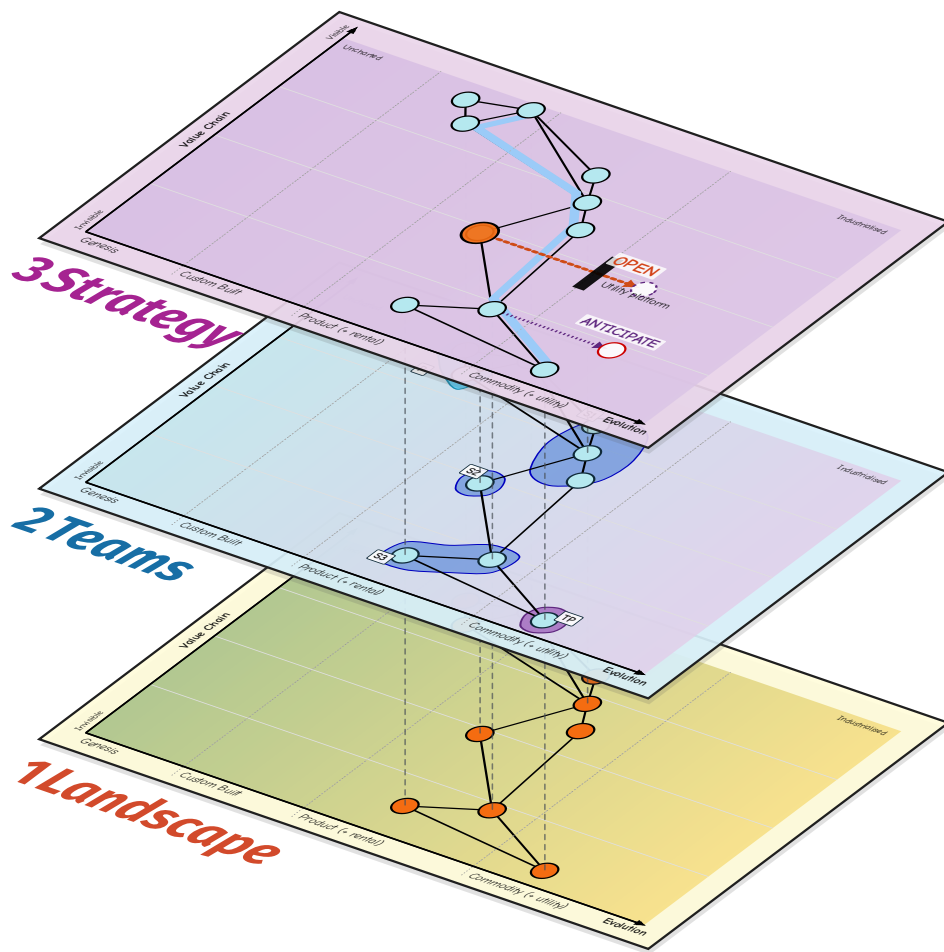


Wardley-TikZ Manual

Wardley Maps from tikz-network primitives



Version 1.0.0

`wardley-tikz`

VERSION 1.0.0

<https://github.com/latticecut/wardley-tikz>

Released, August 2026

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SOURCE AND LICENSING

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Changes include re-expressing maps as semantic TeX, adding package documentation and examples, and supplying book typography, cross-references, and complete source appendices.

SOFTWARE AND CODE

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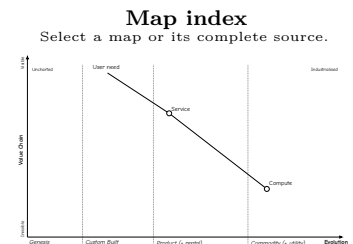
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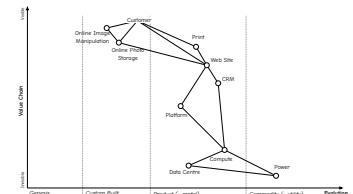
Contents

1	Getting Started	5
1.1	Why Draw Wardley Maps?	5
1.2	Installation	6
1.3	A Simple Map	7
1.4	Coordinates and Stages	9
2	Visual Language	10
2.1	Components	10
2.2	Anchors and Links	12
2.2.1	Anchors	12
2.2.2	Links	12
2.3	Evolution and Inertia	13
2.4	Map Styles, Formats, and Canvases	14
2.4.1	Aspect Ratio	16
2.4.2	Axes and Labels	16
2.4.3	Coordinate Grid	16
2.4.4	Stage Guides and Labels	16
2.4.5	Canvas Background	17
2.4.6	Local Object Overrides	17
2.5	Flows and Routes	18
2.6	Notes, Annotations and Supporting Objects	19
2.6.1	Notes and Map Labels	19
2.6.2	Numbered Annotations and Type Markers	19
2.6.3	Pipelines and Legends	20
2.7	States and Regions	22
2.7.1	Evolution States	22
2.7.2	Ownership Regions and PST Areas	22
2.8	Inactive Objects and Metrics	24
3	Examples from the Book	25
3.1	Book Chapter 2: Finding a Path	25
3.1.1	Figure 8: A Map	25
3.1.2	Figure 11: Advanced Elements of a Map	27
3.2	Book Chapter 3: Evolution States	29
3.3	Book Chapter 4: Teams and Attitudes	31
3.4	Book Chapter 8: Flow and Financial Measures	33
4	Package Reference	35
4.1	Checking Maps and Test Output	35



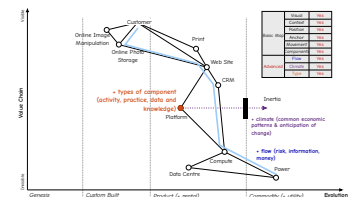
Simple map

Guide p. 7 · Code p. 38



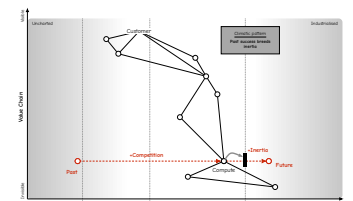
Book Figure 8

Guide p. 25 · Code p. 39



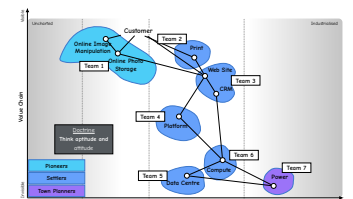
Book Figure 11

Guide p. 27 · Code p. 41



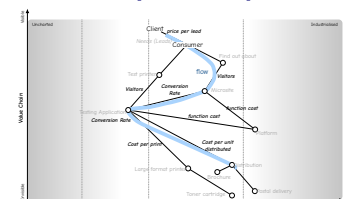
Book Figure 26

Guide p. 29 · Code p. 44



Book Figure 41

Guide p. 31 · Code p. 47



Book Figure 86

Guide p. 33 · Code p. 51

4.2	OnlineWardleyMaps Compatibility	36
4.3	Unsupported Features	36
A	Complete Map Examples	37
A.1	Simple Map	38
A.2	Book Figure 8: A Map	39
A.3	Book Figure 11: Advanced Elements of a Map	41
A.4	Book Figure 26: Evolution and Inertia	44
A.5	Book Figure 41: Teams and Attitudes	47
A.6	Book Figure 86: Flow and Financial Measures	51
	References	55

About this manual

`wardley-tikz` adds Wardley Map commands to the `tikz-network` drawing engine. The command names follow the OnlineWardleyMaps language where TeX permits it. The commands create components, anchors, links, flows, evolution, inertia, notes, pipelines, states, regions, and metrics.

The public commands use the OnlineWardleyMaps coordinate order `[visibility, maturity]`. This order is (y,x) relative to TikZ. The order makes it easier to transfer map data from OnlineWardleyMaps.

This manual first shows a simple map. Chapter 2 then introduces one visual primitive at a time. It also explains how style, format, aspect ratio, stage guides, and canvas control the rendering. Chapter 3 reproduces examples from Chapters 2, 3, 4, and 8 of the Wardley book. The book examples use the `book` visual language. They do not include raster images from the book.

1 *Getting Started*

1.1 *Why Draw Wardley Maps?*

A Wardley Map is a visual model of a value chain. It shows the components that meet a user need, the dependencies between them, their visibility to the user, and their maturity from genesis to commodity.

The position and connection of each object carry meaning, so a Wardley Map is also a method of communication. People need to be able to create a map, share it, question it, and edit it while keeping those meanings clear.

TeX is a typesetting language that lends itself well to rendering networks. It stores the map as source text and produces precise vector output. The source can be copied, reviewed, and managed with version control. The map and its explanation can be revised together.

A Wardley Map uses semantic coordinates. Moving a component to the right shows greater maturity. Moving a need upward shows greater visibility to the user. A link shows a dependency. Automatic layout could change this meaning, so `wardley-tikz` keeps positions explicit and normalized.

The package uses the `\Vertex`, `\Edge`, and `\Text` primitives from `tikz-network`. Its manual describes them.¹ The Wardley interface adds axes, stages, validation, styles, object registers, and semantic commands. Where the formats overlap, it is consistent with open formats such as OnlineWardleyMaps. The result is both a rendered map and editable source.

¹ Jürgen Hackl. *tikz-network Manual*, August 2019. URL <https://mirrors.ctan.org/graphics/pgf/contrib/tikz-network/tikz-network.pdf>.
Version 1.1

1.2 Installation

Keep these two files together in your project or install them through a local TeX tree:

```
tikz-network.sty
wardley-tikz.sty
```

Then load the package:

```
\usepackage{wardley-tikz}
```

The `book` theme uses the TeX Live `comicneue` package when it is available. Install it for the calibrated typography. Without that optional font, the package remains usable and falls back to the ordinary sans family.

The clean engine baseline is commit `06a72d0` in the upstream `tikz-network` source repository.² The complete provenance and licence record is in `NOTICE.md`. Both the inherited engine and this derivative package are distributed under GPL 3 or later. This software licence is separate from the CC BY-SA 4.0 terms applied to the manual prose and rendered diagrams on the copyright page.

² Jürgen Hackl. `tikz-network` source repository. GitHub repository, January 2021. URL <https://github.com/hackl/tikz-network>. Baseline commit `06a72d0`, dated 18 January 2021

1.3 A Simple Map

The smallest useful map needs a user need, two components, and links between them. This example uses the same open axes, dotted stage guides, compact markers, and book typography as the chapter examples. Position pairs follow OnlineWardleyMaps:

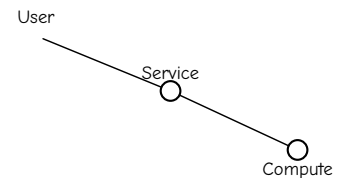
[visibility, maturity]

Visibility comes first. This is (y,x) order rather than the usual TikZ (x,y) order. The package converts the coordinates internally.

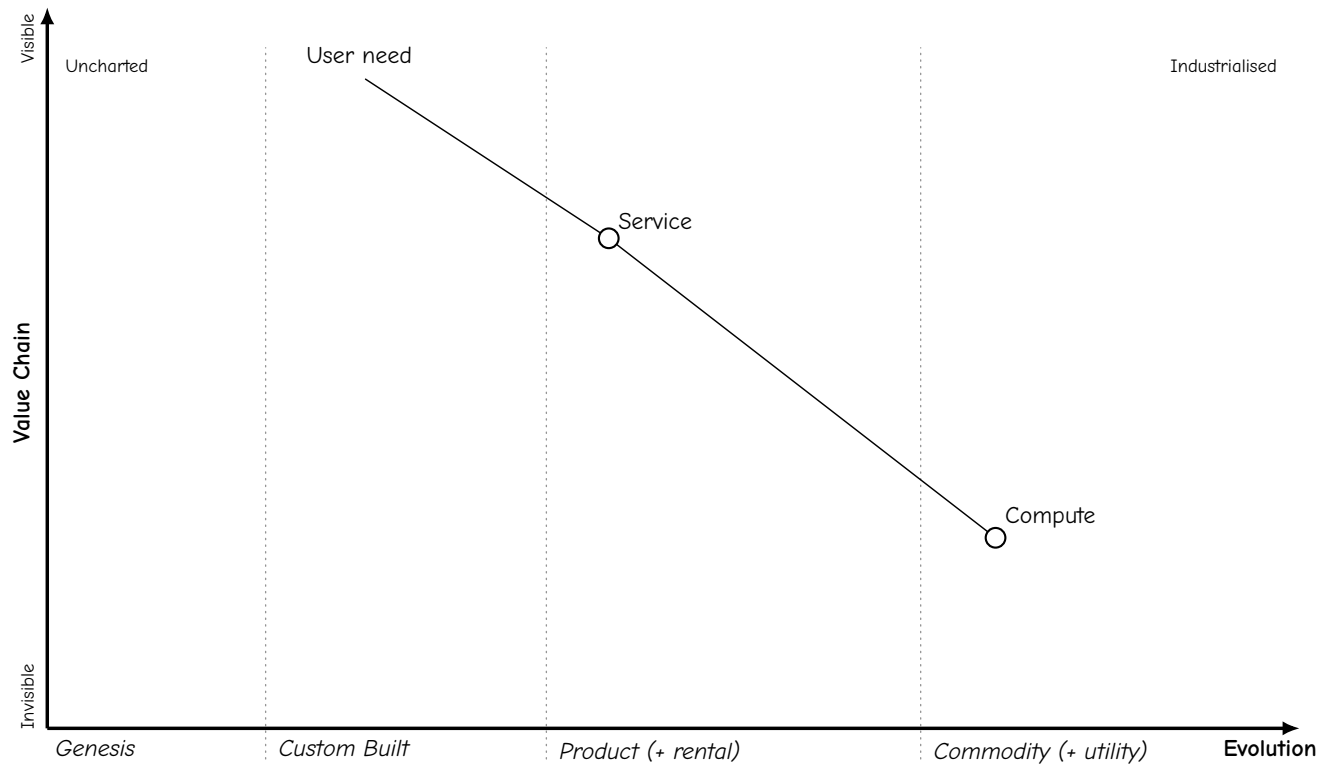
```
\begin{wardleymap}[width=16.5cm,height=9cm,style=book]
  \WardleyAnchor[id=user]{User need} [.96,.25]
  \WardleyComponent[id=service]{Service} [.72,.45]
  \WardleyComponent[id=compute]{Compute} [.28,.76]

  \WardleyLink{user}{service}
  \WardleyLink{service}{compute}
\end{wardleymap}
```

Names are visible labels. Explicit id values are the stable references for links and overlays. Labels can repeat when every occurrence has a different explicit ID. A unique label can still be used as a reference, as it can in an OWM file. A repeated label is ambiguous and must not be used as a reference. Explicit IDs are also safer when labels contain formatting or may be renamed.



