OMNICHANNELX

ONLINE JUNE 13-16, 2022

Workshop

Improving usability with an omnichannel-ready writing methodology

precision content

Speaker

Sophie Gravel

Precision Content

Learning consultant

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About me

Sophie Gravel

- Learning consultant and Trainer at Precision Content®
- Key responsibilities:

  - Writer training
  - Training development
  - Evolving our content standard

In partnership with: <oXygen/> XML Editor

About Precision Content

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Purpose of this session

Learn some fundamental techniques to re-structure content.

Work through application exercises to apply these techniques.

At the end of this session, you will be able to restructure your content according to the basic principles of the Precision Content® methodology.

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Agenda

- A mini-introduction to microcontent
- The five fundamentals of Precision Content® Writing
- Key writing methods
- Application exercise: Applying the methodology

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A mini-introduction to *microcontent*

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Microcontent

Microcontent is content that is

- about one primary idea, fact, or concept
- easily scannable
- labelled for clear identification and meaning
- appropriately written and formatted for use anywhere and any time it is needed, and
- It's awesome!

Microcontent is the starting point for effective omnichannel delivery.

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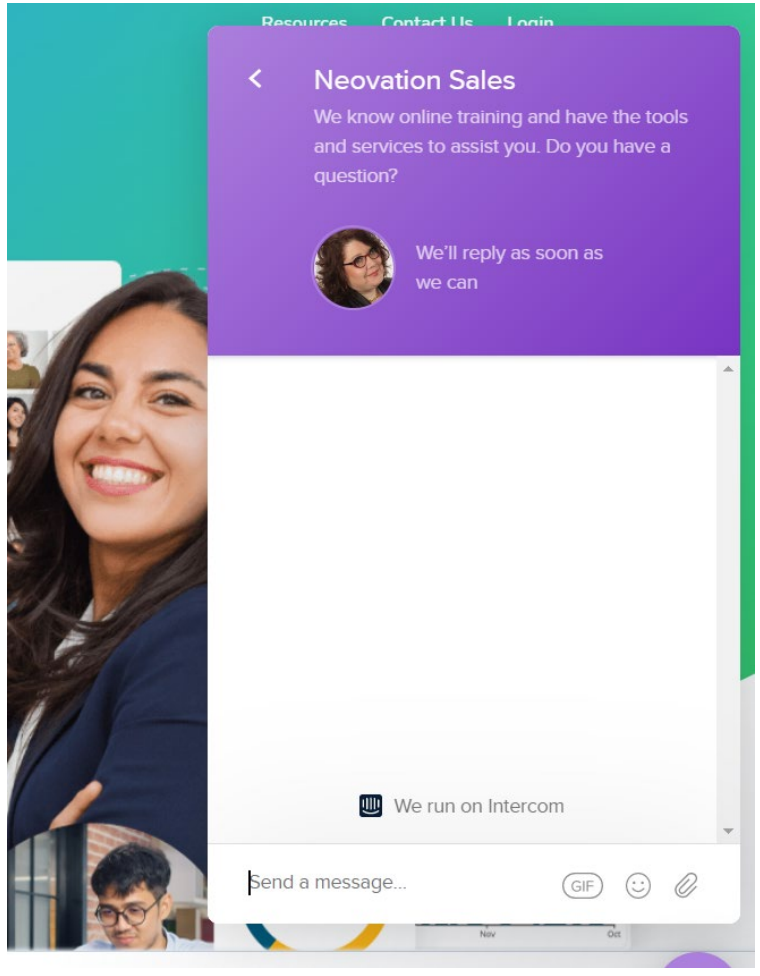
It’s not microcontent just because it’s small.



Hey Siri

Google

how to change a tire

All Videos Images Shopping News More Tools

About 2,540,000,000 results (0.61 seconds)

Stuck with a flat tire? here's How to Change a Tire in 10 steps

1. Find a Safe Place to Pull Over. ...
2. Check for Materials. ...
3. Loosen the Lug Nuts. ...
4. Lift Your Vehicle Off the Ground. ...
5. Remove the Lug Nuts and the Tire. ...
6. Place the Spare Tire on the Car. ...
7. Replace the Lug Nuts. ...
8. Lower Your Vehicle and Begin Tightening.

More items... • Sept 22, 2017

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Building blocks of information

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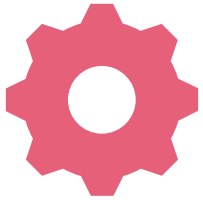
Principles of Intelligent Microcontent

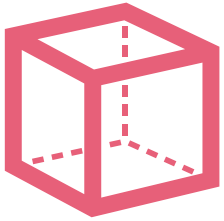
Focus

Microcontent must be about only one subject



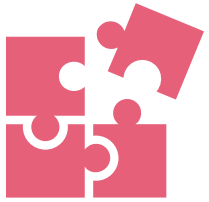
Function

Microcontent must be categorized to identify user intent



Structure

Microcontent must use predictable patterns and language



Context

Microcontent must be easily relatable to other content

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Precision Content® Writing Part 1: Fundamentals

