Less ugly tables

Table of contents

Tables tend to look fine in html, but when rendering to word they completely fall down. Below, I test a bunch of the standard packages. \*The one that seems to work best is [flextable::flecxtable()], which is interesting, since [huxtable::huxtable()] claims to build on it but doesn’t work well at all.

*NOTE: this doc probably looks fine on the website. The issue is word rendering.*

I’ll test two tables- iris, which has narrow columns, and a table with lots of text, which tends to cause the most problems.

texttab <- readr::read\_csv(file.path('data/component\_table.csv'),   
 show\_col\_types = FALSE) |>   
 dplyr::select(-tidyselect::last\_col())

## The solution

Maybe. This exact code works great in another project, and not at all here. I have no idea what’s going on.

library(flextable)  
  
set\_flextable\_defaults(font.family = 'Calibri',  
 font.size = 10,  
 table.layout = 'autofit')

Use flextable with set\_table\_properties(layout = 'autofit') .

head(iris) |>   
 flextable()

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| Table 1: This is a table with flextable   | Sepal.Length | Sepal.Width | Petal.Length | Petal.Width | Species | | --- | --- | --- | --- | --- | | 5.1 | 3.5 | 1.4 | 0.2 | setosa | | 4.9 | 3.0 | 1.4 | 0.2 | setosa | | 4.7 | 3.2 | 1.3 | 0.2 | setosa | | 4.6 | 3.1 | 1.5 | 0.2 | setosa | | 5.0 | 3.6 | 1.4 | 0.2 | setosa | | 5.4 | 3.9 | 1.7 | 0.4 | setosa | |

texttab |>   
 flextable() #|>   
 # set\_table\_properties(layout = "autofit")

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| Table 2: This is a table with lots of text in flextable   | General HydroBOT components | Type | General component definitions | Specific components used in our example | | --- | --- | --- | --- | | Input data | Not part of HydroBOT | Hydrologic data (timeseries). Typically representing multiple scenarios, e.g. climate and climate adaptations. May include other inputs as needed by response models. | Modified historical hydrographs to represent hypothetical climate change and adaptations (45 gauges, 15 scenarios) | | Controller | Workflow | Interface between input data, response model, and other toolkit components. Sets up run(s). | Sets up links to data and parameters for EWR tool and aggregations. | | Response models | External, integrated | A model of the response of values, e.g. social, cultural, environmental, or economic values in response to hydrologic drivers. | EWR tool | | Aggregator | Workflow | Aggregates response model results to scales across the dimensions of time, space, and theme. | Response model sets the base scale for aggregation. EWR tool assesses hydrologic indicators (value) at gauges (space) and year (time). | | Comparer | Workflow | Compares scenarios (typically) or other groupings. Provides standard outputs including comparison methods, plots, and tables. | Comparison of environmental values at various theme scales for the example climate and adaptation scenarios | | Causal networks | External, integrated | Describe causal relationships between values. | Long Term Water Plan (LTWP) | | Spatial data | External, integrated | Describe spatial relationships | Gauge locations, Sustainable Diversion Limits (SDL) units, Murray-Darling Basin | |

Note that there is an issue still if the table prints into a div. I think because divs render in word as tables, and so flextable struggles with what it controls. I’ll show that below.

## The others

These all look fine in html, most things do. But the word doc is where things seem to fall down. Especially if they have lots of text.

head(iris) |>   
 knitr::kable()

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| Table 3: This is a table with kable   | Sepal.Length | Sepal.Width | Petal.Length | Petal.Width | Species | | --- | --- | --- | --- | --- | | 5.1 | 3.5 | 1.4 | 0.2 | setosa | | 4.9 | 3.0 | 1.4 | 0.2 | setosa | | 4.7 | 3.2 | 1.3 | 0.2 | setosa | | 4.6 | 3.1 | 1.5 | 0.2 | setosa | | 5.0 | 3.6 | 1.4 | 0.2 | setosa | | 5.4 | 3.9 | 1.7 | 0.4 | setosa | |

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| --- |
| Table 4: This is a table with kableExtra. It does not render to word. It used to with prefer-html: true, but that workarounds seems not to work anymore.  # head(iris) |>  # knitr::kable() |>  # kableExtra::kable\_styling() |

head(iris) |>   
 huxtable::huxtable() |>   
 huxtable::theme\_article()