An anchor and two components form a value chain.



Simple map. A user need, two components and the dependencies between them.

1.4 Coordinates and Stages

Both coordinate values lie between zero and one. Visibility increases from bottom to top. Maturity increases from left to right. These two forms are equivalent:

```
\WardleyComponent[id=db]{Database} [.40, .72]

\WardleyComponent[
  id=db,
  visibility=.40,
  maturity=.72
]{Database}
```

The named form is longer but useful when code is generated or reviewed by someone likely to reverse the pair. `evolution` is accepted as an alias for the maturity key.

Set `show coordinate grid=true` to add a numbered authoring grid. Maturity runs along the horizontal axis and visibility along the vertical axis. The grid is behind the map objects and does not change their coordinates:

```
\begin{wardleymap}[show coordinate grid=true]
  \WardleyComponent[id=point,label position=above right]
    {$.65, .55}$.65, .55]
\end{wardleymap}
```

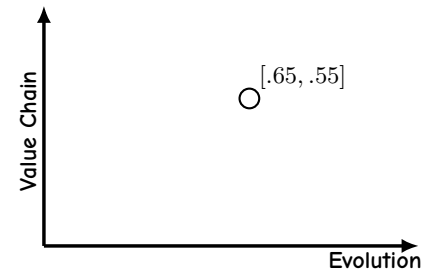
The default boundaries are .175, .4 and .7. Both labels and boundaries can be changed:

```
\begin{wardleymap}[
  stages={Novel,Emerging,Good,Best},
  stage boundaries={.2,.48,.74}
]
  \WardleyComponent[id=point,label position=above right]
    {$.65, .55}$.65, .55]
\end{wardleymap}
```

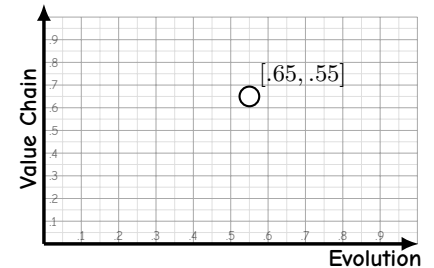
Use `evolution axis=none` or `value chain axis=none` to hide an axis without changing the stage guides. The older OWM-aligned `show ... axis=false` keys also hide the associated label. For compatibility, hiding the evolution axis this way hides implicit stage guides and labels unless their switches are set explicitly.

Section 2.4 explains the canvas controls. Use `background style` for one TikZ path style. Use `background code` only when one path style is not sufficient.

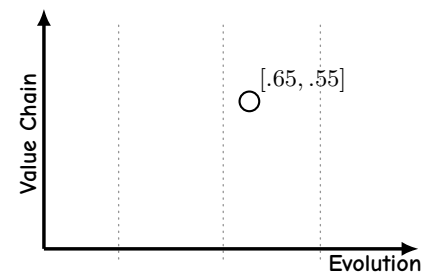
An OWM `size [W,H]` declaration describes its source SVG canvas rather than a physical TeX size. Preserve it with `source size={W,H}`. This lets the package convert browser label offsets while `width` and `height` continue to control the printed map.



Visibility is vertical. Maturity is horizontal.



At $[.65, .55]$, the horizontal .65 visibility line meets the vertical .55 maturity line.



The same coordinate; three dotted guides divide four stages.

2 Visual Language

2.1 Components

`\WardleyComponent` creates an open component marker by wrapping `\Vertex`. Its common options are:

Option	Purpose
<code>id</code>	Stable reference used by links and overlays
<code>visibility, maturity</code>	Named normalized coordinates
<code>at={V,M}</code>	OWM-order positional pair
<code>label position</code>	TikZ position such as <code>left</code> or <code>above right</code>
<code>label distance</code>	Physical distance from the marker
<code>label offset</code>	Explicit physical <code>{xshift,yshift}</code> dimensions
<code>owm label offset</code>	OWM/SVG pixel pair, scaled from <code>source size</code>
<code>kind</code>	<code>component</code> , <code>market</code> or <code>ecosystem</code>
<code>method</code>	<code>build</code> , <code>buy</code> or <code>outsource</code>
<code>show marker, show label</code>	Keep semantic registration while hiding either visual

Later sections describe pipeline membership, inertia, and subtitles. Use the `style` key only when no package option gives the required result.

The OWM Market symbol contains three connected component circles. The Ecosystem symbol uses a hatched field around a central component.

The `method` option adds a halo behind the component marker. `build` uses a light halo. `buy` uses a medium halo. `outsource` uses a dark halo. The inner marker continues to show the component kind. Build, Buy, and Outsource are explanatory labels in these examples. In a map, keep the component name and use `method` to record the sourcing method.

```
\WardleyComponent[id=component,
label offset={1.2cm,0pt}]{Component}[,50,.22]
```



Component

The open circle is the default component kind.

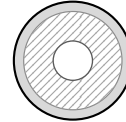
```
\WardleyComponent[id=market,kind=market,
  label offset={1.2cm,0pt}]{Market} [.50,.22]
```



Market

The connected circles show the market kind.

```
\WardleyComponent[id=ecosystem,kind=ecosystem,
  label offset={1.2cm,0pt}]{Ecosystem} [.50,.22]
```



Ecosystem

The hatched field shows the ecosystem kind.

```
\WardleyComponent[id=build,method=build,
  label offset={1.2cm,0pt}]{Build} [.50,.22]
```



Build

The light halo shows the build method.

```
\WardleyComponent[id=buy,method=buy,
  label offset={1.2cm,0pt}]{Buy} [.50,.22]
```



Buy

The medium halo shows the buy method.

```
\WardleyComponent[id=outsource,method=outsource,
  label offset={1.2cm,0pt}]{Outsource} [.50,.22]
```



Outsource

The dark halo shows the outsource method.

2.2 Anchors and Links

2.2.1 Anchors

An anchor is usually a user, user need or other named starting point. OWM and the published maps render it as text attached to an invisible semantic point, not as a special concentric-circle symbol. Dependencies still terminate at that point. It has the same position and label options as a component:

```
\WardleyAnchor[id=public,label position=above]{Public} [.98,.37]
```

The default is markerless. If an exceptional diagram needs a visible point, `show marker=true` adds the same open-circle marker used for a normal component; it does not introduce a separate anchor glyph.

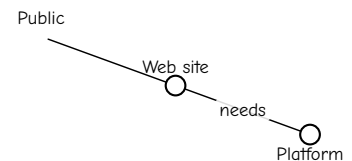
2.2.2 Links

A link is a value-chain dependency. It is deliberately non-arrowed by default:

```
\WardleyLink{public}{website}  
\WardleyLink[context={needs}]{website}{platform}
```

`\WardleyDependency` remains an alias, but `\WardleyLink` is the preferred OWM-aligned name. Source and target order still matter semantically even when the line has no arrowhead. Context is rendered as compact themed text over the line rather than as a graph vertex.

Use `from offset={visibility,maturity}` only when a source drawing starts a link away from its semantic source point. The option moves the drawn origin by a normalized delta. It does not change either endpoint ID or the topology. Figure 41 uses four offsets for the separate Customer spokes.



Links connect an anchor to components.

2.3 Evolution and Inertia

Evolution gives a component a possible future maturity. `\WardleyEvolve` creates an invisible target at this maturity. It draws a directed line from the component to the target. The command does not add a component or a dependency. The book style uses red for the evolution line and the future target:

```
\WardleyEvolve[
  id=platform-shift,
  target id=utility-platform,
  new name={Utility Platform}
]{platform}{.82}
```

The final argument is the target maturity. By default, the target has the same visibility as the component. Use `target visibility` for a diagonal movement. Use `show target=false` to hide the target marker. The target ID can start another `\WardleyEvolve`, even when the marker is hidden. An evolution target is not a component, so it cannot be an endpoint of a dependency or flow.

Use `target style={...}` for an ordinary target marker. The alias `target marker style` is equivalent. Use `climate marker style={...}` for the endpoints of a climate movement; the older `marker style` name remains available there.

Inertia applies to an evolution movement. `\WardleyInertia` refers to the movement ID:

```
\WardleyInertia[at=.72,label={Inertia}]{platform-shift}
```

The `at` option sets the position of the inertia bar on the movement. Its value is a fraction from zero to one.



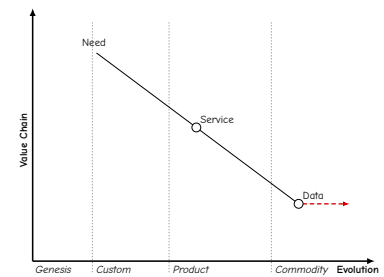
*The red dashed line shows evolution.
The black bar shows inertia.*

2.4 Map Styles, Formats, and Canvases

Three map keys select the base rendering. **style** sets fonts, component glyphs, line weights, and semantic colours. **format** sets the frame and its guide defaults. **canvas** sets the map background. These keys do not change component positions, dependencies, or other semantic objects.

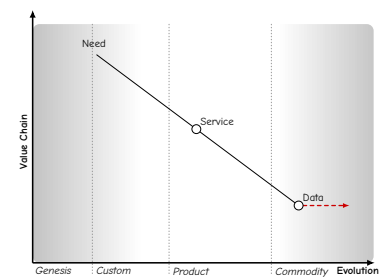
For a new map, always set **format**. Use **standard** for the standard frame. Use **book** for the published-book frame. Use **structural** for dense minor evolution guides. The examples below use the same three-object map.

```
\begin{wardleymap}[
  width=10cm,aspect ratio=10/7,
  style=book,format=book,canvas=white,
  stages={Genesis,Custom,Product,Commodity},
  stage boundaries={.175,.40,.70},
  show stage separators=true,
  show stage labels=true,
  show chart labels=false,
  show visibility labels=false
]
  \WardleyAnchor[id=format-need]{Need} [.88,.18]
  \WardleyComponent[id=format-service]{Service} [.56,.48]
  \WardleyComponent[id=format-data]{Data} [.24,.78]
  \WardleyLink{format-need}{format-service}
  \WardleyLink{format-service}{format-data}
  \WardleyEvolve[id=format-data-shift,show target=false]
    {format-data}{.94}
\end{wardleymap}
```



The book-white rendering uses the book frame on a white canvas.

```
\begin{wardleymap}[
  width=10cm,aspect ratio=10/7,
  style=book,format=book,
  canvas=edge-fade,
  stages={Genesis,Custom,Product,Commodity},
  stage boundaries={.175,.40,.70},
  show stage separators=true,
  show stage labels=true,
  show chart labels=false,
  show visibility labels=false
]
  \WardleyAnchor[id=format-need]{Need} [.88,.18]
  \WardleyComponent[id=format-service]{Service} [.56,.48]
  \WardleyComponent[id=format-data]{Data} [.24,.78]
  \WardleyLink{format-need}{format-service}
  \WardleyLink{format-service}{format-data}
  \WardleyEvolve[id=format-data-shift,show target=false]
    {format-data}{.94}
\end{wardleymap}
```

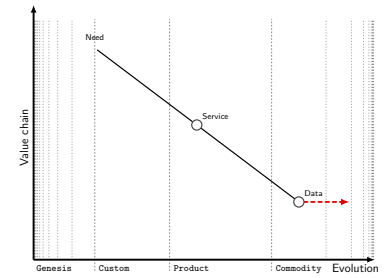


Shaded ends cue logarithmic compression at both extremes.

```

\begin{wardleymap}[
  width=10cm,aspect ratio=1.414,
  style=structural,format=structural,
  canvas=white,
  stages={Genesis,Custom,Product,Commodity},
  stage boundaries={.18,.40,.70},
  show stage separators=true,
  show stage labels=true,
  show chart labels=false,
  show visibility labels=false
]
  \WardleyAnchor[id=format-need]{Need} [.88,.18]
  \WardleyComponent[id=format-service]{Service} [.56,.48]
  \WardleyComponent[id=format-data]{Data} [.24,.78]
  \WardleyLink{format-need}{format-service}
  \WardleyLink{format-service}{format-data}
  \WardleyEvolve[id=format-data-shift,show target=false]
    {format-data}{.94}
\end{wardleymap}

```



Clustered minor guides make the same compression explicit.

Both renderings cue logarithmic compression near the ends of evolution. The shaded canvas signals it at the edges. The structural format uses minor guides that cluster towards both ends. These are visual cues only; neither rendering rescales component coordinates.

The structural guide pattern is a vector interpretation of A P Moore's *Structural Deepening* diagrams.¹ It retains the measured plot-frame aspect ratio 1.414, major boundaries .18, .40, and .70, and measured minor-guide positions. It does not reproduce the article's topology, panels, contours, or overlays. Add those with semantic commands or local TikZ geometry.

¹ A. P. Moore. Structural deepening. SuperLattice, January 2020. URL <https://latticecut.github.io/wardleymaps/2020/01/05/structural-deepening.html>. Creative Commons Attribution-ShareAlike 4.0 International

2.4.1 Aspect Ratio

`aspect ratio=10/7` means that the width-to-height ratio is ten to seven. `aspect ratio=10:7` is equivalent. The value must be positive. The package calculates the height from the final width. This calculation replaces an explicit `height`, independent of the key order.

2.4.2 Axes and Labels

Set `evolution axis=arrow, line, or none`. Use the same three values with `value chain axis`. The line form has no arrowhead. Control the captions separately with `show evolution label=true|false` and `show value chain label=true|false`. These canonical controls do not change stage separators, stage labels, or stage fill.

The older `show evolution axis` and `show value chain axis` booleans remain for OWM and pre-version-1 source. Their false form hides both the axis and its label. The legacy evolution switch also hides implicit stage guides and labels; an explicit stage switch takes priority.