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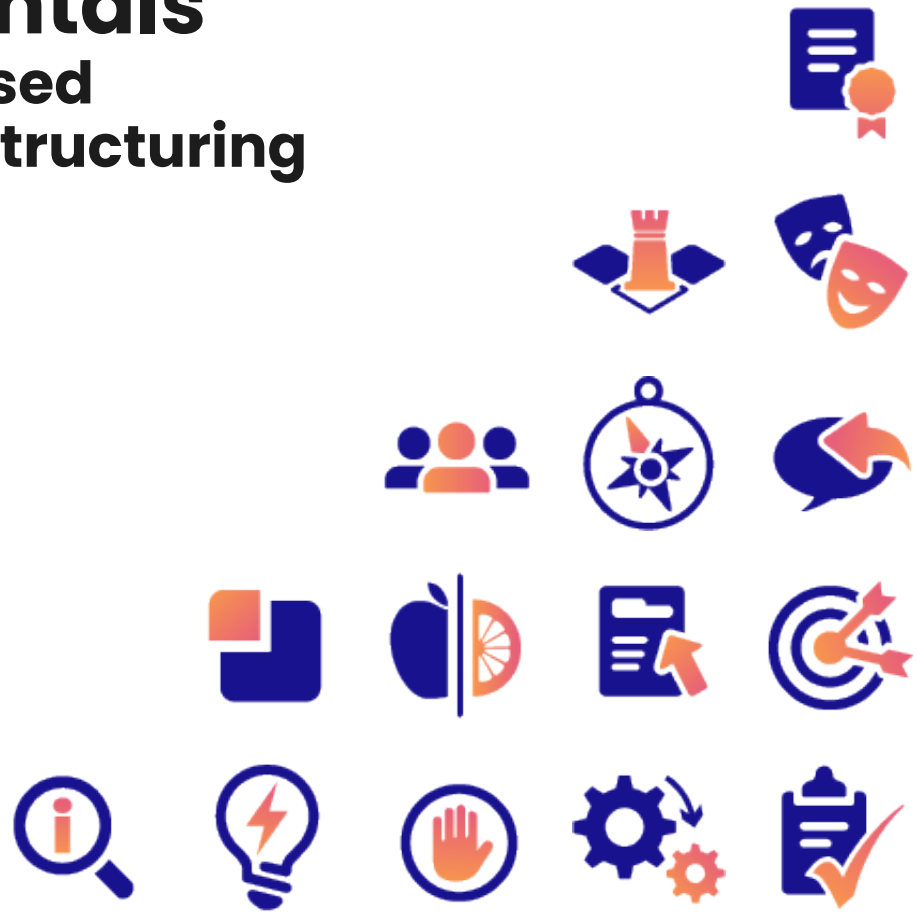
Fundamentals

A science-based approach to structuring content



One content standard

Two approaches to content creation

Three guiding principles

Four organizing functions

Five information types

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A Unified content standard is a series of rules and instructions for writing content that is applied across the entire organization.

These rules

- govern the source content, and
- specify the grammar, writing structures, and organization of the source content.

The unified content standard facilitates information sharing and updating across the organization.

One Unified Content Standard

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Two Approaches to content creation

Content appealing to

emotion	logic

• To emotionally engage the reader
• Techniques:
  • narrative style
  • varied vocabulary and sentence structure
  • withholding information
• Writer-driven
• Meant to be READ
	• To convey information that readers use
	• Techniques:
	  • consistent modular structure
	  • concise, direct vocabulary
	  • use of graphics
	• Reader-driven
	• Meant to be USED

Feed the brain what it needs, when it needs it.

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Emotion vs Logic: which is which?

Write a story for your 5 year old.	Emotion
Send an email to persuade your boss to give you a raise.	Emotion
Compare features of a new app with an existing app.	Logic
Present your scientific findings to a pharmaceutical company.	Logic
List the scores from the weekend's soccer games.	Logic
Describe the highlights of a soccer game.	Emotion

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Three Guiding principles

Identify your **audience**

Identify the **purpose** of the information

Identify the **intended user response** of the information

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Use the Three Guiding Principles

Plan a deliverable

Determine the use of specific content

Determine how to write and structure specific content

Determine metadata

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Four
Organizing functions

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Experiment #1: Memorization

How many words can you memorize in 20 seconds?

hockey bear **baseball** Holland *coyote*

cricket *wolverine* **wrestling** Switzerland

Germany lynx WOLF COUGAR France ***polo***

Sweden *Spain* golf *fox* NORWAY *hurdles*

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Experiment #1: Memorization

How many words can you memorize in 20 seconds?

How many did you remember?