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| Table 5: This is a table with huxtable   |  |  |  |  |  | | --- | --- | --- | --- | --- | | **Sepal.Length** | **Sepal.Width** | **Petal.Length** | **Petal.Width** | **Species** | | 5.1 | 3.5 | 1.4 | 0.2 | setosa | | 4.9 | 3 | 1.4 | 0.2 | setosa | | 4.7 | 3.2 | 1.3 | 0.2 | setosa | | 4.6 | 3.1 | 1.5 | 0.2 | setosa | | 5 | 3.6 | 1.4 | 0.2 | setosa | | 5.4 | 3.9 | 1.7 | 0.4 | setosa | |

head(iris) |>   
 gt::gt()

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| Table 6: This is a table with gt   | Sepal.Length | Sepal.Width | Petal.Length | Petal.Width | Species | | --- | --- | --- | --- | --- | | 5.1 | 3.5 | 1.4 | 0.2 | setosa | | 4.9 | 3.0 | 1.4 | 0.2 | setosa | | 4.7 | 3.2 | 1.3 | 0.2 | setosa | | 4.6 | 3.1 | 1.5 | 0.2 | setosa | | 5.0 | 3.6 | 1.4 | 0.2 | setosa | | 5.4 | 3.9 | 1.7 | 0.4 | setosa | |

## Long text

This table is giving me fits elsewhere, let’s try it here. It has a common issue of wrapping words.

|  |
| --- |
| Table 7: This is just printed  texttab  # A tibble: 6 × 4  `General HydroBOT components` General component defin…¹ Specific components …²  <chr> <chr> <chr>  1 Input data Hydrologic data (timeser… Modified historical h… 2 Controller Interface between input … Sets up links to data… 3 Response models A model of the response … EWR tool  4 Aggregator Aggregates response mode… Response model sets t… 5 Comparer Compares scenarios (typi… Comparison of environ… 6 Causal networks Describe causal relation… Long Term Water Plan … # ℹ abbreviated names: ¹​`General component definitions`, # ²​`Specific components used in our example` # ℹ 1 more variable: `Details of Specific components` <chr> |

texttab |>   
 knitr::kable()

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| Table 8: This is a table with kable   | General HydroBOT components | General component definitions | Specific components used in our example | Details of Specific components | | --- | --- | --- | --- | | Input data | Hydrologic data (timeseries). Typically representing multiple scenarios, e.g. climate and climate adaptations. May include other inputs as needed by response models. | Modified historical hydrographs to represent hypothetical climate change and adaptations (45 gauges, 15 scenarios) | Daily flow rates for 45 for 15 scenarios | | Controller | Interface between input data, response model, and other toolkit components. Sets up run(s). | Sets up links to data and parameters for EWR tool and aggregations. | NA | | Response models | A model of the response of values, e.g. social, cultural, environmental, or economic values in response to hydrologic drivers. | EWR tool | The EWR tool holds databases of the EWRs required to meet the environmental objectives of the basin, which protect or enhance environmental assets that are valued based on ecological significance. | | Aggregator | Aggregates response model results to scales across the dimensions of time, space, and theme. | Response model sets the base scale for aggregation. EWR tool assesses hydrologic indicators (value) at gauges (space) and year (time). | The spatial dimension consists of gauges nested within planning units within the basin. The time dimension assessess EWR performance averaged over the yearly data returned by the EWR tool. The value dimension consists of multiple EWRs (hydrologic indicators) that apply to environmental values (many-to-many), at multiple levels in the causal network (e.g. life-cycle components, species, groups of species, or long-term planning targets). | | Comparer | Compares scenarios (typically) or other groupings. Provides standard outputs including comparison methods, plots, and tables. | Comparison of environmental values at various theme scales for the example climate and adaptation scenarios | Explored in detail in figures and tables | | Causal networks | Describe causal relationships between values. | Long Term Water Plan (LTWP) | Provided by HydroBOT. LTWP required of Basin States by the Murray-Darling Basin Plan and give effect to the Basin-wide Environmental Watering Strategy. | |

texttab |>   
 huxtable::huxtable() |>   
 huxtable::theme\_article()