2.4.3 Coordinate Grid

The coordinate grid is an optional authoring overlay. Thin light-grey lines divide both normalized axes at `.05`. Stronger lines and labels mark `.1` through `.9`. Maturity is horizontal and visibility is vertical. Set `show coordinate grid=true` to enable it.

The grid is on the canvas layer, behind the semantic objects. It changes no stored position. `coordinate grid` is a shorthand for the canonical key. The older `debug grid` name remains available for compatibility.

2.4.4 Stage Guides and Labels

Use `show stage separators=true` to show the three major stage boundaries. Use `false` to hide them. A value that you set takes priority over the format default. Use `stage separator style={...}` to change the major guide path.

The structural format supplies faint minor guides at logarithmically spaced positions near both ends of evolution. Its defaults reproduce the recovered source:

```
minor stage guides={
  .002,.004,.007,.011,.018,.028,.045,.071,.113,
  .860,.935,.970,.986,.993,.997,.998,.999},
minor stage guide style={
  draw=black!38,line width=.4pt,dotted,line cap=round}
```

These are the structural defaults. A list or style that you set replaces them. The key order does not change the result. These guides do not create more evolution stages.

Use `show stage labels=true` to show the four stage names. Use `false` to hide them. Set the text with `stages={...}`:

```
stages={Genesis,Custom Built,
  Product (+ rental),Commodity (+ utility)}
```

Use `stage fill=true|false` independently of the frame. For compatibility, the standard format fills stages by default; the book and structural formats do not. A value set explicitly takes priority in either key order.

2.4.5 Canvas Background

Use `canvas=white`, `canvas=edge-fade`, or `canvas=transparent`. The edge fade is a TeX vector shading. A transparent canvas has no base fill.

`background style` remains available for a local base-rectangle style. It takes priority over the style selected by `canvas`. A non-empty `background code` replaces the selected canvas. Use these advanced keys only when the named canvas does not reproduce the source.

The chapter examples continue to use `style=book`. Their measured stage boundaries, positions, and special backgrounds are values in the example source. A rendering format must not change topology, content, movement, or analysis records. The trace records the selected rendering and minor guides separately. TeX engine, PDF renderer, and scan differences can still alter antialiasing and sub-pixel font metrics.

2.4.6 Local Object Overrides

Use semantic map keys first. Use a component `style` option only when the package has no suitable key:

```
\WardleyComponent[
  id=special,
  style={line width=1.4pt,fill=yellow!12}
]{Special case} [.55,.48]
```

Raw TikZ remains a local override. It is not the standard authoring language. If the same exception appears in several maps, add a semantic option or a reusable style.

For source-specific vector geometry, use public layers and Wardley-order coordinates instead of private package names:

```
\WardleyCoordinate{assembly-centre} [.48,.62]
\begin{wardleylayer}{regions}
  \draw[dashed] (assembly-centre) circle[radius=8mm];
\end{wardleylayer}
```

The public layer names are `canvas`, `regions`, `background`, `dependencies`, `main`, and `overlays`. A `\WardleyCoordinate` is local drawing geometry. It is not a semantic component or a dependency endpoint.

2.5 Flows and Routes

OWM uses `+>` for a flow. It uses `->` for a basic link. In TeX, `\WardleyFlow` is the OWM-aligned command. It joins two named components. The `value` option names what flows:

```
\WardleyFlow[value={GBP 0.10}]{customer}{service}
```

The `scope` option accepts `future`, `past`, or `both`. `\WardleyFlowPath` is a shortcut. It draws one segment for each adjacent pair in an ordered component list:

```
\WardleyFlowPath[
  color=cyan!65!blue,
  line width=2.4pt
]{customer,storage,website,compute,power}
```

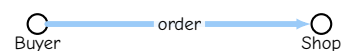
It does not add dependencies.

`\WardleyFlowRoute` draws a flow through fixed waypoints. It does not refer to component IDs. Use it when the line must follow a measured route. Enter each waypoint in `visibility/maturity` order. Separate the waypoints with commas:

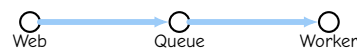
```
\WardleyFlowRoute[
  directed=false,
  color=wardleybookflow,
  line width=2.4pt
]{.94/.35,.845/.31,.735/.54,.615/.59,.26/.61,.09/.79}
```

All three commands use the same flow options. Set `directed=false` to remove the arrowheads. None of these commands adds a dependency.

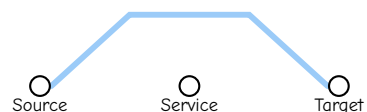
Two components: `\WardleyFlow`



Ordered list: `\WardleyFlowPath`



Waypoints: `\WardleyFlowRoute`



The first flow joins two components. The second visits components in list order. The third follows fixed waypoints around Service.

2.6 Notes, Annotations and Supporting Objects

2.6.1 Notes and Map Labels

Use `\WardleyNote` to place free text at a normalized map position.

```
\WardleyNote[at={.50,.10},anchor=west]{A map note}
```

A map note

The code places one free-text note.

The `at` option uses `[visibility,maturity]`. The `anchor` option sets the part of the text that touches that position.

Use `\WardleyMapLabel` for text that applies to two or more map objects. The label does not belong to one component.

```
\WardleyComponent[id=context-left,show label=false]
{Left} [.28,.18]
\WardleyComponent[id=context-right,show label=false]
{Right} [.28,.82]
\WardleyMapLabel[at={.72,.50}]{Shared context}
```

Shared context



The label applies to both open components.

The two components remain ordinary map objects. The map label is a separate supporting object. It does not add a link.

2.6.2 Numbered Annotations and Type Markers

Use `\WardleyAnnotation` to place a numbered marker and its explanation.

```
\WardleyAnnotation[at={.50,.12}]{1}{Observation}
```

1 Observation

The number and the text form one annotation.

The first number is the annotation number, not an object ID. A slash-separated point list represents OWM's multi-point form without confusing PGF's option parser:

```
\begin{wardleymap}[annotation key at={.76,.04}]
\WardleyAnnotation[
points={.43/.49,.08/.79}
]{1}{Standardising power speeds up evolution}
\end{wardleymap}
```

Each pair remains `visibility/maturity`. With an annotation key, every point receives the same numbered marker while one compact

text key is rendered at the requested OWM-order position. Without a key, the explanation appears beside the first point.

Use `\WardleyType` to highlight the type of an existing component. The command does not move the component.

```
\WardleyComponent[id=platform,label position=below,
  label distance=2mm]{Platform} [.55,.22]
\WardleyType{platform}{Activity}
```



The orange marker and label identify the component type.

Use Activity, Practice, Data, or Knowledge as the display label.

2.6.3 Pipelines and Legends

Use `\WardleyLegend` to place a manual legend.

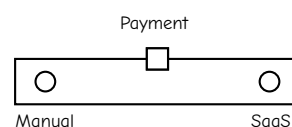
```
\WardleyLegend[at={.50,.50},anchor=center]
{\shortstack[l]{Open circle: component\\
  Blue line: flow}}
```

Open circle: component
Blue line: flow

The legend explains symbols that are specific to this map.

`\WardleyPipeline` draws a bounded maturity range at a chosen visibility. Parent and member IDs preserve OWM's nested pipeline meaning while the children remain ordinary, linkable components. The two component flags make the owner square and place children on the box centreline:

```
\WardleyComponent[id=payment,pipeline parent,
  label offset={-5mm,4mm}]{Payment} [.60,.50]
\WardleyComponent[id>manual,pipeline member,
  label offset={-4mm,-6mm}]{Manual} [.60,.20]
\WardleyComponent[id=saas,pipeline member,
  label offset={-2.5mm,-6mm}]{SaaS} [.60,.80]
\WardleyPipeline[
  visibility=.60,start=.20,end=.80,
  label={},parent=payment,members={manual,saas}
]{Payment}
```



A pipeline groups related components under one parent. The square marks the parent. The circles mark children that inherit its visibility. The box shows their maturity range.

An empty range label prevents a duplicate parent name. A default child label can touch the range. Use `label offset` to move it. This example puts the parent name above the range and the child names below it. If you do not give a position, OWM uses the `[5,-10]` offset for a child label. The `pipeline member` option uses the same default. An explicit `owm label offset` replaces this value.

The package checks pipeline visibility and maturity. The converter keeps an OWM-hidden one-position V2 child as a stable link target. Fixed 4/6/3-mm dimensions reproduce the OWM padding, height, and child offset. Label pixels scale through **source size**.

2.7 States and Regions

2.7.1 Evolution States

`\WardleyState` marks a past, current, or future position of an existing component. A state marker is not a component. Do not use a state marker as a dependency endpoint.

```
\WardleyState[id=compute-past,kind=past]{compute} [.32,.08]
\WardleyState[id=compute-current,kind=current]{compute}
\WardleyState[id=compute-future,kind=future]{compute} [.32,.90]
\WardleyClimate[
  id=compute-shift,
  from=compute-past,
  arrows=future,
  competition={+Competition}
]{compute} {.90}
```

The current state uses the component position unless you give another position. `\WardleyClimate` draws the Past–Future trajectory. When `from` names a Past state, `arrows=future` puts one arrowhead at the current state and one at Future. Use `arrows=both` to put arrowheads at the two outer ends instead.

Use `competition at` to position the competition label by a fraction of the trajectory. Use `competition maturity` to position the label at a specified maturity. Use `competition distance` to set its distance from the line. Named TikZ styles can be supplied with `competition style`, `marker style`, and `style`. Use `color` for the path, endpoint markers, and competition label. Use `line width` and `arrowhead` for the path. Use `marker style` for the endpoint rings.

Use `y offset` to move an inertia bar a small physical distance from the movement line. Use `label style` to format its label. `\WardleyResistance` draws a grey curve from the current state to an inertia bar. It is an annotation. It is not a dependency or a second movement.



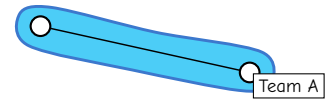
The red dashed line shows movement. The grey curve shows resistance. The black bar shows inertia.

2.7.2 Ownership Regions and PST Areas

Use `\WardleyRegion` to record explicit team membership and one Pioneer, Settler, or Town Planner attitude. The package draws the hull below dependency lines. Do not infer membership from the contour. Component markers, labels, and team tags remain above the hull. The `book` theme uses organic coloured regions and white team tags. Use `shape=box` when you need a rectangular hull. Use `contour` for a measured outline. Give its points in `visibility/maturity` order. The points define one closed smooth curve. Use `tension` to control the curve between the points. The default is `.55`. A larger value makes the turns fuller. Use a small set of well-spaced points. Points that are very close can make a visible bump. The `shape=box`

form does not use `contour` or `tension`. Use `tag at`, `tag anchor`, and `tag style` to control the team label.

```
\WardleyComponent[id=discover,show label=false]
  {Discover} [.72,.12]
\WardleyComponent[id=develop,show label=false]
  {Develop} [.38,.68]
\WardleyLink{discover}{develop}
\WardleyRegion[
  id=team-a,attitude=pioneer,
  members={discover,develop},tension=.55,
  tag position=south east
]{Team A}
```



The region shows the components that Team A owns. Its colour shows the Pioneer attitude. The tension value controls the smooth boundary. The dependency remains visible above the region.

Use `\WardleyPST` to mark a rectangular map range for one attitude. The four limits use normalized map positions. A PST area does not name team members.

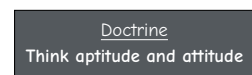
```
\WardleyPST[
  type=pioneers,
  top=.78,left=.18,bottom=.22,right=.82
]{Research}
```



The four limits set one Pioneer area. The area does not record team ownership.

Use `\WardleyCallout` to add a climatic pattern or a doctrine principle.

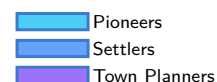
```
\WardleyCallout[
  kind=doctrine,at={.50,.50},anchor=center
]{Think aptitude and attitude}
```



The doctrine callout adds one operating principle. It does not define a region.

Use `\WardleyAttitudeLegend` to identify the three attitude colours. The default compact form puts each label beside its swatch. Use `format=bars` to centre each label inside a full-width bar. The `width`, `row height`, and `row gap` options control that form.

```
\WardleyAttitudeLegend[at={.08,.10}]
```



The key identifies the Pioneer, Settler, and Town Planner colours.

These objects do not add components or links.

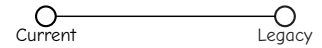
2.8 Inactive Objects and Metrics

The `inactive` option fades a component. It also fades each link that touches the component. The component and its links stay in the map. Put `\WardleyInactive` before the components and links that it must fade. You can also set `inactive` when you declare a component.

```
\WardleyInactive{brochure,postal-delivery}
\WardleyMetric[id=visitors,on=microsite]{visitors}
\WardleyMetric[
  id=conversion,
  interface={microsite,testing-application}
]{conversion rate}
```

A metric adds measurement text. Use `on` for one component. Use `interface` for the interface between two components. Use `at` to move the text without changing its attachment. A metric is not a component, a dependency or a flow.

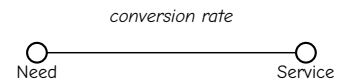
Inactive component:
`\WardleyInactive`



Component metric: `\WardleyMetric`



Interface metric: `\WardleyMetric`



The first inset compares a current component with an inactive component. The second metric refers to one component. The third metric refers to the interface between two components.

3 Examples from the Book

3.1 Book Chapter 2: Finding a Path

Figures 8 and 11 are from Chapter 2, *Finding a Path*.¹ They use the same topology: one **Customer** anchor, nine components, and fourteen links. Figure 11 adds a type marker, evolution, inertia, and a flow. These overlays do not change the topology.

The **book** style defines the typeface, axes, maturity guides, component markers, and line widths. The example source defines the canvas size, stage boundaries, component positions, label offsets, and overlay positions. Section 2.4 explains these rendering controls.

Figures 8 and 11 use `show chart labels=false` because the source figures do not show the Uncharted and Industrialised labels. The crop margins change only the exported page bounds. They do not change the map coordinates.