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Organizing function: Consistency

1. Filter out the noise

hockey bear baseball Holland

Switzerland Germany lynx wolf

coyote cricket wolverine wrestling

cougar France polo Sweden

Spain golf fox Norway hurdles

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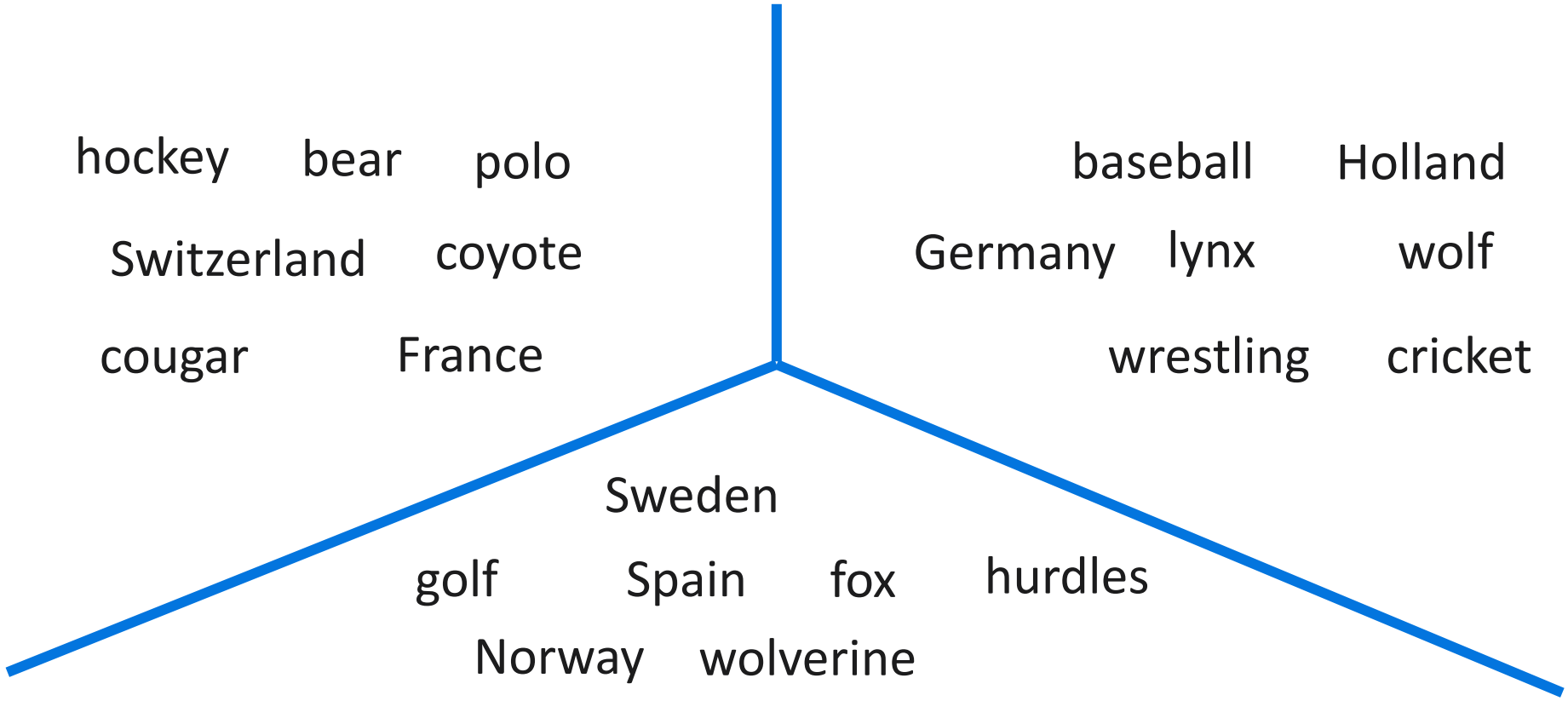
Organizing function: Chunking