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| Table 9: This is a table with huxtable   |  |  |  |  | | --- | --- | --- | --- | | **General HydroBOT components** | **General component definitions** | **Specific components used in our example** | **Details of Specific components** | | Input data | Hydrologic data (timeseries). Typically representing multiple scenarios, e.g. climate and climate adaptations. May include other inputs as needed by response models. | Modified historical hydrographs to represent hypothetical climate change and adaptations (45 gauges, 15 scenarios) | Daily flow rates for 45 for 15 scenarios | | Controller | Interface between input data, response model, and other toolkit components. Sets up run(s). | Sets up links to data and parameters for EWR tool and aggregations. |  | | Response models | A model of the response of values, e.g. social, cultural, environmental, or economic values in response to hydrologic drivers. | EWR tool | The EWR tool holds databases of the EWRs required to meet the environmental objectives of the basin, which protect or enhance environmental assets that are valued based on ecological significance. | | Aggregator | Aggregates response model results to scales across the dimensions of time, space, and theme. | Response model sets the base scale for aggregation. EWR tool assesses hydrologic indicators (value) at gauges (space) and year (time). | The spatial dimension consists of gauges nested within planning units within the basin. The time dimension assessess EWR performance averaged over the yearly data returned by the EWR tool. The value dimension consists of multiple EWRs (hydrologic indicators) that apply to environmental values (many-to-many), at multiple levels in the causal network (e.g. life-cycle components, species, groups of species, or long-term planning targets). | | Comparer | Compares scenarios (typically) or other groupings. Provides standard outputs including comparison methods, plots, and tables. | Comparison of environmental values at various theme scales for the example climate and adaptation scenarios | Explored in detail in figures and tables | | Causal networks | Describe causal relationships between values. | Long Term Water Plan (LTWP) | Provided by HydroBOT. LTWP required of Basin States by the Murray-Darling Basin Plan and give effect to the Basin-wide Environmental Watering Strategy. | |

texttab |>   
 gt::gt()

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| Table 10: This is a table with gt   | General HydroBOT components | General component definitions | Specific components used in our example | Details of Specific components | | --- | --- | --- | --- | | Input data | Hydrologic data (timeseries). Typically representing multiple scenarios, e.g. climate and climate adaptations. May include other inputs as needed by response models. | Modified historical hydrographs to represent hypothetical climate change and adaptations (45 gauges, 15 scenarios) | Daily flow rates for 45 for 15 scenarios | | Controller | Interface between input data, response model, and other toolkit components. Sets up run(s). | Sets up links to data and parameters for EWR tool and aggregations. | NA | | Response models | A model of the response of values, e.g. social, cultural, environmental, or economic values in response to hydrologic drivers. | EWR tool | The EWR tool holds databases of the EWRs required to meet the environmental objectives of the basin, which protect or enhance environmental assets that are valued based on ecological significance. | | Aggregator | Aggregates response model results to scales across the dimensions of time, space, and theme. | Response model sets the base scale for aggregation. EWR tool assesses hydrologic indicators (value) at gauges (space) and year (time). | The spatial dimension consists of gauges nested within planning units within the basin. The time dimension assessess EWR performance averaged over the yearly data returned by the EWR tool. The value dimension consists of multiple EWRs (hydrologic indicators) that apply to environmental values (many-to-many), at multiple levels in the causal network (e.g. life-cycle components, species, groups of species, or long-term planning targets). | | Comparer | Compares scenarios (typically) or other groupings. Provides standard outputs including comparison methods, plots, and tables. | Comparison of environmental values at various theme scales for the example climate and adaptation scenarios | Explored in detail in figures and tables | | Causal networks | Describe causal relationships between values. | Long Term Water Plan (LTWP) | Provided by HydroBOT. LTWP required of Basin States by the Murray-Darling Basin Plan and give effect to the Basin-wide Environmental Watering Strategy. | |

gt seems to really have a lot of issues here. What if I use divs?

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| Table 11: This is a table with gt in a div.  texttab |>   gt::gt()   | General HydroBOT components | Type | General component definitions | Specific components used in our example | | --- | --- | --- | --- | | Input data | Not part of HydroBOT | Hydrologic data (timeseries). Typically representing multiple scenarios, e.g. climate and climate adaptations. May include other inputs as needed by response models. | Modified historical hydrographs to represent hypothetical climate change and adaptations (45 gauges, 15 scenarios) | | Controller | Workflow | Interface between input data, response model, and other toolkit components. Sets up run(s). | Sets up links to data and parameters for EWR tool and aggregations. | | Response models | External, integrated | A model of the response of values, e.g. social, cultural, environmental, or economic values in response to hydrologic drivers. | EWR tool | | Aggregator | Workflow | Aggregates response model results to scales across the dimensions of time, space, and theme. | Response model sets the base scale for aggregation. EWR tool assesses hydrologic indicators (value) at gauges (space) and year (time). | | Comparer | Workflow | Compares scenarios (typically) or other groupings. Provides standard outputs including comparison methods, plots, and tables. | Comparison of environmental values at various theme scales for the example climate and adaptation scenarios | | Causal networks | External, integrated | Describe causal relationships between values. | Long Term Water Plan (LTWP) | | Spatial data | External, integrated | Describe spatial relationships | Gauge locations, Sustainable Diversion Limits (SDL) units, Murray-Darling Basin | |

## Column widths.

None of those handle column widths with long text. kable smashes the first col, huxtable and gt smash them all.

Based on some [github](https://github.com/quarto-dev/quarto-cli/issues/7321) [issues](https://github.com/quarto-dev/quarto-cli/issues/7151), does it work if I just don’t use a label at all?

Gt no label

texttab |>   
 gt::gt()

| General HydroBOT components | Type | General component definitions | Specific components used in our example |
| --- | --- | --- | --- |
| Input data | Not part of HydroBOT | Hydrologic data (timeseries). Typically representing multiple scenarios, e.g. climate and climate adaptations. May include other inputs as needed by response models. | Modified historical hydrographs to represent hypothetical climate change and adaptations (45 gauges, 15 scenarios) |
| Controller | Workflow | Interface between input data, response model, and other toolkit components. Sets up run(s). | Sets up links to data and parameters for EWR tool and aggregations. |
| Response models | External, integrated | A model of the response of values, e.g. social, cultural, environmental, or economic values in response to hydrologic drivers. | EWR tool |
| Aggregator | Workflow | Aggregates response model results to scales across the dimensions of time, space, and theme. | Response model sets the base scale for aggregation. EWR tool assesses hydrologic indicators (value) at gauges (space) and year (time). |
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| Causal networks | External, integrated | Describe causal relationships between values. | Long Term Water Plan (LTWP) |
| Spatial data | External, integrated | Describe spatial relationships | Gauge locations, Sustainable Diversion Limits (SDL) units, Murray-Darling Basin |

Huxtable no label

texttab |>   
 huxtable::huxtable() |>   
 huxtable::theme\_article()

|  |  |  |  |
| --- | --- | --- | --- |
| **General HydroBOT components** | **Type** | **General component definitions** | **Specific components used in our example** |
| Input data | Not part of HydroBOT | Hydrologic data (timeseries). Typically representing multiple scenarios, e.g. climate and climate adaptations. May include other inputs as needed by response models. | Modified historical hydrographs to represent hypothetical climate change and adaptations (45 gauges, 15 scenarios) |
| Controller | Workflow | Interface between input data, response model, and other toolkit components. Sets up run(s). | Sets up links to data and parameters for EWR tool and aggregations. |
| Response models | External, integrated | A model of the response of values, e.g. social, cultural, environmental, or economic values in response to hydrologic drivers. | EWR tool |
| Aggregator | Workflow | Aggregates response model results to scales across the dimensions of time, space, and theme. | Response model sets the base scale for aggregation. EWR tool assesses hydrologic indicators (value) at gauges (space) and year (time). |
| Comparer | Workflow | Compares scenarios (typically) or other groupings. Provides standard outputs including comparison methods, plots, and tables. | Comparison of environmental values at various theme scales for the example climate and adaptation scenarios |
| Causal networks | External, integrated | Describe causal relationships between values. | Long Term Water Plan (LTWP) |
| Spatial data | External, integrated | Describe spatial relationships | Gauge locations, Sustainable Diversion Limits (SDL) units, Murray-Darling Basin |

## Divs

Flextable struggles in divs. The best we can do is to set width = 1 to at least make all the cols the same width and use the whole space. Though usually what i end up doing is rendering those tables outside a div and pasting in.

texttab |>   
 flextable::flextable() |>   
 flextable::set\_table\_properties(layout = "autofit", width = 1)

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| Table 12: This is a flextable in a div with width = 1   | General HydroBOT components | General component definitions | Specific components used in our example | Details of Specific components | | --- | --- | --- | --- | | Input data | Hydrologic data (timeseries). Typically representing multiple scenarios, e.g. climate and climate adaptations. May include other inputs as needed by response models. | Modified historical hydrographs to represent hypothetical climate change and adaptations (45 gauges, 15 scenarios) | Daily flow rates for 45 for 15 scenarios | | Controller | Interface between input data, response model, and other toolkit components. Sets up run(s). | Sets up links to data and parameters for EWR tool and aggregations. |  | | Response models | A model of the response of values, e.g. social, cultural, environmental, or economic values in response to hydrologic drivers. | EWR tool | The EWR tool holds databases of the EWRs required to meet the environmental objectives of the basin, which protect or enhance environmental assets that are valued based on ecological significance. | | Aggregator | Aggregates response model results to scales across the dimensions of time, space, and theme. | Response model sets the base scale for aggregation. EWR tool assesses hydrologic indicators (value) at gauges (space) and year (time). | The spatial dimension consists of gauges nested within planning units within the basin. The time dimension assessess EWR performance averaged over the yearly data returned by the EWR tool. The value dimension consists of multiple EWRs (hydrologic indicators) that apply to environmental values (many-to-many), at multiple levels in the causal network (e.g. life-cycle components, species, groups of species, or long-term planning targets). | | Comparer | Compares scenarios (typically) or other groupings. Provides standard outputs including comparison methods, plots, and tables. | Comparison of environmental values at various theme scales for the example climate and adaptation scenarios | Explored in detail in figures and tables | | Causal networks | Describe causal relationships between values. | Long Term Water Plan (LTWP) | Provided by HydroBOT. LTWP required of Basin States by the Murray-Darling Basin Plan and give effect to the Basin-wide Environmental Watering Strategy. | |

If we don’t set widths, it’s smooshed, even with autofit.

texttab |>   
 flextable::flextable() |>   
 flextable::set\_table\_properties(layout = "autofit")

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| Table 13: This is a flextable in a div with width = 1   | General HydroBOT components | General component definitions | Specific components used in our example | Details of Specific components | | --- | --- | --- | --- | | Input data | Hydrologic data (timeseries). Typically representing multiple scenarios, e.g. climate and climate adaptations. May include other inputs as needed by response models. | Modified historical hydrographs to represent hypothetical climate change and adaptations (45 gauges, 15 scenarios) | Daily flow rates for 45 for 15 scenarios | | Controller | Interface between input data, response model, and other toolkit components. Sets up run(s). | Sets up links to data and parameters for EWR tool and aggregations. |  | | Response models | A model of the response of values, e.g. social, cultural, environmental, or economic values in response to hydrologic drivers. | EWR tool | The EWR tool holds databases of the EWRs required to meet the environmental objectives of the basin, which protect or enhance environmental assets that are valued based on ecological significance. | | Aggregator | Aggregates response model results to scales across the dimensions of time, space, and theme. | Response model sets the base scale for aggregation. EWR tool assesses hydrologic indicators (value) at gauges (space) and year (time). | The spatial dimension consists of gauges nested within planning units within the basin. The time dimension assessess EWR performance averaged over the yearly data returned by the EWR tool. The value dimension consists of multiple EWRs (hydrologic indicators) that apply to environmental values (many-to-many), at multiple levels in the causal network (e.g. life-cycle components, species, groups of species, or long-term planning targets). | | Comparer | Compares scenarios (typically) or other groupings. Provides standard outputs including comparison methods, plots, and tables. | Comparison of environmental values at various theme scales for the example climate and adaptation scenarios | Explored in detail in figures and tables | | Causal networks | Describe causal relationships between values. | Long Term Water Plan (LTWP) | Provided by HydroBOT. LTWP required of Basin States by the Murray-Darling Basin Plan and give effect to the Basin-wide Environmental Watering Strategy. | |