¹ Simon Wardley. Finding a path. Wardley Maps, Chapter 2, August 2016c. URL <https://medium.com/wardleymaps/finding-a-path-cdb1249078c0>. Creative Commons Attribution-ShareAlike 4.0 International

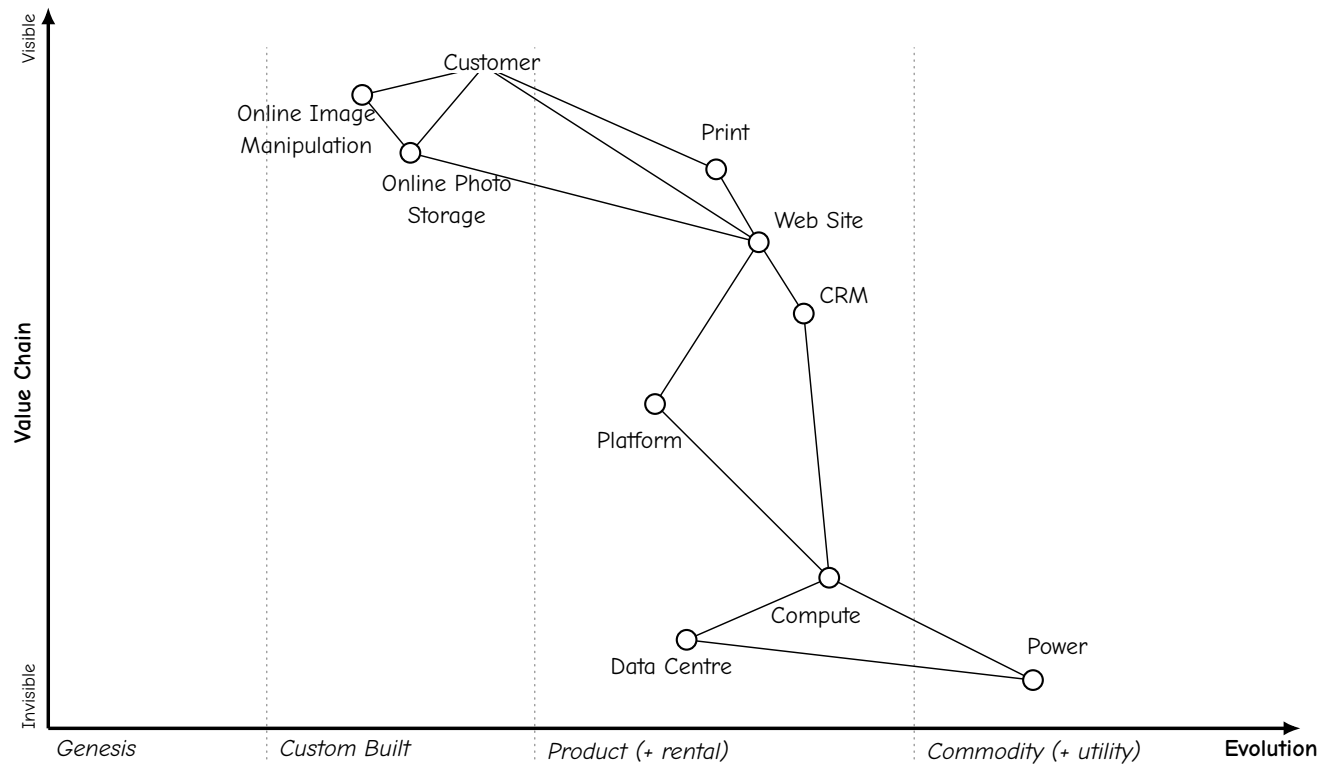
3.1.1 Figure 8: A Map

The reusable source fragment contains ten semantic map objects: a markerless **Customer** anchor and nine open component markers. It uses stable IDs and fourteen links, but otherwise consists only of the semantic commands introduced above.

The complete calibrated fragment is `chapter2-photo-service.tex` in the `examples/wardley` directory. Its structure is:

```
\WardleyAnchor[id=customer]{Customer}[.9732,.3492]
\WardleyComponent[id=image-manipulation]
  {Online Image Manipulation}[.9307,.2516]
\WardleyComponent[id=photo-storage]
  {Online Photo Storage}[.8456,.2902]
% ...six further components...
\WardleyComponent[id=power]{Power}[.0709,.7892]

\WardleyLink{customer}{image-manipulation}
\WardleyLink{customer}{photo-storage}
% ...the remaining value-chain dependencies...
\WardleyLink{data-centre}{power}
```



Book Figure 8. A map.

3.1.2 Figure 11: Advanced Elements of a Map

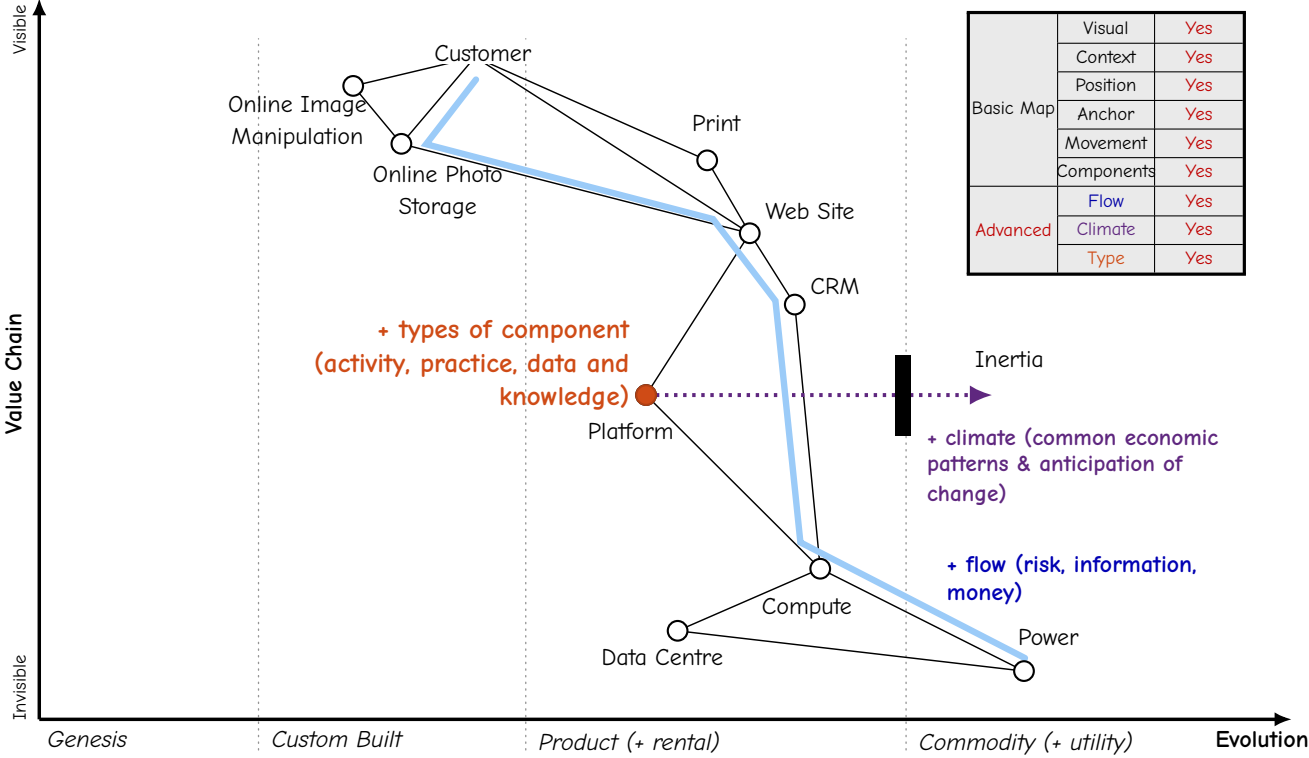
The richer map reuses the same fragment, then adds a type marker, climate movement, inertia, an explicit route and the book key. The route is expressed as measured waypoints so it can pass near, rather than through, component centres:

```
\WardleyType{platform}{}
\WardleyNote[
  at={.587,.473},anchor=north east,
  style={wardley book type note}
]{\shortstack[r]{+ types of component\\
  (activity, practice, data and\\knowledge)}}

\WardleyEvolve[
  id=platform-shift,
  show target=false,
  color=wardleybookclimate,
  line width=1.5pt,
  arrowhead={-{\Latex[length=3mm,width=2.6mm]}},
  style={wardley book climate}
]{platform}{.77}
\WardleyInertia[
  at=.725,size=10.6mm,
  style={wardley book inertia barrier}
]{platform-shift}
\WardleyNote[
  at={.53,.75},anchor=west,
  style={wardley book inertia label}
]{Inertia}
\WardleyNote[
  at={.4285,.7115},anchor=north west,
  style={wardley book climate note}
]{\shortstack[l]{+ climate (common economic\\
  patterns \& anticipation of\\change)}}

\WardleyFlowRoute[
  directed=false,
  color=wardleybookflow,
  line width=2.4pt,
  style={wardley book flow route}
]{.94/.35,.845/.31,.735/.54,.615/.59,.26/.61,.09/.79}
\WardleyNote[
  at={.244,.7275},anchor=north west,
  style={wardley book flow note}
]{\shortstack[l]{+ flow (risk, information,\\money)}}
```

These are semantic, vector-only reconstructions, not embedded or traced raster images. Measured geometry was transferred into normalized map coordinates and physical TeX dimensions, so the public project can compile and test the figures without redistributing book rasters. Their map content adapts Simon Wardley’s Chapter 2 diagrams from “[Finding a path](#)”, licensed under [CC BY-SA 4.0](#). The sources were semantically reconstructed as normalized TikZ coordinates, stable IDs and explicit topology; the complete attribution record is retained in `THIRD_PARTY_NOTICES.md`.



Book Figure 11. Advanced elements of a map.

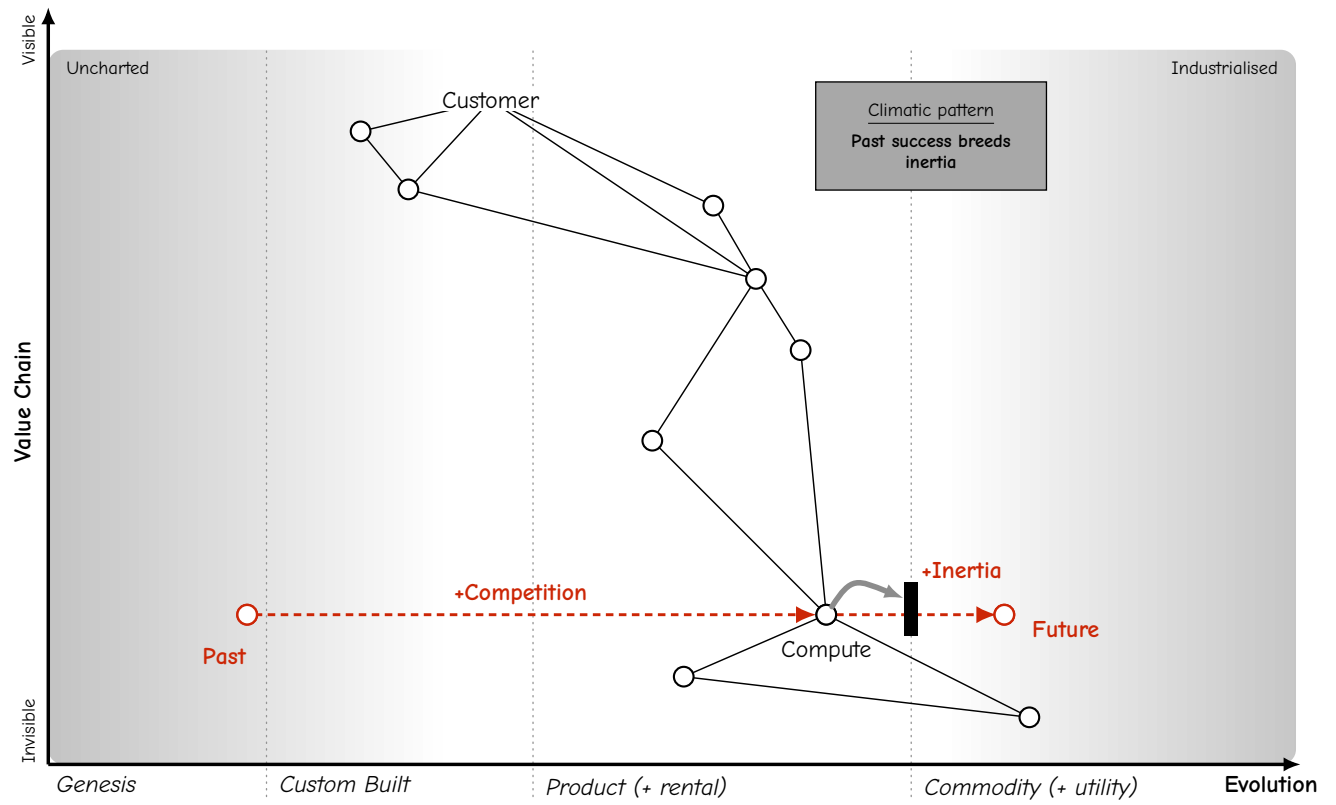
3.2 Book Chapter 3: Evolution States

Figure 26 is from Chapter 3, *Exploring the Map*.² It uses the same component links as Figure 8. **Customer** is a text-only anchor with four links. The map hides all other component labels except **Compute**.

Compute is in late Product. The black inertia bar is on the Product–Commodity boundary. The red dashed line starts at Past. One arrowhead points to **Compute**, and a second arrowhead points to Future. The grey curve shows resistance to that movement. The background has grey edges and a white centre. The climatic callout follows the published raster.

² Simon Wardley. Exploring the map. Wardley Maps, Chapter 3, August 2016b. URL <https://medium.com/wardleymaps/exploring-the-map-ad0266fad59b>. Creative Commons Attribution-ShareAlike 4.0 International

```
\begin{wardleymap}[
  width=16.5cm,height=9.45cm,style=book,
  stages={Genesis,Custom Built,Product (+ rental),Commodity (+ utility)},
  stage boundaries={.1749,.3885,.6916},
  background style={shade,shading=wardley book edge fade,
    rounded corners=2mm}
]
\input{chapter3-inertia.tex}
\WardleyState[id=compute-past,kind=past]{compute} [.2095,.1594]
\WardleyState[id=compute-current,kind=current]{compute}
\WardleyState[id=compute-future,kind=future]{compute} [.2095,.7662]
\WardleyMapLabel[at={.167,.161},anchor=north east]
  {\textcolor{wardleyfiguretwentysixred}{\bfseries Past}}
\WardleyMapLabel[at={.205,.786},anchor=north west]
  {\textcolor{wardleyfiguretwentysixred}{\bfseries Future}}
\WardleyClimate[id=compute-shift,from=compute-past,arrows=future,
  competition={+Competition},
  competition maturity=.3786,competition distance=1mm,
  competition style={wardley figure 26 climate label},
  color=wardleyfiguretwentysixred,line width=1.1pt,
  arrowhead=-{Latex[length=2.7mm,width=2.3mm]},
  style={wardley figure 26 climate path},
  marker style={wardley figure 26 climate marker}]{compute} {.7662}
\WardleyInertia[at=.8771,size=20pt,width=5pt,y offset=.8mm,
  label={+Inertia},label color=wardleyfiguretwentysixred,
  label style={wardley figure 26 inertia label}]
  {compute-shift}
\WardleyResistance{compute}{compute-shift}
\WardleyCallout[kind=climatic,at={.955,.800},
  anchor=north east,style={wardley figure 26 callout}]
  {Past success breeds\\inertia}
\end{wardleymap}
```



Book Figure 26. Past success breeds inertia. Existing suppliers and consumers resist the movement from product to utility.

3.3 Book Chapter 4: Teams and Attitudes

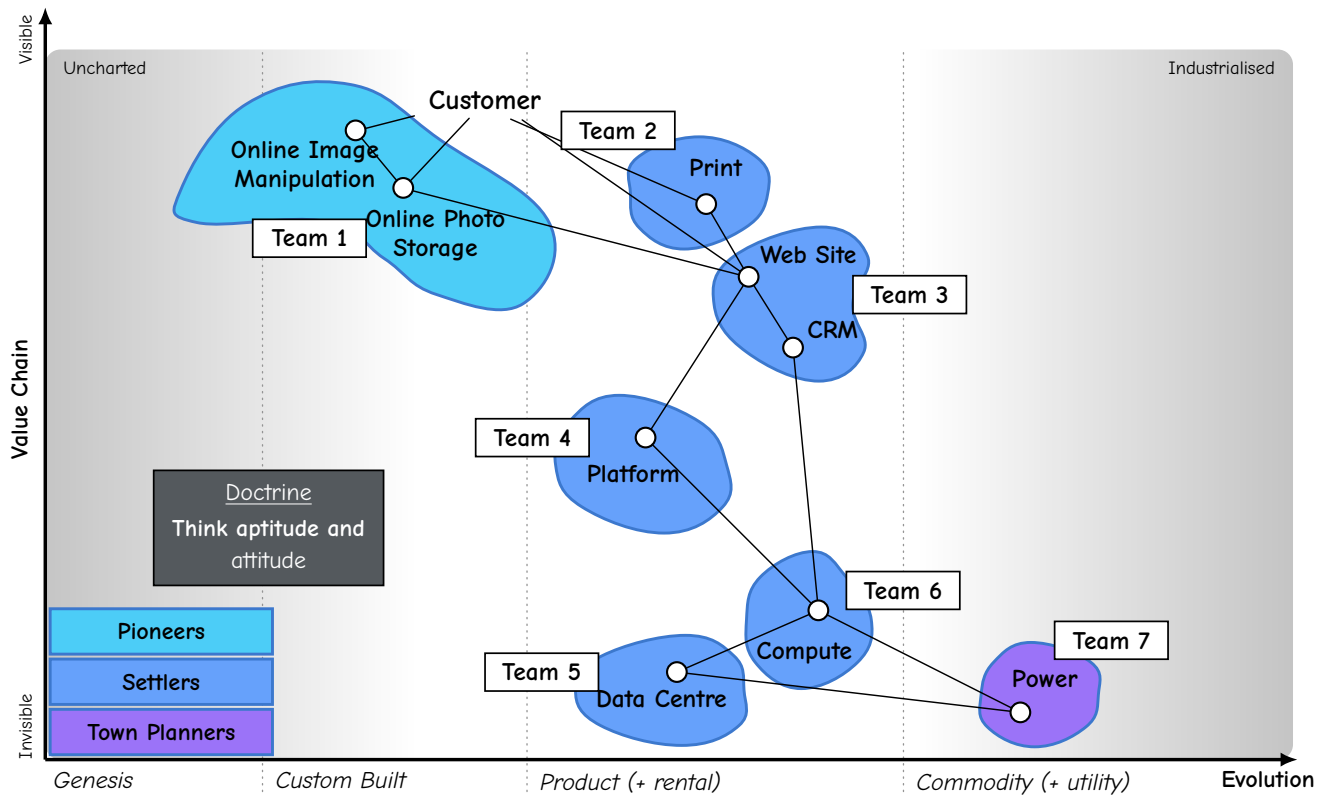
Figure 41 is from Chapter 4, *Doctrine*.³ It uses the same stable IDs and the same fourteen dependencies as Figures 8, 11, and 26. It has nine components and one markerless **Customer** anchor. Figure-specific positions and label offsets change only the drawing. They do not change the graph. **Customer** is outside all team regions. Four visual link offsets reproduce the separate spokes below the published Customer label.

Seven separate team regions show Pioneer, Settler, and Town Planner attitudes. The package paints their fills and outlines below every dependency. It paints component markers, labels, team tags, the doctrine box, and the legend above the dependencies. This order keeps the complete shared graph visible. The `contour` option gives the measured outline as well-spaced `visibility/maturity` points. The package draws one closed smooth curve through them. Figure 41 sets `tension=.72` to round the turns. The `tag at` option fixes each white **Team N** label at its measured position. The doctrine box and the three-bar attitude legend use the same colours and proportions as the published figure.

```
\WardleyRegion[id=team-1,attitude=pioneer,
  members={image-manipulation,photo-storage},
  tension=.72,
  contour={.7563/.4038,.8724/.3168,.9506/.2448,
    .9230/.1610,.8023/.1086,.7563/.1217,
    .7580/.2245,.7057/.2716,.6550/.3135,
    .6420/.3829},
  tag at={.7342,.2117}]{Team 1}
\WardleyCallout[kind=doctrine,at={.326,.179},anchor=center]
  {Think aptitude and\attitude}
\WardleyAttitudeLegend[at={.007,.004},format=bars,
  width=29.4mm,row height=6mm,row gap=6.65mm]
```

The listing shows the Team 1 curve controls and the public overlay controls. The shared executable source defines the common team-tag and doctrine styles, all seven measured smooth contours, and their label positions.

³ Simon Wardley. *Doctrine*. Wardley Maps, Chapter 4, August 2016a. URL <https://medium.com/wardleymaps/doctrine-8bb0015688e5>. Creative Commons Attribution-ShareAlike 4.0 International



Book Figure 41. Aptitude and attitude. Team regions sit behind the shared photo-service graph. Their colours show Pioneer, Settler, and Town Planner attitudes.

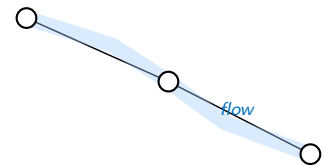
3.4 Book Chapter 8: Flow and Financial Measures

Figure 86 is from Chapter 8, *Keeping the Wolves at Bay*.⁴ It shows a selected flow through the LFP project. **Client** and **Consumer** are markerless anchors. The map has ten components and thirteen dependency links. It shows two **Visitors** measures and two **Conversion Rate** measures. These measures are text. They are not components.

The blue ribbon follows **Client**, **Consumer**, **Microsite**, **Testing Application**, and **Distribution**. It does not add dependency links. The grey labels show context outside the selected flow. The component markers and links stay black.

Use `\WardleyFlowRibbon` to show a broad selected flow. The mandatory list records the semantic route through named map objects. The optional `points` list controls only the visible curve. Each point is a `visibility/maturity` pair.

```
\WardleyFlowRibbon[
  label=flow,line width=2mm,hug=false,
  points={.78/.12,.66/.35,.50/.50,
    .32/.65,.18/.88}
]{client,service,distribution}
```



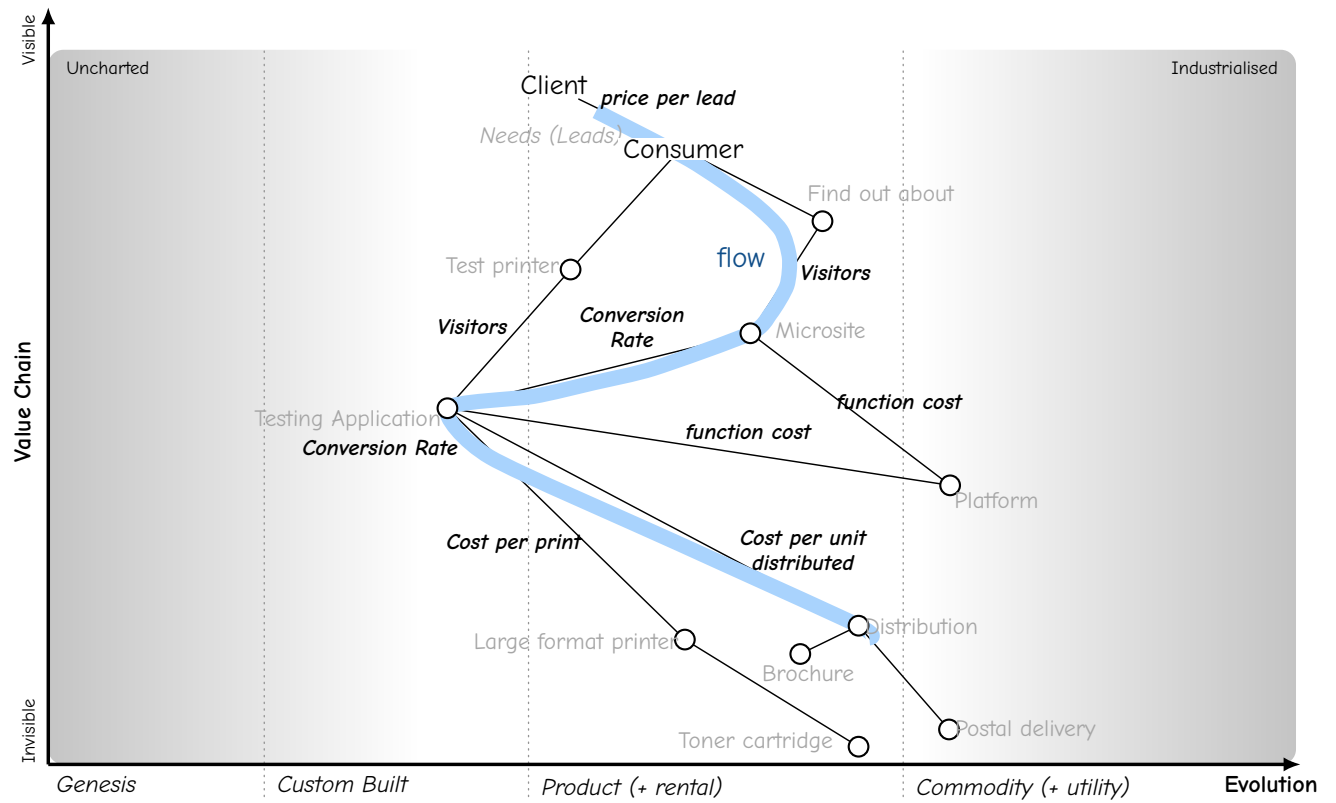
The broad blue line shows one selected flow. The thin black lines remain dependencies.

Use `\WardleyMetric` to attach a measure to one component or to the interface between two components. The `at` option moves the text. It does not change the attachment.

```
\WardleyMetric[id=price-per-lead,
  interface={client,consumer},at={.931,.497}]
{price per lead}
\WardleyMetric[id=conversion-rate,
  on=testing-application,at={.443,.266}]
{Conversion Rate}
```

Reference-image comparison is a local diagnostic only. A maintainer with lawful access may use the ignored `WARDLEY_REFERENCE_DIR` workflow in `doc/acceptance.md`; reference pixels, overlays and difference images must never be committed or published as CI artifacts. Public builds remain raster-free and use semantic traces as their stable release gate.

⁴ Simon Wardley. Keeping the wolves at bay. Wardley Maps, Chapter 8, September 2016d. URL <https://medium.com/wardleymaps/keeping-the-wolves-at-bay-93de21b6b2f8>. Creative Commons Attribution-ShareAlike 4.0 International



Book Figure 86. One flow through the LFP project, from the consumer through the microsite, testing application and distribution to the client.

4 Package Reference

4.1 Checking Maps and Test Output

The package rejects coordinates outside 0..1, non-increasing stage boundaries, invalid themes or component decorators, malformed flow scopes, inverted pipeline ranges, duplicate IDs, ambiguous label references, unknown link endpoints, unknown movement references, movement targets used as dependencies, state markers used as dependencies, invalid region membership or attitude, inverted PST bounds, unattached metrics, unknown inactive references and unknown callout kinds. A map registry is reset between environments, so two maps may safely reuse the same IDs.

Set `trace=true` on a map to emit stable schema-1 log records. The listing below shows the reconstructed logical records:

```
WARDLEY-TRACE|schema|1
WARDLEY-TRACE|map|begin|1|book|
WARDLEY-TRACE|render|book|edge-fade|auto
WARDLEY-TRACE|render-stages|true|true|false
WARDLEY-TRACE|axis-mode|evolution|arrow|label=true
WARDLEY-TRACE|component|power|Power|.07|.79|component|
WARDLEY-TRACE|link|compute|power|
WARDLEY-TRACE|evolve-target|platform-shift|utility-platform
WARDLEY-TRACE|summary|topology|components=9|anchors=1|links=14
WARDLEY-TRACE|summary|movement|flows=1|movements=1|...
WARDLEY-TRACE|map|end|1
```

The schema record precedes every traced map. Records are absent when tracing is disabled. Schema 1 percent-encodes reserved characters in fields. A short logical record is written directly; a longer one is written as numbered **chunk** records whose payloads are bounded so TeX cannot wrap them. Canonical IDs are used wherever a record refers to a map object.

Run `scripts/normalize-trace.py` on a TeX log to validate and reassemble the chunks into one logical record per line. Its default output retains the field escapes; `--json` returns decoded field arrays. Malformed, missing, duplicated, or out-of-order chunks are errors. These records are meant for regression tests and generated-map validation. They separate semantic acceptance from fragile pixel equality.

4.2 *OnlineWardleyMaps Compatibility*

The initial compatibility target is OnlineWardleyMaps version 1.121.0 at commit 71f2aad.¹ The exact contract, legacy forms, and diagnostic policy are documented in `doc/owm-compatibility.md`.

The TeX vocabulary already follows the OWM nouns and coordinate convention. Literal `.owm` files contain free-form text, comments, quoted names and arrow operators that TeX should not try to reinterpret through category-code tricks. The importer is therefore a deterministic converter from `.owm` to generated `.wardley.tex`:

```
python3 scripts/owm2wardley.py map.owm -o map.wardley.tex
```

It validates references and supported syntax, allocates stable IDs, escapes ordinary text and reports failures with source-line locations. The generated fragment needs no shell escape during document compilation.

4.3 *Unsupported Features*

Version 1.0.0 covers the semantic map canvas, the standard object vocabulary, OWM text conversion and acceptance fixtures A1–A5. Remaining OWM constructs such as submaps, URL registries and accelerator markers are still rejected by the strict importer rather than silently flattened.

Profiles, charts and general strategy diagrams are related to Wardley Mapping, but they are not all Wardley Maps. Keeping that boundary lets the package stay small enough that its language remains learnable. A useful test for a proposed feature is whether it changes the meaning of a map or merely draws something near one.

¹ Damon Skelhorn. OnlineWardleyMaps source repository. GitHub repository, July 2026. URL <https://github.com/damonsk/onlinewardleymaps>. Version 1.121.0; baseline commit 71f2aad, dated 4 July 2026

Appendix A - Complete Map Examples

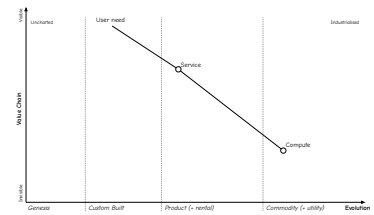
Each entry has a vector thumbnail and the complete source set for one map. Keep the listed files in the same directory. Compile the wrapper file. Do not compile a fragment by itself. The listings read the files that create the public examples, so the appendix stays aligned with the tested source. Complete-map listings use the full page width. Short primitive listings stay beside their margin examples in the main chapters.

Contents

A.1 Simple Map	38
A.2 Book Figure 8: A Map	39
A.3 Book Figure 11: Advanced Elements of a Map	41
A.4 Book Figure 26: Evolution and Inertia	44
A.5 Book Figure 41: Teams and Attitudes	47
A.6 Book Figure 86: Flow and Financial Measures	51

A.1 Simple Map

Compile `simple-map.tex`. This map has no separate fragments.



Simple map thumbnail.

Wrapper: `simple-map.tex`

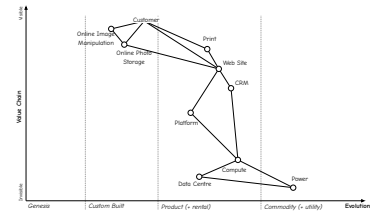
```
% Complete source for the Simple Map in Chapter 1 of the manual.
\documentclass[border=18pt]{standalone}
\IfFileExists{../../wardley-tikz.sty}{%
  \usepackage{../../tikz-network}
  \usepackage{../../wardley-tikz}
}{%
  \usepackage{wardley-tikz}
}

\begin{document}
\begin{wardleymap}[
  width=16.5cm,
  height=9cm,
  style=book,
  stages={Genesis,Custom Built,Product (+ rental),Commodity (+ utility)},
  trace=true
]
  \WardleyAnchor[id=simple-user]{User need} [.96,.25]
  \WardleyComponent[id=simple-service]{Service} [.72,.45]
  \WardleyComponent[id=simple-compute]{Compute} [.28,.76]

  \WardleyLink{simple-user}{simple-service}
  \WardleyLink{simple-service}{simple-compute}
\end{wardleymap}
\end{document}
```

A.2 Book Figure 8: A Map

Compile `fig08-basic-map.tex`. Keep `chapter2-photo-service.tex` beside it.



Book Figure 8 thumbnail.

Wrapper: `fig08-basic-map.tex`

```
% Semantic adaptation of Simon Wardley's "Finding a path", Figure 8.
% Licensed CC BY-SA 4.0: https://creativecommons.org/licenses/by-sa/4.0/
% See THIRD_PARTY_NOTICES.md for attribution and change details.
\documentclass[border={-1.7pt 1.7pt 13.3pt 1.1pt}]{standalone}
\IfFileExists{../../wardley-tikz.sty}{%
  \usepackage{../../tikz-network}
  \usepackage{../../wardley-tikz}
}{%
  \usepackage{wardley-tikz}
}

\begin{document}
\begin{wardleymap}[
  width=16.5cm,
  height=9cm,
  stages={Genesis,Custom Built,Product (+ rental),Commodity (+ utility)},
  stage boundaries={.1751,.3899,.6940},
  style=book,
  show chart labels=false,
  trace=true
]
  \input{chapter2-photo-service.tex}
\end{wardleymap}
\end{document}
```

Fragment: `chapter2-photo-service.tex`

```
% Semantic reconstruction of the Chapter 2 online photo-service map.
% Adapted from Simon Wardley, "Finding a path" (Chapter 2), CC BY-SA 4.0:
% https://creativecommons.org/licenses/by-sa/4.0/
% Changes: normalized coordinates, stable IDs, and reconstructed topology.
% See THIRD_PARTY_NOTICES.md for the full attribution record.
% OWM positional pairs are [visibility, maturity].
\WardleyAnchor[
  id=customer,
  label offset={1.03mm,.52mm},
  label style={wardley book anchor label}
]{Customer}[.9732,.3492]
\WardleyComponent[
  id=image-manipulation,
  label offset={-7.37mm,-4.80mm},
  label style={wardley book multiline label}
]{Online Image\Manipulation}[.9307,.2516]
\WardleyComponent[
  id=photo-storage,
  label offset={4.83mm,-6.34mm},
  label style={wardley book multiline label}
]{Online Photo\Storage}[.8456,.2902]
\WardleyComponent[
  id=print,label offset={1.20mm,5.01mm},label style={wardley book centered label}
]{Print}[.8213,.5353]
\WardleyComponent[
  id=website,label offset={7.96mm,2.98mm},label style={wardley book centered label}
```

```

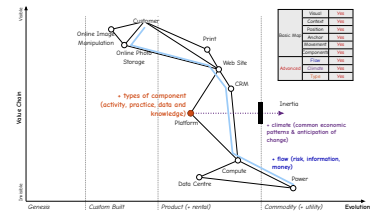
] {Web Site} [.7142, .5694]
\WardleyComponent[
  id=crm, label offset={5.32mm, 2.50mm}, label style={wardley book centered label}
] {CRM} [.6094, .6055]
\WardleyComponent[
  id=platform, label offset={-2.03mm, -4.80mm}, label style={wardley book centered label}
] {Platform} [.4765, .4863]
\WardleyComponent[
  id=compute, label offset={-1.78mm, -5.28mm}, label style={wardley book centered label}
] {Compute} [.2213, .6259]
\WardleyComponent[
  id=data-centre, label offset={-2.05mm, -3.43mm}, label style={wardley book centered label}
] {Data Centre} [.1301, .5116]
\WardleyComponent[
  id=power, label offset={3.22mm, 4.53mm}, label style={wardley book centered label}
] {Power} [.0709, .7892]

\WardleyLink{customer}{image-manipulation}
\WardleyLink{customer}{photo-storage}
\WardleyLink{customer}{print}
\WardleyLink{customer}{website}
\WardleyLink{image-manipulation}{photo-storage}
\WardleyLink{photo-storage}{website}
\WardleyLink{print}{website}
\WardleyLink{website}{crm}
\WardleyLink{website}{platform}
\WardleyLink{crm}{compute}
\WardleyLink{platform}{compute}
\WardleyLink{compute}{data-centre}
\WardleyLink{compute}{power}
\WardleyLink{data-centre}{power}

```

A.3 Book Figure 11: Advanced Elements of a Map

Compile `fig11-advanced-map.tex`. Keep `chapter2-photo-service.tex` beside it.



Book Figure 11 thumbnail.

Wrapper: `fig11-advanced-map.tex`

```
% Semantic adaptation of Simon Wardley's "Finding a path", Figure 11.
% Licensed CC BY-SA 4.0: https://creativecommons.org/licenses/by-sa/4.0/
% See THIRD_PARTY_NOTICES.md for attribution and change details.
\documentclass[border={-1.5pt 1.17pt 8.35pt 2.2pt}]{standalone}
\IfFileExists{../..../wardley-tikz.sty}{%
  \usepackage{../..../tikz-network}
  \usepackage{../..../wardley-tikz}
}{%
  \usepackage{wardley-tikz}
}

\begin{document}
\begin{wardleymap}[
  width=16.5cm,
  height=9cm,
  stages={Genesis,Custom Build,Product (+ rental),Commodity (+ utility)},
  stage boundaries={.1757,.3899,.6947},
  style=book,
  show chart labels=false,
  trace=true
]
  \input{chapter2-photo-service.tex}

  \WardleyType{platform}{}
  \WardleyNote[
    at={.587,.473},anchor=north east,
    style={wardley book type note}
  ]{\shortstack[r]{+ types of component\\(activity, practice, data and\\knowledge)}}

  \WardleyEvolve[
    id=platform-shift,
    show target=false,
    color=wardleybookclimate,
    line width=1.5pt,
    arrowhead={-{\Latex[length=3mm,width=2.6mm]}},
    style={wardley book climate}
  ]{platform}{.77}
  \WardleyInertia[
    at=.725,size=10.6mm,style={wardley book inertia barrier}
  ]{platform-shift}
  \WardleyNote[
    at={.53,.75},anchor=west,style={wardley book inertia label}
  ]{Inertia}
  \WardleyNote[
    at={.4285,.7115},anchor=north west,
    style={wardley book climate note}
  ]{\shortstack[l]{+ climate (common economic\\patterns & anticipation of\\change)}}

  \WardleyFlowRoute[
    directed=false,
    color=wardleybookflow,
    line width=2.4pt,

```

```

    style={wardley book flow route}
]{{.94/.35,.845/.31,.735/.54,.615/.59,.26/.61,.09/.79}
\WardleyNote[
    at={.244,.7275},anchor=north west,
    style={wardley book flow note}
]{{\shortstack[l]{+ flow (risk, information,\\money)}}}

\WardleyLegend[
    at={.8463,.8577},anchor=center,
    style={wardley book legend}
]{{%
\begin{group}
\setlength{\fboxsep}{0pt}%
\setlength{\fboxrule}{1.2pt}%
\setlength{\tabcolsep}{1pt}%
\setlength{\arrayrulewidth}{.4pt}%
\renewcommand{\arraystretch}{1.345}%
\newcommand{\bookkeygroup}[1]{\makebox[1.082cm][c]{#1}}%
\newcommand{\bookkeyitem}[1]{\makebox[1.198cm][c]{#1}}%
\newcommand{\bookkeyvalue}[1]{\makebox[1.089cm][c]{#1}}%
\colorbox{black}{wardleybooklegendfill}{%
\begin{tabular}{c|c|c}
\bookkeygroup{\smash{\raisebox{-10.5mm}{Basic Map}}}
&\bookkeyitem{Visual}&\bookkeyvalue{\textcolor{red!75!black}{Yes}}\\ \cline{2-3}
&\bookkeyitem{Context}&\bookkeyvalue{\textcolor{red!75!black}{Yes}}\\ \cline{2-3}
&\bookkeyitem{Position}&\bookkeyvalue{\textcolor{red!75!black}{Yes}}\\ \cline{2-3}
&\bookkeyitem{Anchor}&\bookkeyvalue{\textcolor{red!75!black}{Yes}}\\ \cline{2-3}
&\bookkeyitem{Movement}&\bookkeyvalue{\textcolor{red!75!black}{Yes}}\\ \cline{2-3}
&\bookkeyitem{Components}&\bookkeyvalue{\textcolor{red!75!black}{Yes}}\\ \hline
\bookkeygroup{\smash{\raisebox{-3.8mm}{\textcolor{red!75!black}{Advanced}}}}
&\bookkeyitem{\textcolor{blue!65!black}{Flow}}&\bookkeyvalue{\textcolor{red!75!black}{Yes}}\\ \cline
{2-3}
&\bookkeyitem{\textcolor{wardleybookclimate}{Climate}}&\bookkeyvalue{\textcolor{red!75!black}{Yes}}\\ \cline{2-3}
&\bookkeyitem{\textcolor{wardleybooktype}{Type}}&\bookkeyvalue{\textcolor{red!75!black}{Yes}}
\end{tabular}}
\end{group}
\end{wardleymap}
\end{document}

```

Fragment: chapter2-photo-service.tex

```

% Semantic reconstruction of the Chapter 2 online photo-service map.
% Adapted from Simon Wardley, "Finding a path" (Chapter 2), CC BY-SA 4.0:
% https://creativecommons.org/licenses/by-sa/4.0/
% Changes: normalized coordinates, stable IDs, and reconstructed topology.
% See THIRD_PARTY_NOTICES.md for the full attribution record.
% OWM positional pairs are [visibility, maturity].
\WardleyAnchor[
    id=customer,
    label offset={1.03mm,.52mm},
    label style={wardley book anchor label}
]{{Customer}[.9732,.3492]
\WardleyComponent[
    id=image-manipulation,
    label offset={-7.37mm,-4.80mm},
    label style={wardley book multiline label}
]{{Online Image\\Manipulation}[.9307,.2516]
\WardleyComponent[
    id=photo-storage,
    label offset={4.83mm,-6.34mm},
    label style={wardley book multiline label}
]{{Online Photo\\Storage}[.8456,.2902]
\WardleyComponent[
    id=print,label offset={1.20mm,5.01mm},label style={wardley book centered label}
]{{Print}[.8213,.5353]
\WardleyComponent[
    id=website,label offset={7.96mm,2.98mm},label style={wardley book centered label}
]{{Web Site}[.7142,.5694]
\WardleyComponent[

```

```

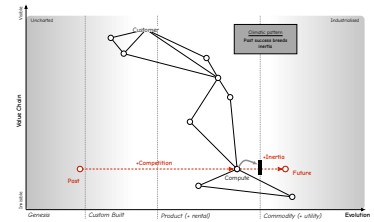
    id=crm,label offset={5.32mm,2.50mm},label style={wardley book centered label}
] {CRM} [.6094,.6055]
\WardleyComponent[
    id=platform,label offset={-2.03mm,-4.80mm},label style={wardley book centered label}
] {Platform} [.4765,.4863]
\WardleyComponent[
    id=compute,label offset={-1.78mm,-5.28mm},label style={wardley book centered label}
] {Compute} [.2213,.6259]
\WardleyComponent[
    id=data-centre,label offset={-2.05mm,-3.43mm},label style={wardley book centered label}
] {Data Centre} [.1301,.5116]
\WardleyComponent[
    id=power,label offset={3.22mm,4.53mm},label style={wardley book centered label}
] {Power} [.0709,.7892]

\WardleyLink{customer}{image-manipulation}
\WardleyLink{customer}{photo-storage}
\WardleyLink{customer}{print}
\WardleyLink{customer}{website}
\WardleyLink{image-manipulation}{photo-storage}
\WardleyLink{photo-storage}{website}
\WardleyLink{print}{website}
\WardleyLink{website}{crm}
\WardleyLink{website}{platform}
\WardleyLink{crm}{compute}
\WardleyLink{platform}{compute}
\WardleyLink{compute}{data-centre}
\WardleyLink{compute}{power}
\WardleyLink{data-centre}{power}

```

A.4 Book Figure 26: Evolution and Inertia

Compile `fig26-evolution-inertia.tex`. Keep `chapter3-inertia.tex` beside it.



Book Figure 26 thumbnail.

Wrapper: `fig26-evolution-inertia.tex`

```
% Semantic adaptation of Simon Wardley's "Exploring the map", Figure 26.
% Licensed CC BY-SA 4.0: https://creativecommons.org/licenses/by-sa/4.0/
% See THIRD_PARTY_NOTICES.md for attribution and change details.
\documentclass[border=18pt]{standalone}
\IfFileExists{../wardley-tikz.sty}{%
  \usepackage{../tikz-network}
  \usepackage{../wardley-tikz}
}{%
  \usepackage{wardley-tikz}
}

\begin{document}
\begin{wardleymap}[
  width=16.5cm,
  height=9.45cm,
  style=book,
  stages={Genesis,Custom Built,Product (+ rental),Commodity (+ utility)},
  stage boundaries={.1749,.3885,.6916},
  background style={shade,shading=wardley book edge fade,rounded corners=2mm},
  trace=true
]
  \input{chapter3-inertia.tex}

  \WardleyState[id=compute-past,kind=past]{compute} [.2095,.1594]
  \WardleyState[id=compute-current,kind=current]{compute}
  \WardleyState[id=compute-future,kind=future]{compute} [.2095,.7662]
  \WardleyMapLabel[at={.167,.161},anchor=north east]
    {\textcolor{wardleyfiguretwentysixred}{\bfseries Past}}
  \WardleyMapLabel[at={.205,.786},anchor=north west]
    {\textcolor{wardleyfiguretwentysixred}{\bfseries Future}}
  \WardleyClimate[
    id=compute-shift,
    from=compute-past,
    arrows=future,
    competition={+Competition},
    competition maturity=.3786,
    competition distance=1mm,
    competition style={wardley figure 26 climate label},
    color=wardleyfiguretwentysixred,
    line width=1.1pt,
    arrowhead={\Latex[length=2.7mm,width=2.3mm]},
    style={wardley figure 26 climate path},
    marker style={wardley figure 26 climate marker}
  ]{compute}{.7662}
  \WardleyInertia[
    at=.8771,
    size=20pt,
    width=5pt,
    y offset=.8mm,
    label={+Inertia},
    label color=wardleyfiguretwentysixred,
    label style={wardley figure 26 inertia label}
  ]{compute-shift}
```

```

\WardleyResistance{compute}{compute-shift}
\WardleyCallout[
  kind=climatic,
  at={.955,.800},
  anchor=north east,
  style={wardley figure 26 callout}
]
{Past success breeds\\inertia}
\end{wardleymap}
\end{document}

```

Fragment: chapter3-inertia.tex

```

% Semantic reconstruction of Chapter 3, Figure 26.
% Adapted from Simon Wardley, "Exploring the map", CC BY-SA 4.0:
% https://creativecommons.org/licenses/by-sa/4.0/
% Changes: measured coordinates, stable IDs, hidden source labels, and
% reconstructed topology. See THIRD_PARTY_NOTICES.md.
% OWM positional pairs are [visibility, maturity].
%
% The raster uses the Chapter 2 photo-service graph. Customer is a text-only
% anchor. The other labels are hidden except for Compute.
\definecolor{wardleyfiguretwentysixred}{RGB}{204,38,6}
\tikzset{
  wardley figure 26 callout/.style={
    fill=black!34,
    text width=2.7cm,
    font=\comicneue\scriptsize,
    inner sep=5pt,
    line width=.5pt,
    minimum height=1.43cm
  },
  wardley figure 26 climate path/.style={
    dash pattern=on 1mm off .72mm,
    line cap=butt
  },
  wardley figure 26 climate marker/.style={line width=.9pt},
  wardley figure 26 climate label/.style={
    font=\comicneue\small\bfseries
  },
  wardley figure 26 inertia label/.style={
    font=\comicneue\small\bfseries
  }
}
\WardleyAnchor[
  id=customer,
  show label=false
]{Customer}[.9292,.3546]
\WardleyComponent[id=image-manipulation,show label=false]
{Online Image Manipulation}[.8858,.2503]
\WardleyComponent[id=photo-storage,show label=false]
{Online Photo Storage}[.8046,.2886]
\WardleyComponent[id=print,show label=false]
{Print}[.7819,.5330]
\WardleyComponent[id=website,show label=false]
{Web Site}[.6794,.5672]
\WardleyComponent[id=crm,show label=false]
{CRM}[.5797,.6030]
\WardleyComponent[id=platform,show label=false]
{Platform}[.4530,.4841]
\WardleyComponent[
  id=compute,
  label offset={0mm,-4.8mm},
  label style={wardley book centered label}
]{Compute}[.2095,.6235]
\WardleyComponent[id=data-centre,show label=false]
{Data Centre}[.1228,.5093]
\WardleyComponent[id=power,show label=false]
{Power}[.0659,.7863]
\WardleyLink{customer}{image-manipulation}

```

```

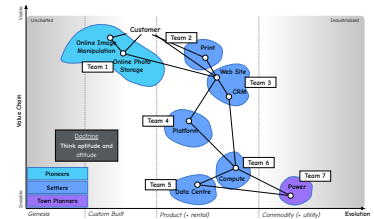
\WardleyLink{customer}{photo-storage}
\WardleyLink{customer}{print}
\WardleyLink{customer}{website}
\WardleyLink{image-manipulation}{photo-storage}
\WardleyLink{photo-storage}{website}
\WardleyLink{print}{website}
\WardleyLink{website}{crm}
\WardleyLink{website}{platform}
\WardleyLink{crm}{compute}
\WardleyLink{platform}{compute}
\WardleyLink{compute}{data-centre}
\WardleyLink{compute}{power}
\WardleyLink{data-centre}{power}

% Draw the label last. Its white field hides the common dependency endpoint,
% as in the published raster.
\WardleyMapLabel[
  at={.9292,.3546},
  style={wardley book anchor label}
]{Customer}

```

A.5 Book Figure 41: Teams and Attitudes

Compile `fig41-teams-attitudes.tex`. Keep `chapter4-photo-teams.tex` and `chapter4-teams-attitudes.tex` beside it.



Book Figure 41 thumbnail.

Wrapper: `fig41-teams-attitudes.tex`

```
% Semantic adaptation of Simon Wardley's "Doctrine", Figure 41.
% Licensed CC BY-SA 4.0: https://creativecommons.org/licenses/by-sa/4.0/
% See THIRD_PARTY_NOTICES.md for attribution and change details.
\documentclass[border=18pt]{standalone}
\IfFileExists{../../wardley-tikz.sty}{%
  \usepackage{../../tikz-network}
  \usepackage{../../wardley-tikz}
}{%
  \usepackage{wardley-tikz}
}

\begin{document}
\begin{wardleymap}[
  width=16.5cm,
  height=9.39cm,
  style=book,
  stages={Genesis,Custom Built,Product (+ rental),Commodity (+ utility)},
  stage boundaries={.1741,.3861,.6878},
  background code={
    \begin{scope}
      \clip[rounded corners=2mm] (0,0) rectangle (1,1);
      \shade[left color=black!23,right color=white]
        (0,0) rectangle (.30,1);
      \fill[white] (.30,0) rectangle (.70,1);
      \shade[left color=white,right color=black!23]
        (.70,0) rectangle (1,1);
    \end{scope}
  },
  trace=true
]
  \input{chapter4-photo-teams.tex}
  \input{chapter4-teams-attitudes.tex}
\end{wardleymap}
\end{document}
```

Fragment: `chapter4-photo-teams.tex`

```
% Book-faithful coordinates for Chapter 4, Figure 41.
% Same IDs and topology as the Chapter 2 photo-service map. The positions,
% link origins and label centres are measured from the published raster.
% CC BY-SA 4.0: https://creativecommons.org/licenses/by-sa/4.0/
% See THIRD_PARTY_NOTICES.md.
% Positional pairs are [visibility, maturity].
\tikzset{
  wardley chapter four label/.style={
    draw=none,fill=none,text=black,align=center,inner sep=0pt,
    font=\comicneue\bfseries\fontsize{9.6pt}{10.8pt}\selectfont
  },
  wardley chapter four customer label/.style={
    wardley chapter four label,fill=white,inner xsep=2pt,inner ysep=.5pt,
    font=\comicneue\bfseries\fontsize{10.4pt}{11pt}\selectfont
  }
}
```

```

\WardleyAnchor[id=customer,show label=false]{Customer}[.9056,.3541]
\WardleyComponent[id=image-manipulation,show label=false]
  {Online Image Manipulation}[.8861,.2487]
\WardleyComponent[id=photo-storage,show label=false]
  {Online Photo Storage}[.8051,.2869]
\WardleyComponent[id=print,show label=false]{Print}[.7823,.5297]
\WardleyComponent[id=website,show label=false]{Web Site}[.6799,.5637]
\WardleyComponent[id=crm,show label=false]{CRM}[.5802,.5993]
\WardleyComponent[id=platform,show label=false]{Platform}[.4535,.4811]
\WardleyComponent[id=compute,show label=false]{Compute}[.2102,.6196]
\WardleyComponent[id=data-centre,show label=false]{Data Centre}[.1233,.5062]
\WardleyComponent[id=power,show label=false]{Power}[.0665,.7815]

% The published Customer label has four separate spokes. The offsets retain
% one semantic Customer anchor while reproducing those visual origins.
\WardleyLink[from offset={.0023,-.0583}]{customer}{image-manipulation}
\WardleyLink[from offset={-.0011,-.0144}]{customer}{photo-storage}
\WardleyLink[from offset={-.0023,.0189}]{customer}{print}
\WardleyLink[from offset={-.0034,.0281}]{customer}{website}
\WardleyLink{image-manipulation}{photo-storage}
\WardleyLink{photo-storage}{website}
\WardleyLink{print}{website}
\WardleyLink{website}{crm}
\WardleyLink{website}{platform}
\WardleyLink{crm}{compute}
\WardleyLink{platform}{compute}
\WardleyLink{compute}{data-centre}
\WardleyLink{compute}{power}
\WardleyLink{data-centre}{power}

\WardleyMapLabel[at={.9298,.3524},style={wardley chapter four customer label}]
  {Customer}
\WardleyMapLabel[at={.8360,.2081},style={wardley chapter four label}]
  {Online Image\Manipulation}
\WardleyMapLabel[at={.7394,.3128},style={wardley chapter four label}]
  {Online Photo\Storage}
\WardleyMapLabel[at={.8349,.5373},style={wardley chapter four label}]
  {Print}
\WardleyMapLabel[at={.7117,.6116},style={wardley chapter four label}]
  {Web Site}
\WardleyMapLabel[at={.6064,.6312},style={wardley chapter four label}]
  {CRM}
\WardleyMapLabel[at={.4033,.4712},style={wardley chapter four label}]
  {Platform}
\WardleyMapLabel[at={.1513,.6083},style={wardley chapter four label}]
  {Compute}
\WardleyMapLabel[at={.0869,.4938},style={wardley chapter four label}]
  {Data Centre}
\WardleyMapLabel[at={.1145,.8010},style={wardley chapter four label}]
  {Power}

```

Fragment: chapter4-teams-attitudes.tex

```

% Figure 41 ownership contours and analysis overlays.
% Contour and label positions are measured from the published raster.
% CC BY-SA 4.0: https://creativecommons.org/licenses/by-sa/4.0/
% See THIRD_PARTY_NOTICES.md.
\tikzset{
  wardley figure 41 team tag/.style={
    minimum width=15mm,minimum height=5mm,
    draw=black,line width=.65pt,fill=white,
    font=\comicneue\bfseries\fontsize{9.5pt}{10pt}\selectfont,
    inner sep=0pt
  },
  wardley figure 41 doctrine/.style={
    minimum width=30.4mm,minimum height=14.2mm,
    draw=black,line width=.65pt,fill=wardleybookdoctrine,text=white,
    font=\comicneue\small,
    align=center,inner sep=1mm
  }
}

```

```

}

\WardleyRegion[
  id=team-1,attitude=pioneer,
  members={image-manipulation,photo-storage},
  tension=.72,
  contour={
    .7563/.4038,.8724/.3168,.9506/.2448,.9230/.1610,
    .8023/.1086,.7563/.1217,.7580/.2245,.7057/.2716,
    .6550/.3135,.6420/.3829
  },
  tag at={.7342,.2117},tag anchor=center,
  tag style={wardley figure 41 team tag}
]{Team 1}

\WardleyRegion[
  id=team-2,attitude=settler,members={print},
  tension=.72,
  contour={
    .877/.524,.847/.571,.797/.579,.749/.561,
    .719/.512,.749/.476,.797/.469,.847/.474
  },
  tag at={.8861,.4591},tag anchor=center,
  tag style={wardley figure 41 team tag}
]{Team 2}

\WardleyRegion[
  id=team-3,attitude=settler,members={website,crm},
  tension=.72,
  contour={
    .750/.622,.709/.659,.641/.647,.574/.656,
    .533/.620,.574/.562,.641/.536,.709/.552
  },
  tag at={.6548,.6928},tag anchor=center,
  tag style={wardley figure 41 team tag}
]{Team 3}

\WardleyRegion[
  id=team-4,attitude=settler,members={platform},
  tension=.72,
  contour={
    .513/.460,.476/.524,.415/.546,.356/.543,
    .319/.496,.356/.430,.415/.409,.476/.420
  },
  tag at={.4534,.3904},tag anchor=center,
  tag style={wardley figure 41 team tag}
]{Team 4}

\WardleyRegion[
  id=team-5,attitude=settler,members={data-centre},
  tension=.72,
  contour={
    .175/.513,.146/.552,.098/.560,.048/.556,
    .020/.510,.048/.445,.098/.425,.146/.446
  },
  tag at={.1232,.3979},tag anchor=center,
  tag style={wardley figure 41 team tag}
]{Team 5}

\WardleyRegion[
  id=team-6,attitude=settler,members={compute},
  tension=.72,
  contour={
    .293/.615,.257/.642,.197/.662,.137/.651,
    .100/.606,.137/.569,.197/.562,.257/.573
  },
  tag at={.2382,.6875},tag anchor=center,
  tag style={wardley figure 41 team tag}
]{Team 6}

\WardleyRegion[
  id=team-7,attitude=town-planner,members={power},
  tension=.72,
  contour={
    .165/.790,.137/.838,.091/.844,.046/.834,
    .018/.793,.046/.755,.091/.750,.137/.760
  },
  tag at={.1680,.8544},tag anchor=center,

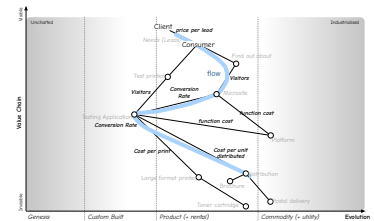
```

```
    tag style={wardley figure 41 team tag}
  ]{Team 7}

\WardleyCallout[
  kind=doctrine,at={.3263,.1790},anchor=center,
  style={wardley figure 41 doctrine}
]{Think aptitude and\\attitude}
\WardleyAttitudeLegend[
  at={.0069,.0039},format=bars,
  width=29.4mm,row height=6.0mm,row gap=6.65mm
]
```

A.6 Book Figure 86: Flow and Financial Measures

Compile `fig86-flow-metrics.tex`. Keep `chapter8-lfp-project.tex` and `chapter8-flow-metrics.tex` beside it.



Book Figure 86 thumbnail.

Wrapper: fig86-flow-metrics.tex

```
% Semantic adaptation of Simon Wardley's "Keeping the wolves at bay", Figure 86.
% Licensed CC BY-SA 4.0: https://creativecommons.org/licenses/by-sa/4.0/
% See THIRD_PARTY_NOTICES.md for attribution and change details.
\documentclass[border=18pt]{standalone}
\IfFileExists{../../wardley-tikz.sty}{%
  \usepackage{../../tikz-network}
  \usepackage{../../wardley-tikz}
}{%
  \usepackage{wardley-tikz}
}

\begin{document}
\begin{wardleymap}[
  width=16.5cm,
  height=9.45cm,
  style=book,
  stages={Genesis,Custom Built,Product (+ rental),Commodity (+ utility)},
  stage boundaries={.1731,.3849,.6852},
  background code={
    \begin{scope}
      \clip[rounded corners=2mm] (0,0) rectangle (1,1);
      \shade[left color=black!23,right color=white]
        (0,0) rectangle (.30,1);
      \fill[white] (.30,0) rectangle (.70,1);
      \shade[left color=white,right color=black!23]
        (.70,0) rectangle (1,1);
    \end{scope}
  },
  trace=true
]

\input{chapter8-lfp-project.tex}
\input{chapter8-flow-metrics.tex}
\end{wardleymap}
\end{document}
```

Fragment: chapter8-lfp-project.tex

```
% Book-faithful topology for Chapter 8, Figure 86.
% Adapted from Simon Wardley, "Keeping the wolves at bay", CC BY-SA 4.0:
% https://creativecommons.org/licenses/by-sa/4.0/
% Changes: normalized coordinates, stable IDs and vector text.
% See THIRD_PARTY_NOTICES.md for the full attribution record.
% Positional pairs are [visibility, maturity].
\definecolor{wardleyfigureeightysixcontext}{RGB}{166,166,166}
\tikzset{
  wardley figure 86 label/.style={
    draw=none,fill=none,text=black,align=center,inner sep=0pt,
    font=\comicneue\fontsize{9.6pt}{10.6pt}\selectfont
  },
  wardley figure 86 anchor label/.style={
    wardley figure 86 label,fill=white,inner xsep=2pt,inner ysep=.5pt,
    font=\comicneue\fontsize{10.4pt}{11pt}\selectfont
  },
}
```

```

wardley figure 86 context/.style={
  wardley figure 86 label,text=wardleyfigureeightysixcontext,
  font=\comicneue\fontsize{8.8pt}{9.8pt}\selectfont
},
wardley figure 86 subtitle/.style={
  wardley figure 86 label,text=wardleyfigureeightysixcontext,
  font=\comicneue\itshape\fontsize{8.8pt}{9.8pt}\selectfont
}
}

% Client and Consumer are markerless anchors in the published map.
\WardleyAnchor[id=client,show label=false]{Client} [.9270,.4311]
\WardleyAnchor[id=consumer,show label=false]{Consumer} [.8615,.5070]

\WardleyComponent[id=test-printer,show label=false]
  {Test printer} [.6925,.4186]
\WardleyComponent[id=find-out-about,show label=false]
  {Find out about} [.7601,.6205]
\WardleyComponent[id=microsite,show label=false]{Microsite} [.6033,.5627]
\WardleyComponent[id=testing-application,show label=false]
  {Testing Application} [.4984,.3199]
\WardleyComponent[id=platform,show label=false]{Platform} [.3905,.7228]
\WardleyComponent[id=distribution,show label=false]
  {Distribution} [.1941,.6494]
\WardleyComponent[id=large-format-printer,show label=false]
  {Large format printer} [.1747,.5102]
\WardleyComponent[id=brochure,show label=false]{Brochure} [.1545,.6027]
\WardleyComponent[id=toner-cartridge,show label=false]
  {Toner cartridge} [.0248,.6494]
\WardleyComponent[id=postal-delivery,show label=false]
  {Postal delivery} [.0489,.7219]

\WardleyLink[from offset={.004,-.006}]{client}{consumer}
\WardleyLink{consumer}{find-out-about}
\WardleyLink{consumer}{test-printer}
\WardleyLink{find-out-about}{microsite}
\WardleyLink{test-printer}{testing-application}
\WardleyLink{microsite}{testing-application}
\WardleyLink{microsite}{platform}
\WardleyLink{testing-application}{platform}
\WardleyLink{testing-application}{distribution}
\WardleyLink{testing-application}{large-format-printer}
\WardleyLink{distribution}{brochure}
\WardleyLink{distribution}{postal-delivery}
\WardleyLink{large-format-printer}{toner-cartridge}

% The raster fades contextual labels but keeps markers and links black.
\WardleyMapLabel[at={.951,.405},style={wardley figure 86 anchor label}]
  {Client}
\WardleyMapLabel[at={.881,.403},style={wardley figure 86 subtitle}]
  {Needs (Leads)}
\WardleyMapLabel[at={.861,.509},style={wardley figure 86 anchor label}]
  {Consumer}
\WardleyMapLabel[at={.696,.364},style={wardley figure 86 context}]
  {Test printer}
\WardleyMapLabel[at={.799,.667},style={wardley figure 86 context}]
  {Find out about}
\WardleyMapLabel[at={.608,.619},style={wardley figure 86 context}]
  {Microsite}
\WardleyMapLabel[at={.482,.240},style={wardley figure 86 context}]
  {Testing Application}
\WardleyMapLabel[at={.370,.760},style={wardley figure 86 context}]
  {Platform}
\WardleyMapLabel[at={.194,.700},style={wardley figure 86 context}]
  {Distribution}
\WardleyMapLabel[at={.169,.423},style={wardley figure 86 context}]
  {Large format printer}
\WardleyMapLabel[at={.128,.609},style={wardley figure 86 context}]
  {Brochure}
\WardleyMapLabel[at={.031,.567},style={wardley figure 86 context}]
  {Toner cartridge}

```

```
\WardleyMapLabel[at={.048,.783},style={wardley figure 86 context}]
{Postal delivery}
```

Fragment: chapter8-flow-metrics.tex

```
% Figure 86 selected flow and financial measures.
% Adapted from Simon Wardley, "Keeping the wolves at bay", CC BY-SA 4.0.
% See THIRD_PARTY_NOTICES.md.
\definecolor{wardleyfigureeightysixflow}{RGB}{169,211,253}
\definecolor{wardleyfigureeightysixflowtext}{RGB}{16,78,137}
\tikzset{
  wardley figure 86 metric/.style={
    draw=none,fill=none,text=black,align=center,inner sep=0pt,
    font=\comicneue\bfseries\itshape
    \fontsize{8.4pt}{9.6pt}\selectfont
  },
  wardley figure 86 flow label/.style={
    draw=none,fill=none,text=wardleyfigureeightysixflowtext,
    align=center,inner sep=0pt,
    font=\comicneue\fontsize{11pt}{11pt}\selectfont
  },
  wardley figure 86 ribbon/.style={
    opacity=1,line cap=butt
  }
}

\WardleyFlowRibbon[
  label={},color=wardleyfigureeightysixflow,line width=2.0mm,
  tension=.42,hug=false,style=wardley figure 86 ribbon,
  points={
    .914/.439,.846/.514,
    .787/.564,.748/.587,.709/.594,.670/.592,.631/.579,
    .6033/.5627,
    .554/.485,.534/.437,.515/.389,.4984/.3199,
    .430/.354,.310/.504,.1941/.6494,.177/.658
  }
]{{client,consumer,microsite,testing-application,distribution}}
\WardleyMapLabel[at={.7065,.5554},style={wardley figure 86 flow label}]
{flow}

\WardleyMetric[
  id=price-per-lead,interface={client,consumer},
  at={.931,.497},anchor=center,style={wardley figure 86 metric}
]{{price per lead}}
\WardleyMetric[
  id=visitors-find,interface={find-out-about,microsite},
  at={.688,.631},anchor=center,style={wardley figure 86 metric}
]{{Visitors}}
\WardleyMetric[
  id=visitors-test,interface={test-printer,testing-application},
  at={.613,.340},anchor=center,style={wardley figure 86 metric}
]{{Visitors}}
\WardleyMetric[
  id=conversion-micro,interface={microsite,testing-application},
  at={.612,.468},anchor=center,style={wardley figure 86 metric}
]{{Conversion\\Rate}}
\WardleyMetric[
  id=conversion-application,on=testing-application,
  at={.443,.266},anchor=center,style={wardley figure 86 metric}
]{{Conversion Rate}}
\WardleyMetric[
  id=function-micro-platform,interface={microsite,platform},
  at={.507,.682},anchor=center,style={wardley figure 86 metric}
]{{function cost}}
\WardleyMetric[
  id=function-application-platform,
  interface={testing-application,platform},
  at={.465,.561},anchor=center,style={wardley figure 86 metric}
]{{function cost}}
\WardleyMetric[
  id=cost-per-unit,interface={testing-application,distribution},
```

```

    at={.300,.605},anchor=center,style={wardley figure 86 metric}
  ]{Cost per unit\\distributed}
\\WardleyMetric[
    id=cost-per-print,interface={testing-application,large-format-printer},
    at={.309,.373},anchor=center,style={wardley figure 86 metric}
  ]{Cost per print}

```

References

- Jürgen Hackl. *tikz-network Manual*, August 2019. URL <https://mirrors.ctan.org/graphics/pgf/contrib/tikz-network/tikz-network.pdf>. Version 1.1.
- Jürgen Hackl. *tikz-network* source repository. GitHub repository, January 2021. URL <https://github.com/hackl/tikz-network>. Baseline commit 06a72d0, dated 18 January 2021.
- A. P. Moore. Structural deepening. SuperLattice, January 2020. URL <https://latticecut.github.io/wardleymaps/2020/01/05/structural-deepening.html>. Creative Commons Attribution-ShareAlike 4.0 International.
- Damon Skelhorn. OnlineWardleyMaps source repository. GitHub repository, July 2026. URL <https://github.com/damonsk/onlinewardleymaps>. Version 1.121.0; baseline commit 71f2aad, dated 4 July 2026.
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- Simon Wardley. Finding a path. Wardley Maps, Chapter 2, August 2016c. URL <https://medium.com/wardleymaps/finding-a-path-cdb1249078c0>. Creative Commons Attribution-ShareAlike 4.0 International.
- Simon Wardley. Keeping the wolves at bay. Wardley Maps, Chapter 8, September 2016d. URL <https://medium.com/wardleymaps/keeping-the-wolves-at-bay-93de21b6b2f8>. Creative Commons Attribution-ShareAlike 4.0 International.