STRUCTURAL TEMPLATE AND FORMATTING INSTRUCTIONS FOR IGLC PAPERS

Frode Drevland[[1]](#footnote-2), Eric Forcael[[2]](#footnote-3), Farook Hamzeh[[3]](#footnote-4), Mani Poshdar[[4]](#footnote-5), & Iris D. Tommelein[[5]](#footnote-6)

# Abstract

This paper describes how you should prepare your technical paper for submission, review, and inclusion in the Proceedings of the XXth Annual Conference of the International Group for Lean Construction (IGLCXX). Using this template and following these instructions is important: our proceedings must be easy to read and have a consistent, professional appearance. To ensure that your paper will conform to the required formatting, just modify this file by typing in your contents while erasing the remainder as you go, and apply the formatting provided in the Microsoft Word style sheet that is used to format this document.

Structuring papers according to this template will help you report clearly on your work. Correct formatting, including the use of provided styles and adherence to layout settings, allows the organisers to efficiently compile the proceedings and prepare papers for online posting on the IGLC website. ([Structural template and formatting instructions for IGLC papers](https://iglc.net/ForAuthors?view=StructuralTemplateAndFormattingInstructions)).

These instructions have been adopted to format this paper. Please follow them so that your submission will have the same look-and-feel as this paper.

# Keywords

Lean construction, template, formatting, instructions, references.

# Introduction

This paper's structural template and formatting instructions differ only slightly from the specifications we have used for previous proceedings of the Annual Conference of the International Group for Lean Construction (IGLC). The language for papers to be included in the proceedings is English; both UK English and American English are acceptable, but please select one and use it consistently in your paper.

If you are not yet familiar with style sheets, we encourage you to use this opportunity to learn how to use them. The Microsoft (n.d. -a) website and YouTube offer tutorials.

# STRUCTURAL TEMPLATE

## Document structure

Your document should be at most 12 pages long, including references. For papers over 10 pages, the last two pages (pages 11 and 12) must contain only references.

The first page is to include the paper's title (at most 90 characters, including white spaces), author(s) name(s), abstract (up to 200 words), and keywords. Please spell 'keywords' as one word. Provide up to 5 keywords for your paper by selecting at least two from the keyword list that is posted on the conference website. Under Page Setup, ensure that A4 is the paper size setting under the Paper tab.

Use footnotes to provide each author's professional title, affiliation, email address, and ORCID. Each author must have an ORCID; if you do not already have one, request one at [orcid.org](https://orcid.org/) (It is free of charge). The email addresses and orcids should be hyperlinks.

Most papers will start with an introduction and end with conclusions. The introduction should immediately follow the keywords, on the first page if possible. The conclusions must be followed by acknowledgments, if any, and then references.

## References

A significant body of literature exists to describe lean construction theory and applications as well as lean production in general. Make sure to build on that work (or critique it) and cite sources accordingly in the References section of your paper. Papers that do not at all relate to the existing lean construction literature will be rejected.

The references should be formatted using the author-date format according to APA Style, 7th Edition ([apastyle.apa.org](https://apastyle.apa.org/)). You may benefit from using a citation and reference management software program such as **Zotero**, **EndNote**, **RefWorks**, or **Mendeley**, or an online citation generator such as Citation Machine ([citationmachine.net/apa](https://www.citationmachine.net/apa)).

The References section must include all work cited in the paper, sorted in alphabetical order by author(s) and then by year. Some example references are cited in the following text, illustrating the following types of references: doctoral dissertation (Martinez, 1996), technical report (Tommelein & Ballard, 1997), and journal papers (Howell et al., 1993; Tommelein, 1998; Tommelein et al., 1999). The proceedings of the first three IGLC conferences were compiled into a book, edited by Alarcon (1997). All other IGLC papers are available online at [www.iglc.net/Papers](https://www.iglc.net/Papers).

## Different types of papers

Some authors will write papers on observations or case studies that are practice-based or experimental in nature. Such papers will be considered for review if they describe or explain an innovative or significant implementation of lean construction concepts and tools. They must contribute to the practice of lean construction from an industrial perspective, make a clear reference to lean concepts, and cite prior work. We ask that authors of such practice-oriented papers describe:

1. What questions were you trying to answer? What (if any) hypotheses are tested in your work?
2. What evidence is provided that was used to test the hypotheses?
3. Did your work enable you to answer your questions or draw conclusions about the hypotheses, or what further work is needed?

In contrast, other authors will write papers that are more opinion-based or theoretical in nature. We ask that authors of such papers describe:

1. What are the foundational elements of the theory you base your work on?
2. What are your hypotheses and background assumptions?
3. What seems to be true based on the theory?
4. How could the theory be tested through experimentation?