2. Break into smaller groupings



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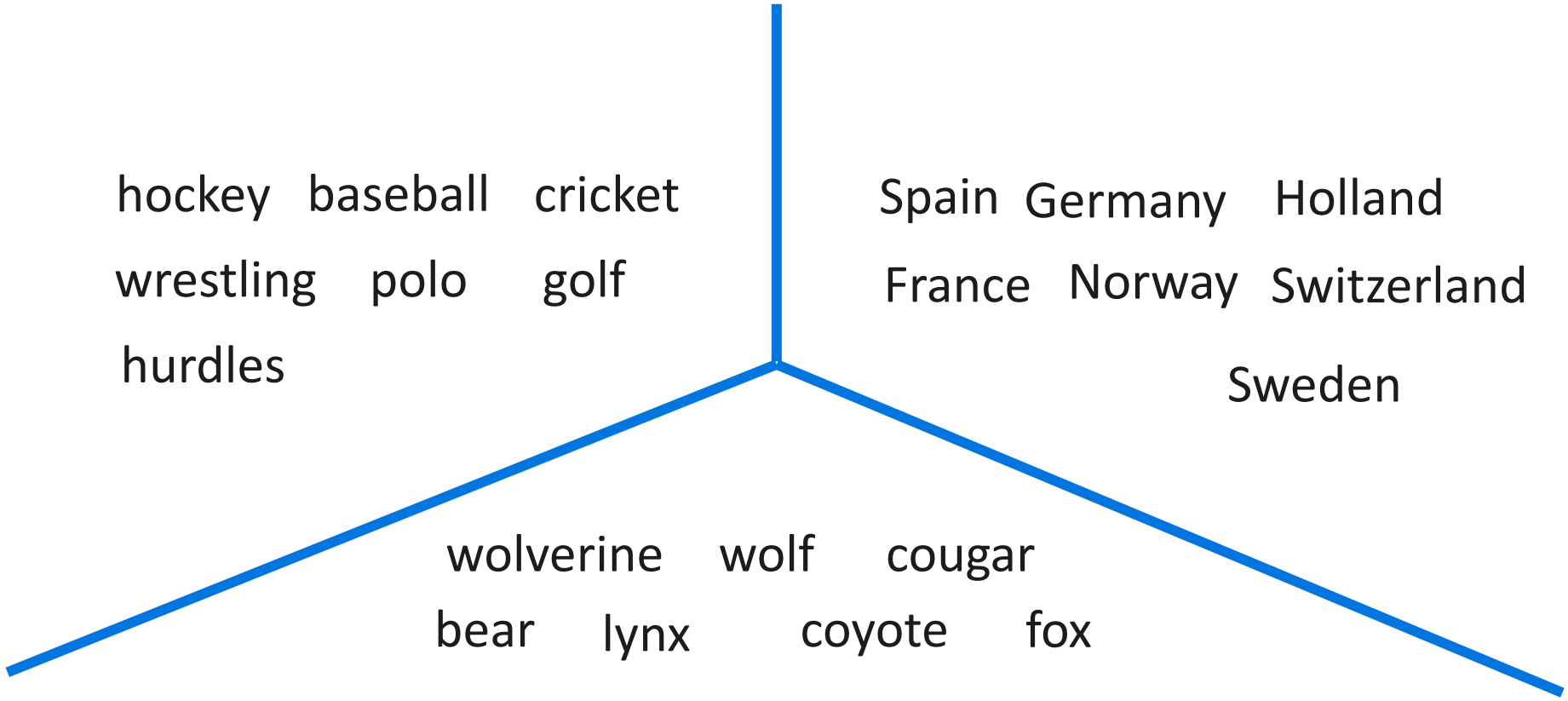
Organizing function: Relevance

3. Organize words by similarities



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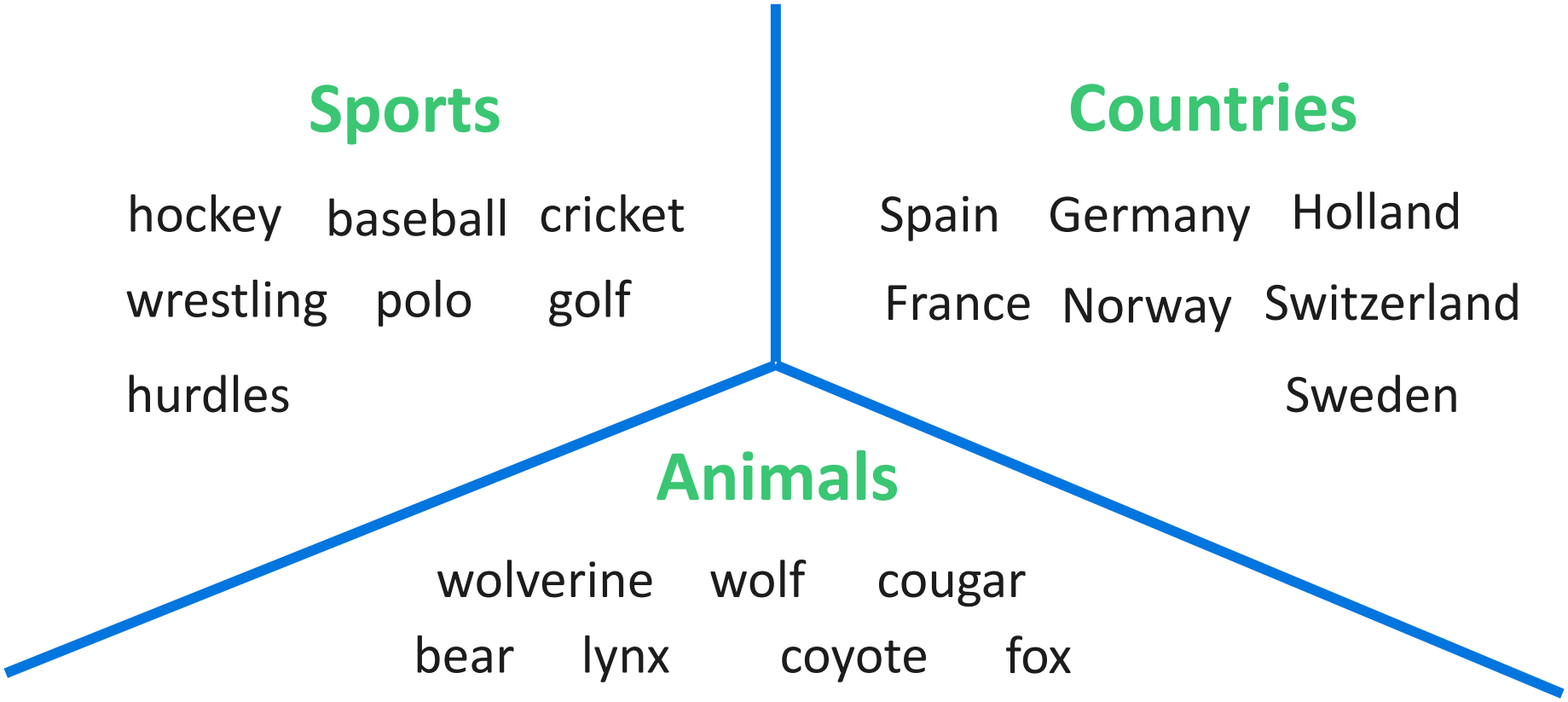
Organizing function: Titling

4. Classify and title the groups



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The result

How well did you do?

Sports	Countries	Animals
hockey	Holland	bear
baseball	Switzerland	coyote
cricket	Germany	cougar
wrestling	France	lynx
polo	Sweden	wolverine
golf	Spain	fox
hurdles	Norway	wolf

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Experiment #2: Let's try this again

Now how many words can you memorize in 20 seconds?

Cities	Trees	Farm animals
London	Oak	Cow
Paris	Maple	Pig
New York	Ash	Sheep
Tokyo	Birch	Horse
Sydney	Pine	Chicken
Cairo	Spruce	Goat
Buenos Aires	Cedar	Duck

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Experiment #2: Memorization

How many words can you memorize in 20 seconds?

How many did you remember?

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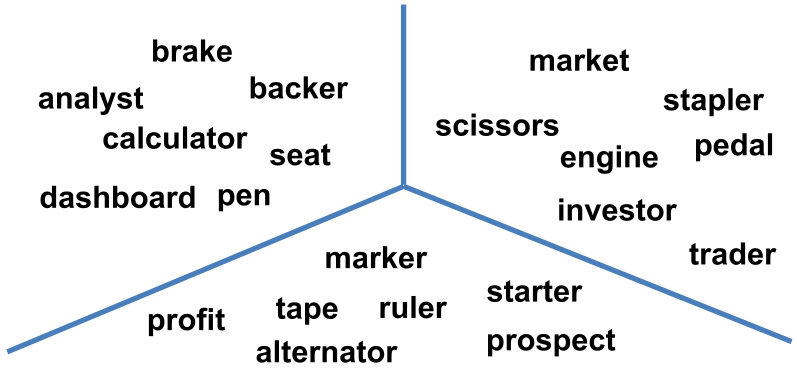
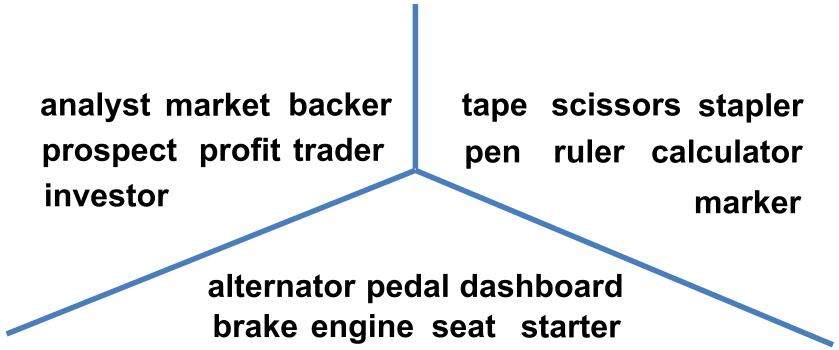
The Four Organizing functions

1. Consistency

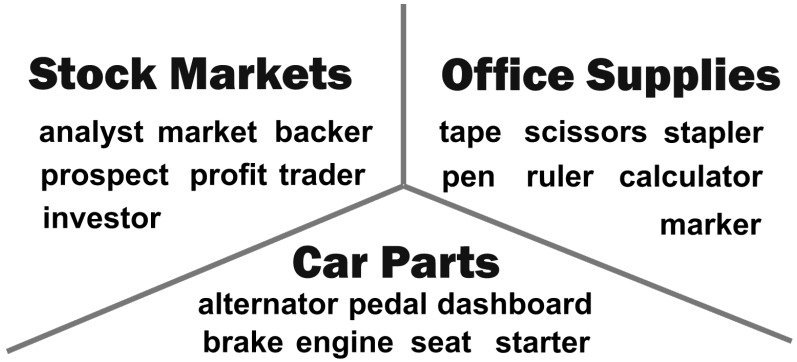
2. Chunking



3. Relevance



4. Titling



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Applying the four Organizing functions

Chunking

Create bite-sized pieces. Up to 7 +/- 2

- items in a list
- rows in a table
- blocks in a topic, or
- topics in a map.

Titling

Name everything.

- Name every block.
- Name every map.
- Name every table column.

Relevance

Group similar items.

- Separate relevance? Separate block.
- Irrelevant? Delete it.

Consistency

Use similar terms and structures.

- Pick a term and stick with it.
- Use the same sequence of blocks.
- Use consistent styles.

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Apply the four Organizing functions

Chunking

Chunking is an organizing function that requires a writer to break content into small, digestible pieces of information, or chunks, for improved reader comprehension. Chunking creates easily digestible pieces of content to solve the information overload problem for users. Always split content into small, focused chunks that adhere to the recommended limits. Limit the number of items in a chunk to between five and nine (7 +/- 2). Avoid breaking content into more than nine items. When you have more than nine items, create another chunk.

Chunking

Chunking is an organizing function that requires a writer to break content into small, digestible pieces of information, or chunks, for improved reader comprehension.

Purpose of chunking

Chunking creates easily digestible pieces of content to solve the information overload problem for users.

Chunking rule

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Chunking limits

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What questions are we asking?

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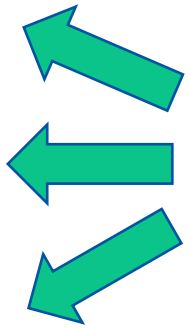

What is chunking?
What is the purpose of chunking?
What are the chunking rules?
What are the chunking limits?

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What questions are we asking?

What is chunking?

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Apply the Organizing functions

Application exercise

1. Chunk the content by relevance
2. Add a title to each chunk
3. Apply consistency

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Five Information types

Information typing is a classification system for content, based on the function of the content.

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Precision Content Information types

Reference

STATES something the reader needs to KNOW

Principle

ADVISES the reader about what they need TO DO or NOT DO, and WHEN

Concept

EXPLAINS something the reader needs to UNDERSTAND

Process

ILLUSTRATES to the reader HOW SOMETHING WORKS and WHAT HAPPENS

Task

INSTRUCTS the reader HOW TO DO something

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Information Type examples

If the goal of the information is to …	Then use the information type
• list the nutritional facts for Cherry Cola	…Reference
• explain what a soft drink is	Concept
• warn you not to drop a Mentos in your cola bottle	Principle
• illustrate how cola is bottled	Process
• instruct you on how to safely open your can of cola	Task
• advise you on the best practices for recycling cans	Principle
• tell the customer this week's sale price for cola	Reference
• show you how you can turn your cola can into a nifty craft project	Task

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Our questions

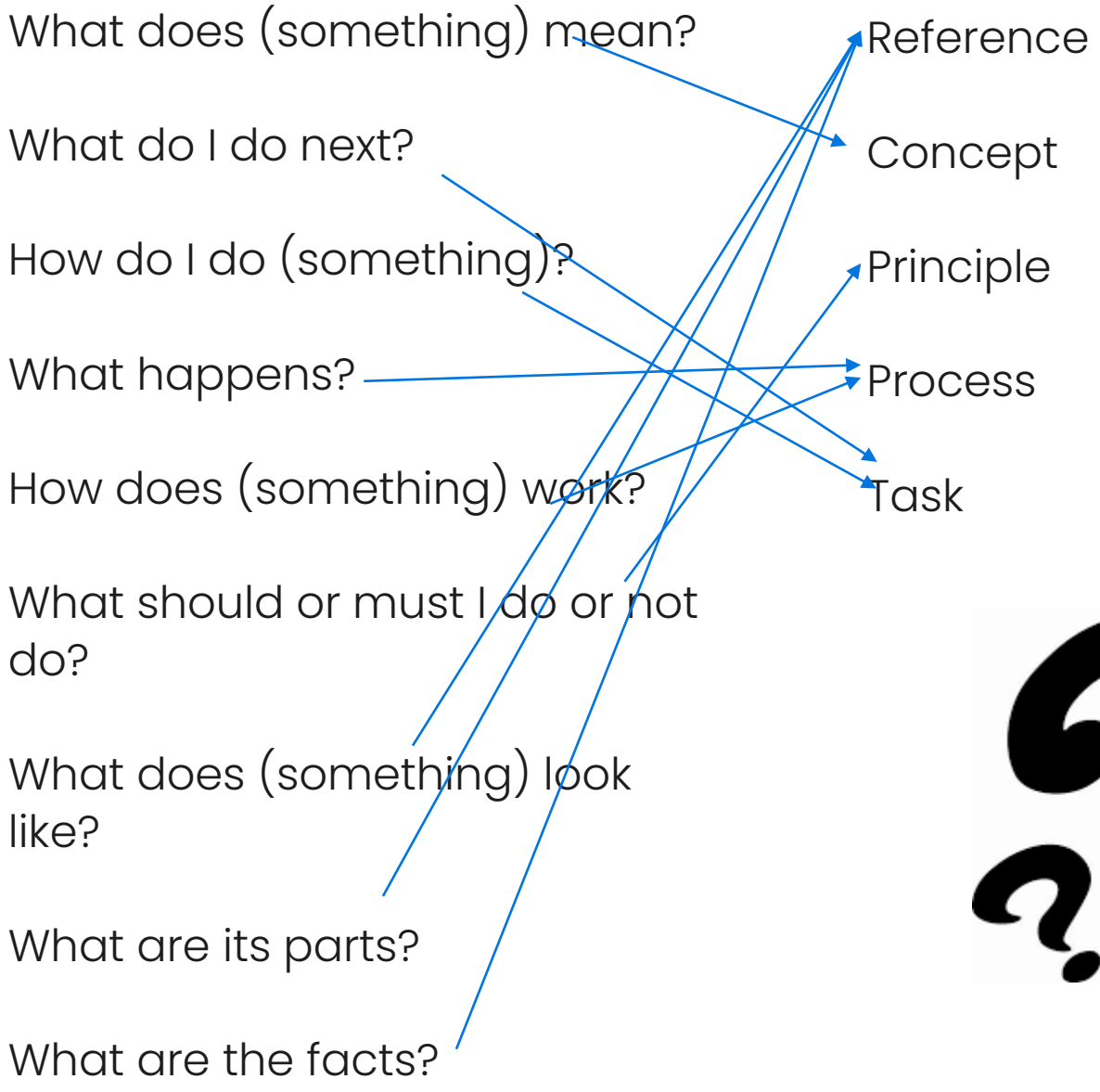
Reference: STATES something the reader needs to KNOW

Principle: ADVISES the reader about what they need TO DO or NOT DO, and WHEN

Concept: EXPLAINS something the reader needs to UNDERSTAND

Process: ILLUSTRATES to the reader HOW SOMETHING WORKS and WHAT HAPPENS

Task: INSTRUCTS the reader HOW TO DO something



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Apply the Information types

Application exercise

Identify the information type.

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Precision Content® Writing Part 2: Methods

- Title standards
- General Writing Rules
- Characters and punctuation
- Plain Language
- Writing structures for information types

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Effective titles for blocks and topics

Information type	Title	Example
Reference	What is it about, and what about what it's about?	"Consolidated core mainframe release schedules"
Concept	The term being defined in plural form when possible	"SSRI inhibitors"
Principle	Conveys the weight of the principle such as caution or guide. Formula = principle + gravity	"Data security regulations"
Process	Activity described in gerund form ("...ing") OR How [the items] work	"Hiring employees" OR "How drug testing works"
Task	Command, 2nd person active-voice	"Change a cardholder address"

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Apply the title standard

Application exercise

For each chunk, write an effective title.
Ensure it adheres to the standard for that information type.

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Information types in a topic

Concept

Reference

Principle

Principle

Chunking

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Chunking limits

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- Avoid breaking content into more than nine items.
- When you have more than nine items, create another chunk.

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Information types inform writing style

Structure of titles

Block and topic construction

Writing style for voice and tense

Specific writing structures

Rules for short descriptions

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How the Principles of Intelligent Microcontent relate to the Precision Content Fundamentals

Microcontent

- Focus
- Function
- Structure
- Context

Fundamentals

- 4 Organizing Functions
- 3 Guiding Principles
  5 Information Types
- 4 Organizing Functions
- [Metadata]
  3 Guiding Principles

Methods

General Writing Rules
Plain Language
Ambiguous Characters
Writing Structures

General writing rules

> "The fundamental purpose of scientific discourse is not the mere presentation of information and thought but rather its actual communication
>
> > It does not matter how pleased an author might be to have converted all the right data into sentences and paragraphs;
>
> it matters only whether a large majority of the reading audience accurately perceives what the author had in mind."
>
> George Gopen and Judith Swan
> *The Science of Scientific Writing*

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Constructing sentences

Write sentences to describe one main point including

- one main agent
- one main action, and
- one main outcome.

Write sentences using the appropriate perspective.

Place the verb after the subject with as few intervening words as possible.

Place the main idea at the end the sentence or phrase, in the stress position.

Present multiple stress positions as an unordered list.

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Agency and perspective

An **agent** is the person initiating the action.

The **perspective** is the point of view of the sentence.

In the sentence
"Peter sent Jane an invitation in the mail."
Peter is the agent. We also read this action from his perspective

Is this also the case in the sentence
"Jane received an invitation in the mail from Peter." ?

What about *"The invitation reached Jane by mail."* ?

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Stress position examples

Place the main idea at the end the sentence or phrase, in the stress position.

Place the main idea at the end the sentence or phrase.
OR
At the end the sentence or phrase, place the main idea.

An agent is the person initiating the action.
OR
The person initiating the action is an agent.

Microcontent is the starting point for effective omnichannel delivery.
OR
The starting point for effective omnichannel delivery is microcontent.

Characters and punctuation

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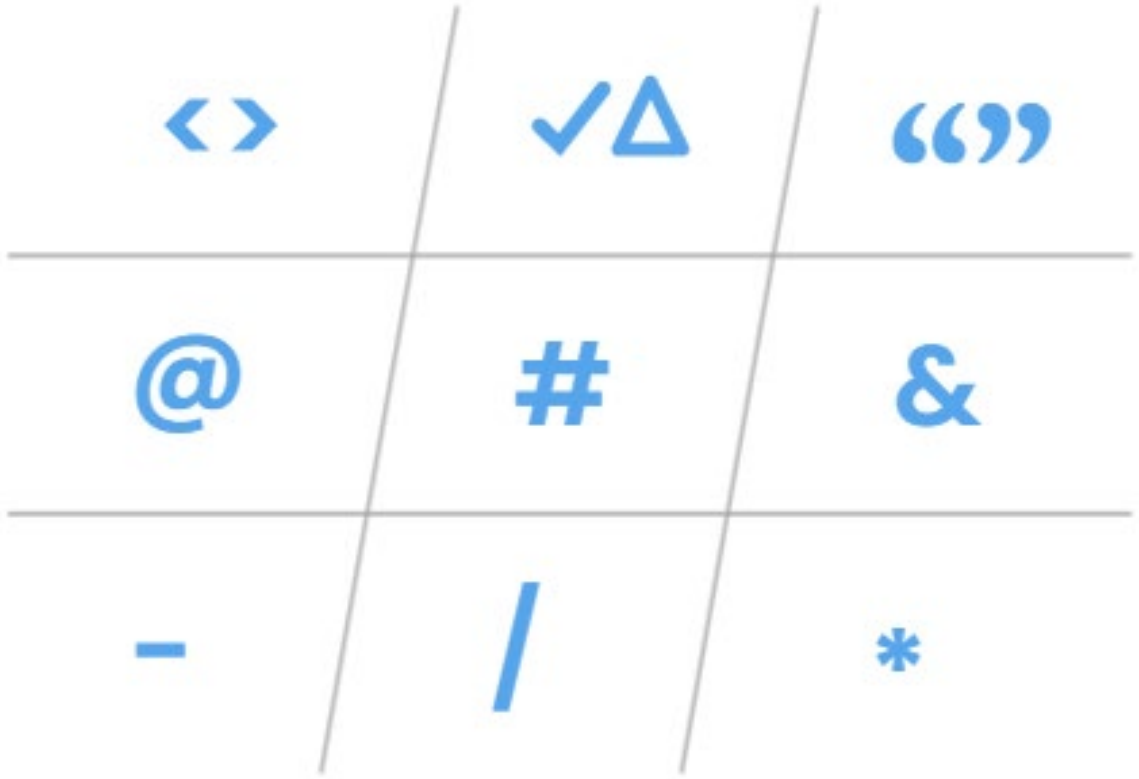
Ambiguous characters

Avoid ambiguous characters.



Replace these characters with their equivalent words.

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Use Parentheses appropriately

Reserve parentheses for "also known as" explanations, such as

- spelling out abbreviations or acronyms, and
- providing common or commercial names.

Where parenthetical content adds a new idea to a sentence, separate the idea into its own sentence.

Where parenthetical content simply restates or reinforces a point, evaluate the content for redundancy.

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Use of commas

Always use the Oxford Comma with serial sentence

For example, "We ate apples, grapes, and pears."

Do not end list items with commas.

Rewrite your sentence without a comma when it makes sense to do so.

Plain language fundamentals

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Plain language

Plain language is content designed for your intended audience to

- quickly find and understand what they need, and
- use what they find.

Plain language principles
Key principles of plain language include:

- Writing must be easy to read, understand, and use.
- Writing must be clear, correct, concise, and complete.

Plain language test
If the audience can find, understand, and use content easily and correctly, then the content is plain language.

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Plain language parts

Appropriate structure	Effective sentences	Effective words
Provide useful titles follow the titling principle Write in short sections and sentences • use blocks, and • avoid long sentences.	Direct your writing to the user, based on their needs "**you** [must]", rather than "**all employees** [must]" Use active voice, and the simplest tense possible "the child climbs the tree" rather "the tree is climbed by the child" Use simple present tense wherever possible "completes", rather than "is completing" or "will complete" Use lists and tables follow the best practices of lists and tables	Use clear, familiar words • "requires", rather than "necessitates" • "must", rather than "shall" Avoid excess words • "before", rather than "in advance of" • "to", rather than "in order to" • "this is critical", rather than "this is really critical" • "give notice", rather than "give advance notice"

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Apply the general writing rules

Application exercise

Do the following tasks to the Application exercise:

- apply the general writing rules
- apply plain language, and
- remove the ambiguous characters.

Core writing structures

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Lists

Unordered list	Ordered list	Item-description list
All cakes require • flour • butter, and • a liquid such as milk or water. **Inline list** All cakes require (a) flour, (b) butter, and (c) a liquid such as milk or water.	These are the most common drinks ordered in our restaurants: 1. Coffee 2. Tea 3. