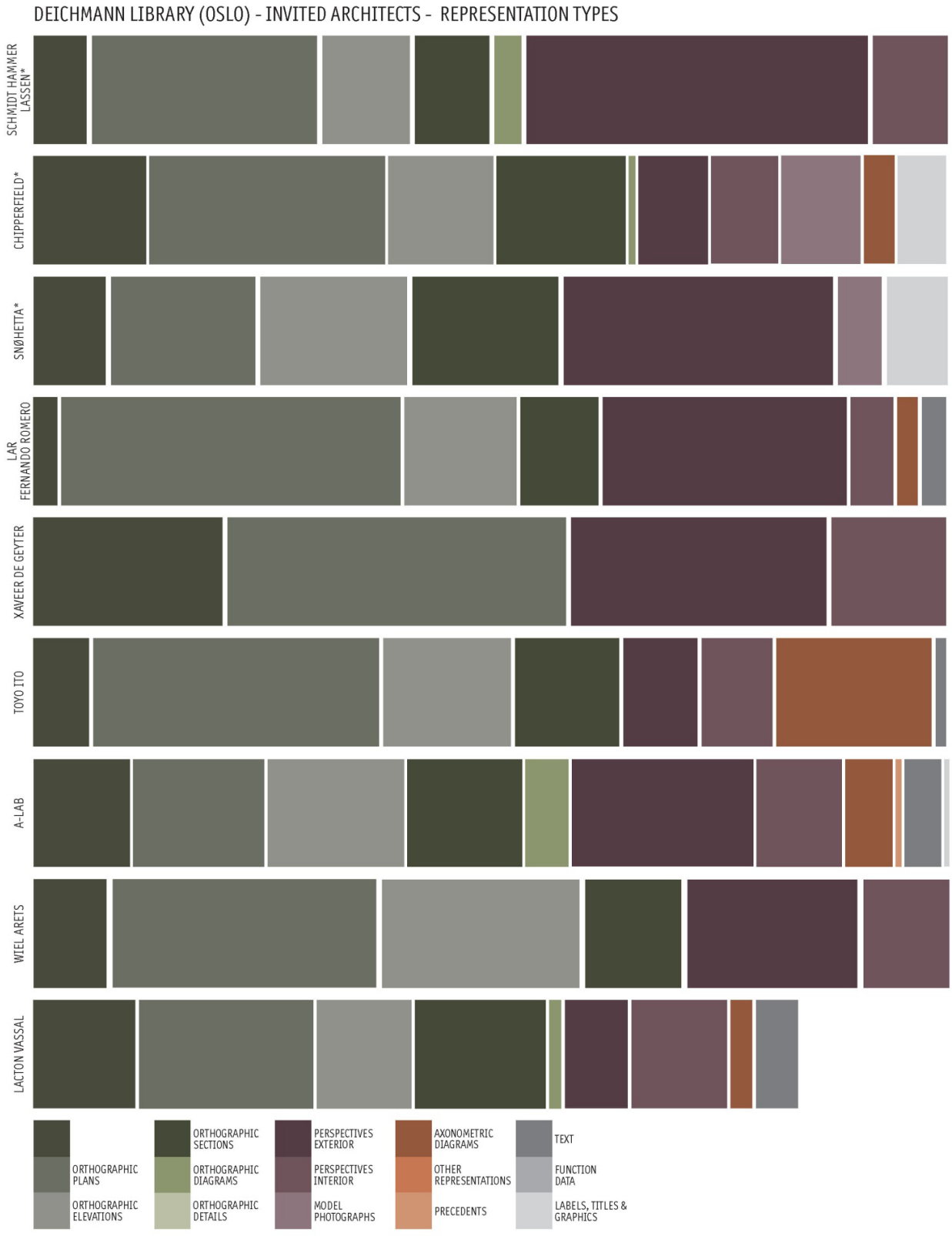
7.1 Boards
Entries should be mounted on boards. In addition to drawings in the given scale, each participant may choose to illustrate and explain the project by means of diagrams and sketches.

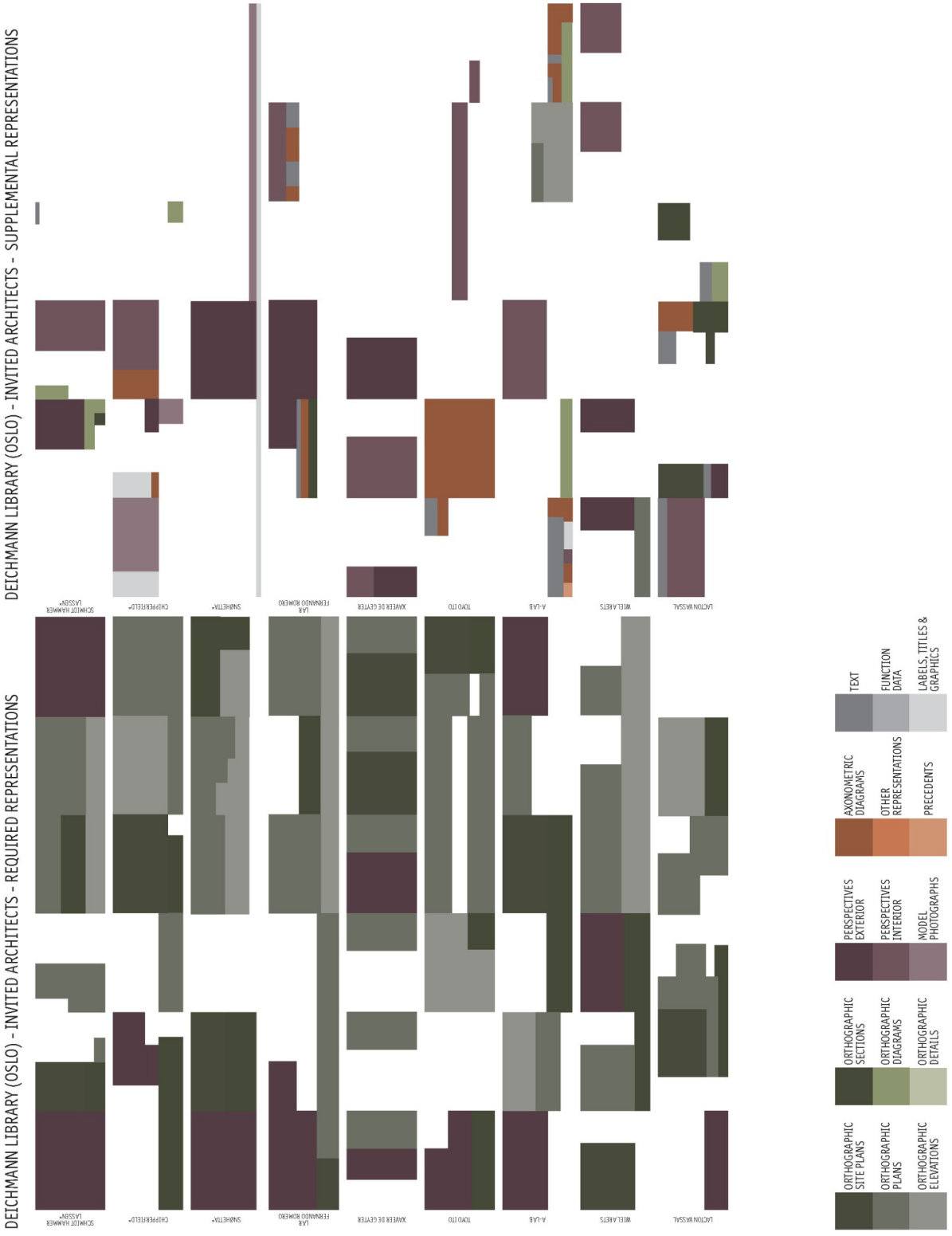
A maximum of 6 A0-size boards in short-edge format (118.8 x 84 cm, landscape) must be submitted. Their consecutive order must be indicated on the boards. The boards must as a minimum contain the following:

1. Site plan, scale 1:500. The plan must show the main floor (the ground floor) of all buildings within the Deichman Axis. It should show the access points for the various functions and explain internal connections within the competition area. The plan should also clarify connections with adjacent streets and squares and with buildings in adjacent blocks, and it should show how the public urban spaces interact with the library and the commercial part of the buildings.
2. Floor plans for the library, scale 1:200. Floor plans should explain schematically the library's main functions and their interrelationship.
3. Floor plans for other buildings, scale 1:500. Floor plans for the buildings not forming part of the library should show the distribution and organisation of the spaces proposed for commercial use.
4. Cellar floors, scale 1:500. Plans of all cellar floors must be submitted, showing the access points, delivery of goods, storerooms, parking spaces, etc.
5. Sections. At least two sections shall be submitted at a scale of 1:200, showing the library's internal structure and spatial composition. In addition, two sections should be presented at a scale of 1:500, showing the library's relationship with surrounding buildings.
6. Facades, scale 1:200. All the building's facades must be shown.
7. Perspectives. At least two perspectives should be submitted to illustrate the library in its urban context, one showing the project seen from the city and one showing the project seen from the seafront.
8. Site model, scale 1:500. The site model must be presented in A1 format. It should be built on the basis of the map sections distributed. In addition to the site model, participants may choose to submit a model of any one section of the entry, at an optional scale. The size of this model should not exceed 50 x 50 x 50 cm.

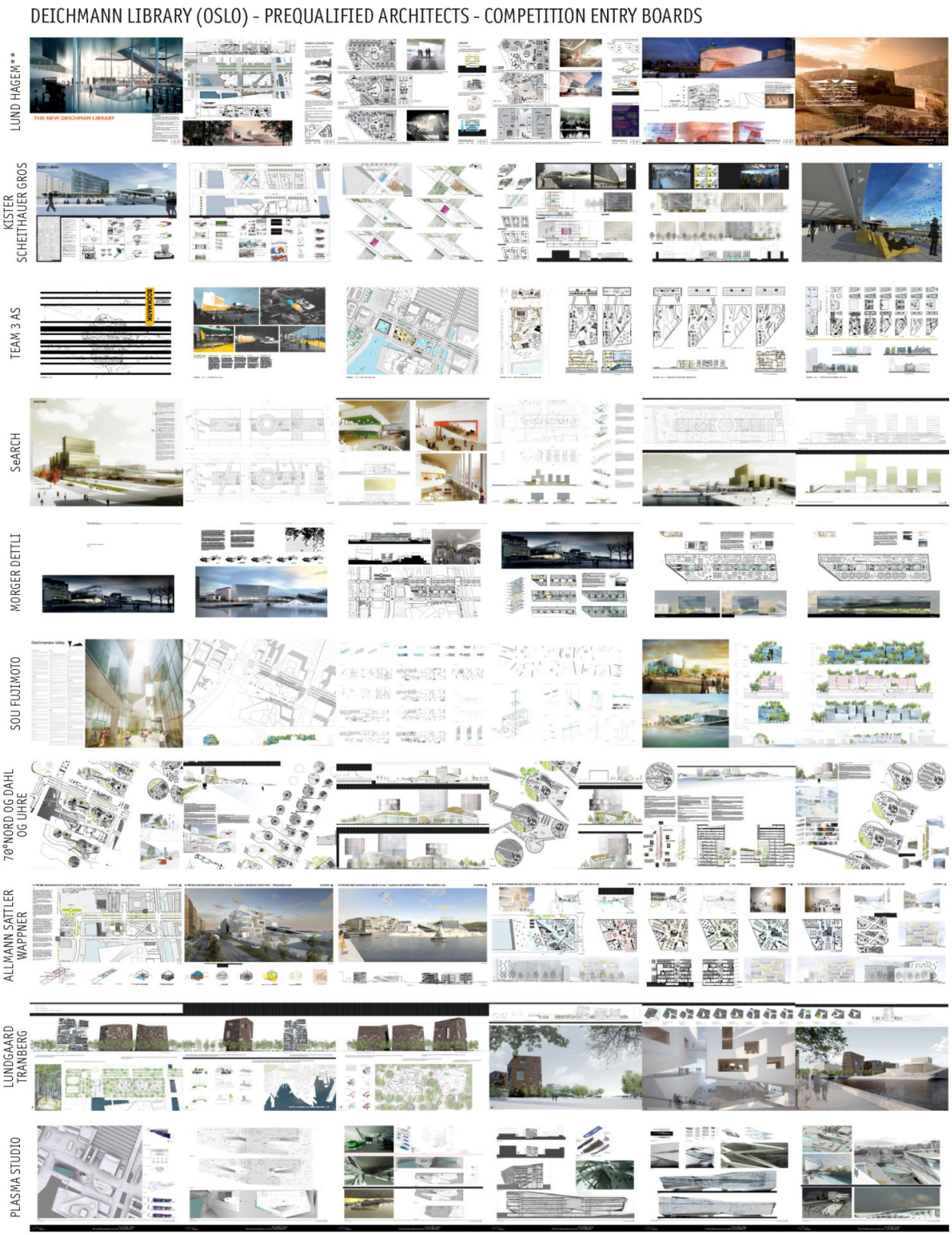
DEICHMANN LIBRARY (OSLO) - INVITED ARCHITECTS - COMPETITION ENTRY BOARDS

** WINNING ENTRY
* PLACED ENTRY

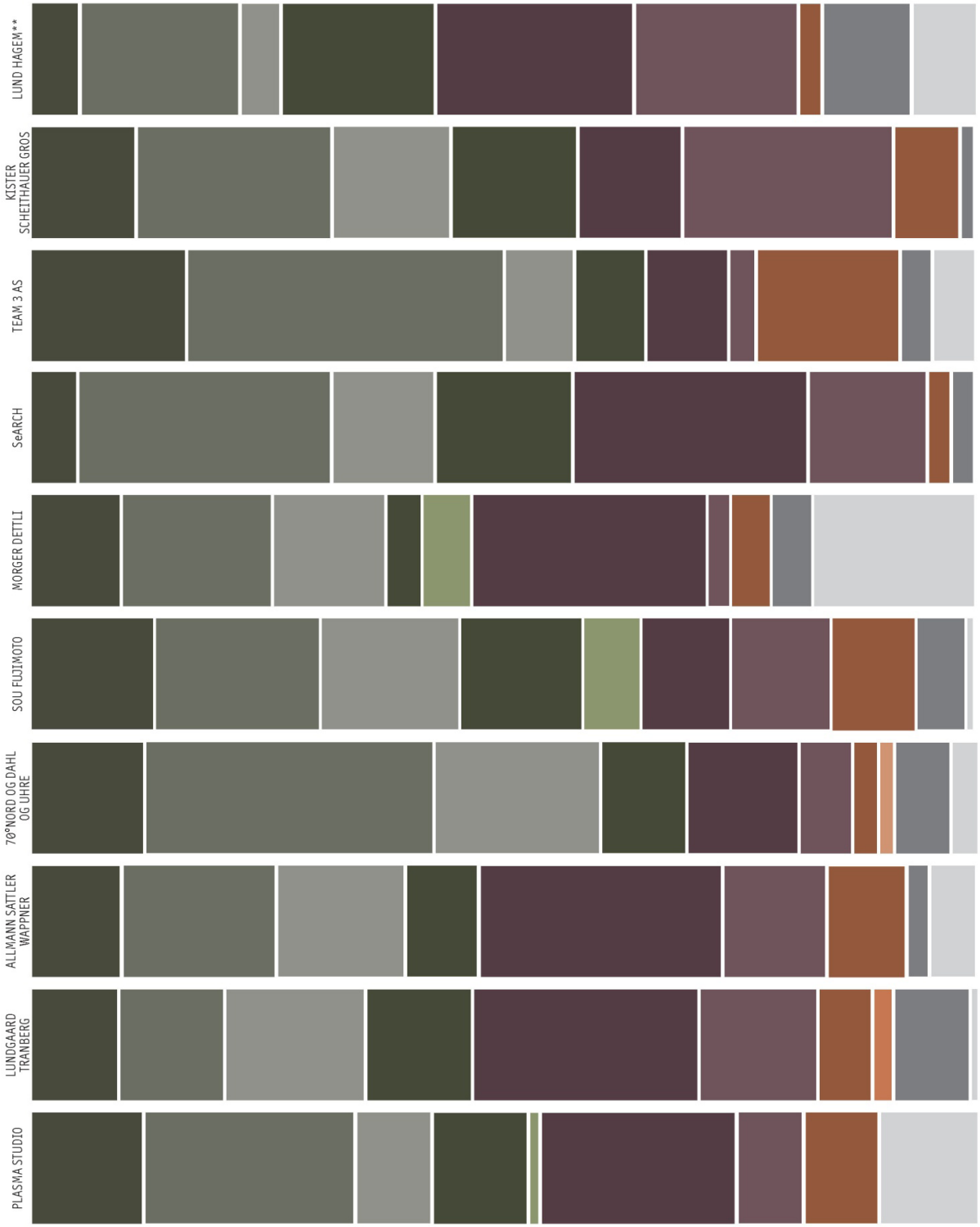

DEICHMANN LIBRARY (OSLO) - INVITED ARCHITECTS - REPRESENTATION TYPES
SCHMIDT HAMMER LASSEN*
CHIPPERFIELD*
SNØHETTA*
LAR FERNANDO ROMERO
XAVEER DE GEYTER
TOYO ITO
A-LAB
WIEL ARETS
LACTON VASSAL
ORTHOGRAPHIC PLANS
ORTHOGRAPHIC ELEVATIONS
ORTHOGRAPHIC SECTIONS
ORTHOGRAPHIC DIAGRAMS
ORTHOGRAPHIC DETAILS
PERSPECTIVES EXTERIOR
PERSPECTIVES INTERIOR
MODEL PHOTOGRAPHS
AXONOMETRIC DIAGRAMS
OTHER REPRESENTATIONS
PRECEDENTS
TEXT
FUNCTION DATA
LABELS, TITLES & GRAPHICS

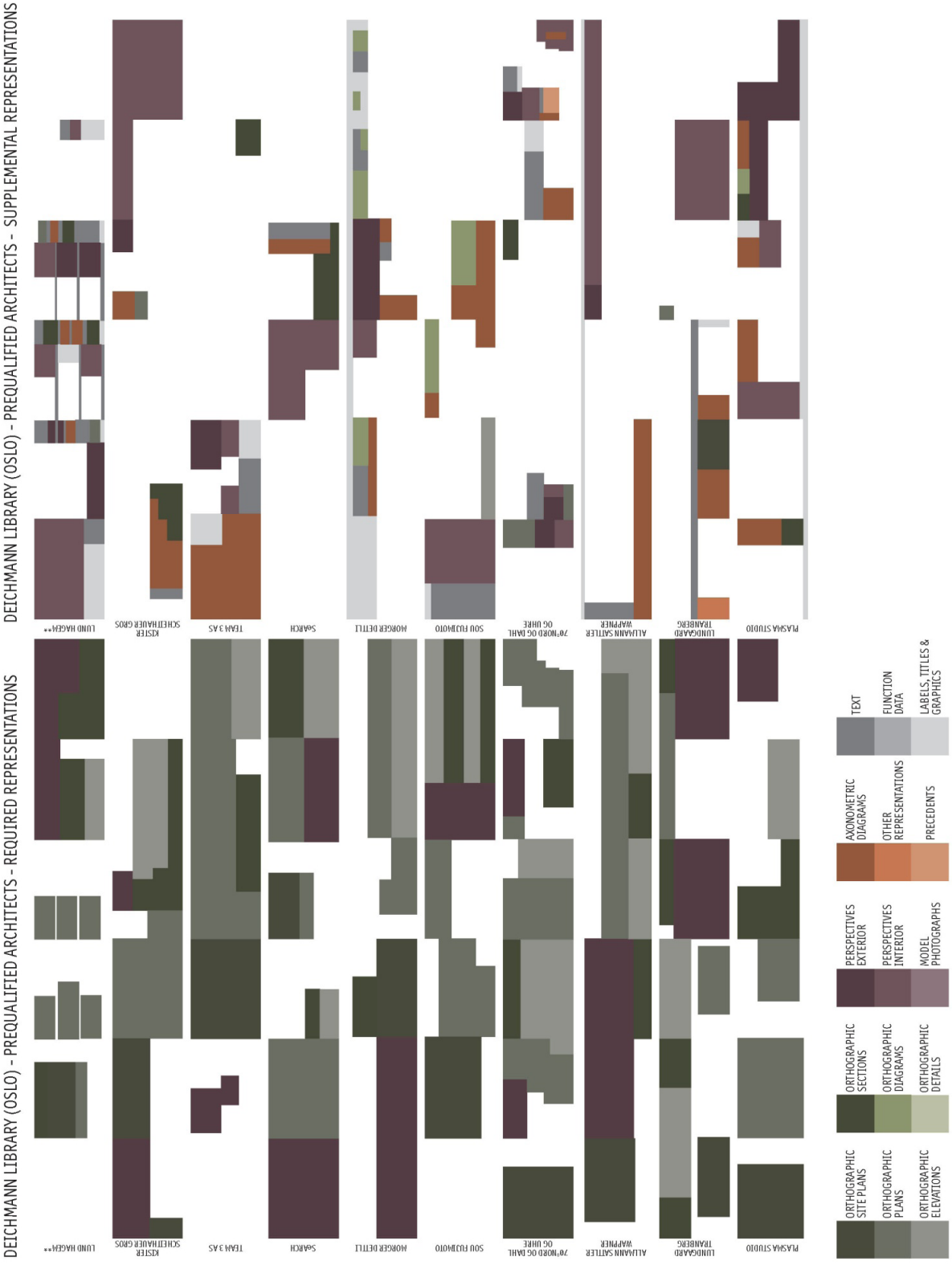

DEICHMANN LIBRARY (OSLO) - INVITED ARCHITECTS - SUPPLEMENTAL REPRESENTATIONS
DEICHMANN LIBRARY (OSLO) - INVITED ARCHITECTS - REQUIRED REPRESENTATIONS
SCHMIDT HAMMER LASSEN*
CHIPPERFIELD*
SNØHETTA*
LAB FERNANDO ROMERO
XAVEER DE GEYTER
TOYO ITO
A-LAB
MIEL ARETS
LACTON VASSAL
TEXT
FUNCTION DATA
LABELS, TITLES & GRAPHICS
AXONOMETRIC DIAGRAMS
OTHER REPRESENTATIONS
PRECEDENTS
PERSPECTIVES EXTERIOR
PERSPECTIVES INTERIOR
MODEL PHOTOGRAPHS
ORTHOGRAPHIC SECTIONS
ORTHOGRAPHIC DIAGRAMS
ORTHOGRAPHIC DETAILS
ORTHOGRAPHIC SITE PLANS
ORTHOGRAPHIC PLANS
ORTHOGRAPHIC ELEVATIONS

Appendix III-D Deichmann Library Competition, Prequalified Entrants: Representation Analysis



DEICHMANN LIBRARY (OSLO) - PREQUALIFIED ARCHITECTS - REPRESENTATION TYPES




DEICHMANN LIBRARY (OSLO) - PREQUALIFIED ARCHITECTS - SUPPLEMENTAL REPRESENTATIONS
DEICHMANN LIBRARY (OSLO) - PREQUALIFIED ARCHITECTS - REQUIRED REPRESENTATIONS
LUND HAGEM**
KISTER SCHEITHAUER GROS
TEAM 3 AS
SEARCH
MORGER DETTLI
SOU FUJIMOTO
70°NORD DG DAHL OG UHRE
ALLFANN SATTLER WAPPNER
LUNDGAARD TRANBERG
PLASMA STUDIO
TEXT
FUNCTION DATA
LABELS, TITLES & GRAPHICS
AXONOMETRIC DIAGRAMS
OTHER REPRESENTATIONS
PRECEDENTS
PERSPECTIVES EXTERIOR
PERSPECTIVES INTERIOR
MODEL PHOTOGRAPHS
ORTHOGRAPHIC SECTIONS
ORTHOGRAPHIC DIAGRAMS
ORTHOGRAPHIC DETAILS
ORTHOGRAPHIC SITE PLANS
ORTHOGRAPHIC PLANS
ORTHOGRAPHIC ELEVATIONS

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School of Architecture
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Austin, TX 78712

In teaching, research, and practice, Cisco Gomes believes that relevant architecture engages the circumstances of its physical and social environment. The materials and techniques of construction, the particularities of site, and the influence of design representation profoundly shape architectural production.

Cisco has maintained an award-winning practice, Gomes+Staub Architects, for over a decade [www.gomes-staub.com]. The work of Gomes+Staub has been published nationally and internationally, notably in 1000x Architecture of the Americas (Verlaghaus Braun, 2008), and has been presented in a number of lectures and exhibitions, including at the Duke University Museum of Art and the Audi International exhibition in Hannover, Germany.

Cisco has actively practiced as a registered architect in the United States since 1996 and also a licensed commercial building contractor. He has served as a juror for numerous design award programs at the regional, state, and local levels. Cisco has been recognized for his teaching with the School of Architecture Outstanding Studio Teacher Award, the Texas Exes Teaching Award, and membership in the UT Society for Teaching Excellence.

Biographical information

Jason Paul Haskins
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