Moreover, some papers will report on constructive research (also called design science research, e.g., March & Smith, 1995). Characteristically, this kind of research pertains to creating and testing an artefact. We ask that authors of such papers describe:

1. What practical problem is being addressed?
2. What is the design and construction process of the artefact?
3. How is the artefact evaluated?

All authors should:

1. Reference previous work, including papers from previous IGLC conferences available at iglc.net/Papers. When citing them, use the APA 7th Edition format specified in this document.
2. Describe how that previous work is related to the presented work.
3. Describe the value of their work for practitioners as well as scholars.
4. State the limitations of the presented work.
5. Propose questions or hypotheses for future work – to be done by the authors themselves or others – and suggest how these may be tested.

Our IGLC conferences aim to advance both the body of knowledge and the practice of lean construction, so please respond to our requests.

# Formatting requirements

## Purpose and use

Technical papers submitted for presentation at the Annual Conference of the IGLC should not only present interesting technical material and be well written, but also be formatted properly. Formatting of technical papers is important to those interested in seeing proceedings that have a consistent appearance, which in turn makes it easier for readers to at least skim through all texts. We next present the formatting instructions for authors wishing to submit a paper for the forthcoming Conference.

## Measurement units

Our standard is to use metric units. Should you wish to use US or other units, please list their metric equivalent first and then your units in parentheses.

## Word processor

### Document File Type

Prepare and submit the final version of your paper as a Microsoft Word (Word, in short) document (.docx file extension).

The editors of the proceedings reserve the right to make minor editorial changes to papers, following these specifications, to make them better suited for printing. Therefore, you must submit a stand-alone Word document with all figures embedded and not a file in .pdf or other file format. The editors will post-process your paper to produce a .pdf file in color for online posting.

### Page Setup

You must use the page setup of this template document exactly as-is, including:

* Page size
* Page rotation
* Page margins
* Header and footer texts

A change to any of these may be a reason for the editors to reject your paper.

## Styles

'Styles' have been defined and are used in this document. Please apply them to format all your text as well. Use only the styles in this template. Do not manually change any text's font, font size, or other characteristics. Do not alter any style definitions.

If you are not familiar with styles in Microsoft Word please follow tutorials available online (Microsoft, n.d. a, b) or seek assistance from your organization's IT support. Learning to use styles and other Word features now will save you a lot of time in the future.

## Styles – Headings

The Heading style specifications are:

* 'Title' is used only for the paper's title
* 'Heading 1'
* 'Heading 2'
* 'Heading 3'

Avoid using further subheadings and note that, contrary to the text paragraphs that are 'Justified,' heading styles are 'Aligned Text Left' to prevent exaggerated spacing when a heading is longer than one line.

### Styles – Figures and Tables

The Figures and Tables style specifications are:

* **Figures** use style 'Figure' with format 'Paragraph' then 'Line and Page Breaks' set at 'Keep with next.'
* A **figure caption** is placed below the figure and centered on the page. Use the style 'Figure Caption.'
* **Text in a table** should be formatted using the 'Table heading' style for the table's heading, and the 'Table body' style for all other text (it is acceptable to left-align, center, right-align, or justify this text).
* A **table caption** is placed above the table and centered on the page. The style to use is 'Table caption.'
* Tables should be kept to one page. Do not allow rows to break across pages. If needed, split a multi-page table into smaller ones, each of which fitting on one page and labelled with its own caption and table heading.

### Styles – Body

The Body style specifications are:

* **'Authors'** is used (only) for formatting the authors' names under the title of the paper.
* **Body text paragraphs** following headings, figures, tables, bullet lists or quotes shall be formatted with the style 'Text First.'
* **Subsequent paragraphs** following directly after a text paragraph shall be formatted with the style 'Text Running.'
* **Quotations** (i.e., direct excerpts from other sources) shall be placed in double quotes, followed by the reference and page number(s).
* **Numbered or bulleted lists** should be formatted with 'List Numbered' or 'List Bullet.' The paragraph following a list is in 'Text First' format.
* **Footnotes** to detail an author's affiliation(s) on page 1 shall be formatted with the style 'Footnote Text.'
* **References** at the end of the paper shall be formatted with the style 'References.'

## Extra line breaks

Note that there should be no extra line breaks or empty lines between paragraphs in the paper. If the paper is formatted correctly using the pre-defined styles, there will be no need to add extra line breaks. Thus, if you see the need to add extra line breaks you have likely not applied the styles correctly.

You will see paragraph markers when you set Word to 'Show tab marks'. You can see which styles have been applied by looking at the left-hand margin when you view your file in Outline or Draft mode, provided you have set the file's Option > Advanced > Display with a 'Style area pane width…' to 3 cm or so.

## Figures and tables

### Placement

Each figure or table should follow the paragraph that first mentions it. Ensure that each figure or table caption fits on the same page as the figure or table it refers to. Once you have edited your paper (admittedly, this is an iterative process), you may need to move text towards the start of the paper to use white space left by Word, and thus move figures and tables to the subsequent page. In any case, figures and tables should follow their first mention in the text.

When you insert a figure in the text, ensure the figure's wrapping style is 'In Line with Text' and then apply the paragraph style 'Figure' to the figure. Do not lay it out with 'Behind text' or 'In front of text' text wrapping (consult Microsoft (n.d. a) to learn about wrapping styles).

### Use of Color

Figures and tables in the paper may be in color, but please ensure that they are also readable in black-and-white, since a reader may print your paper in black-and-white only.

### Figure Requirements

* Acceptable image file types are Joint Photographic Experts Group (using file extension .jpg or .jpeg), Encapsulated Postscript (.eps), Portable Network Graphics (.png), and bitmaps (.bmp).
* Drawings made using lines, boxes, text, etc., within Word cannot be reproduced effectively, so please do not make drawings using Word.
* To ensure print quality, images should be of at least 1,800 pixels wide if they are full-page width or 900 pixels wide if they are half-page width.
* It is preferred that figures are sized to match the full-page width (e.g., Figure 1), or to match the half-page width so you can arrange them side by side to save space if needed.



Figure 1: The figure is an illustrative example only (adapted from Tommelein et al., 1999)”

### Table Requirements

Tables should have a thick top and bottom border, a thin border under headers and generally no vertical borders. Table 1 illustrates these points. The table style 'IGLC table style' will format your table accordingly.

Table 1: Variability of available dies (Table 1 in Tommelein et al. 1999)

|  |  |
| --- | --- |
| Type of Die | Numbers on Faces |
| A | 5, 5, 5, 5, 5, 5 |
| B | 4, 4, 4, 6, 6, 6 |
| C | 3, 3, 3, 7, 7, 7 |
| D | 2, 2, 2, 8, 8, 8 |
| E | 1, 1, 1, 9, 9, 9 |

# Submission

## Anonymizing paper for review

All IGLC papers will go through a double-blind peer review process and authors will be offered feedback to improve their paper. To allow for a double-blind review, authors should not reveal their identities upon their paper's first submittal or resubmittal during the review process. Instead of listing names and affiliations on page 1 or in any header, put in as many XXXXXX placeholders as you need to ensure that the paper will not exceed its page limit when you prepare the camera-ready version.

Anonymity should be maintained during the review process: (1) upon first submission for review and (2) after peer-review feedback has duly been taken into account, upon submission of the authors' improved paper for final review. The conference organizers will then notify the authors whether their paper has been accepted. Once a paper has been accepted, authors should add their full name and affiliations as well as verify once more that their paper is formatted according to this template with specifications, before submitting their final camera-ready paper.

## DOI number in header

Before submitting your camera-ready paper, please replace the XXXX in the DOI in the first-page header with the id-number of your paper as found in the conference management system, padded with a leading 0. The example shown in Figure 2 has id-number 100, and you should thus replace the XXXX with 0100, so that the completed DOI link reads doi.org/10.24928/YEAR/0100.

Graphical user interface, text, application, email

Description automatically generated

Figure 2: ID number of paper in the ConfTool conference management system

## Where to submit

Authors must submit their work in Word document format (.docx) through the conference management system linked on the conference website. For assistance with your submission, please get in touch with the conference's technical committee at the email address stated on the conference website.

Note: You must also submit a plagiarism report to accompany your paper, for example using Turnitin. Similarity report should not reveal excessive similarity or full sentences taken from another source.

# CONCLUSIONS

The instructions presented here have been used to format this paper. After you have formatted your paper accordingly, it should have the same look as the paper presented here. The proceedings editors will appreciate your following these instructions. They may return your paper for correction or reject it if it does not conform to these formatting requirements.

# Acknowledgments

We would like to thank in advance all authors who follow these instructions diligently. We would also like to thank those who have prepared past years' IGLC conference templates that we could build on. Please contact the scientific committee for the conference you are submitting the paper to, if anything needs additional clarification.

# References

Alarcon, L. F. (Ed.). (1997). Lean construction. A. A. Balkema.

Howell, G. A., Laufer, A., & Ballard, G. (1993). Interaction between subcycles: One key to improved methods. Journal of Construction Engineering and Management, 119(4), 714–728. <https://doi.org/10.1061/(ASCE)0733-9364(1993)119:4(714)>

March, S. T., & Smith, G. F. (1995). Design and natural science research on information technology. Decision Support Systems, 15(4), 251–266. <https://doi.org/10.1016/0167-9236(94)00041-2>

Martinez, J. C. (1996). STROBOSCOPE: State and resource based simulation of construction processes [Doctoral dissertation, University of Michigan]. Deep Blue. <https://hdl.handle.net/2027.42/104987>

Microsoft. (n.d.-a). Apply styles. Retrieved December 21, 2020, from <https://support.microsoft.com/en-us/office/apply-styles-f8b96097-4d25-4fac-8200-6139c8093109>

Microsoft. (n.d.-b). Word options (advanced). Retrieved December 13, 2022, from <https://support.microsoft.com/en-us/office/word-options-advanced-1b3d9436-bc3a-4c5d-a55f-17450e701663>

Tommelein, I. D. (1998). Pull-driven scheduling for pipe-spool installation: Simulation of lean construction technique. Journal of Construction Engineering and Management, 124(4), 279–288. <https://doi.org/10.1061/(ASCE)0733-9364(1998)124:4(279)>

Tommelein, I. D., & Ballard, G. (1997). Coordinating specialists. University of California, Berkeley. <https://p2sl.berkeley.edu/wp-content/uploads/2016/03/Tommelein_Ballard-1997-Coordinating-Specialists-CoordSpecTR97-8.pdf>

Tommelein, I. D., Riley, D., & Howell, G. A. (1999). Parade game: Impact of work flow variability on trade performance. Journal of Construction Engineering and Management, 125(5), 304–310. <https://doi.org/10.1061/(ASCE)0733-9364(1999)125:5(304)>

# Appendix A. Style Quick Reference

The following table summarizes the main styles used in the IGLC paper template. Authors should apply these styles consistently and avoid direct formatting.

Table 2: Template text styles

|  |  |
| --- | --- |
| Style Name | Notes |
| Title | For paper title only. |
| Authors | For author names below title. (Anonymise author names for blind version.) |
| Heading 1 | Section heading. |
| Heading 2 | Subsection heading. |
| Heading 3 | Subsubsection heading. |
| Text First | For the body text paragraphs following headings, figures, lists or block quote |
| Text Running | For subsequent paragraphs, i.e. body text paragraphs following paragraphs formatted with text first of text running |
| Block Quote | For longer quotes where the entire paragraph is a quote |
| List Numbered | For numbered lists |
| List Bulleted | For bullet lists |
| Figure | Apply to inserted figures to ensure correct spacing above and below |
| Figure Caption | Place below figures. |
| Table Caption | Place above tables. |
| Table Heading | For heading text in tables |
| Table Body | For body text in tables |
| References | For the reference list. (APA 7th edition format.) |
| Hyperlink | To indicate a hyperlink |

1. Associate Professor, Norwegian University of Science and Technology (NTNU), Trondheim, Norway, [frode.drevland@ntnu.no](mailto:frode.drevland@ntnu.no), [orcid.org/0000-0002-4596-1564](https://orcid.org/0000-0002-4596-1564) [↑](#footnote-ref-2)
2. Professor, Facultad de Ingeniería, Universidad San Sebastián, Concepción 4081339, Chile; [eric.forcael@uss.cl](mailto:eric.forcael@uss.cl), https://orcid.org/0000-0002-3036-4329 [↑](#footnote-ref-3)
3. Professor, Civil and Environmental Engineering Department, University of Alberta, Edmonton, Canada, [hamzeh@ualberta.ca](mailto:hamzeh@ualberta.ca), [orcid.org/0000-0002-3986-9534](https://orcid.org/0000-0002-3986-9534) [↑](#footnote-ref-4)
4. Associate Professor, School of Future Environments, Auckland University of Technology, Auckland, New Zealand, [mani.poshdar@aut.ac.nz](mailto:mani.poshdar@aut.ac.nz), [orcid.org/0000-0001-9132-2985](https://orcid.org/0000-0001-9132-2985) [↑](#footnote-ref-5)
5. Distinguished Professor, Civil and Environmental Engineering Department, Director, Project Production Systems Laboratory, University of California, Berkeley, USA, [tommelein@berkeley.edu](mailto:tommelein@berkeley.edu), [orcid.org/0000-0002-9941-6596](https://orcid.org/0000-0002-9941-6596) [↑](#footnote-ref-6)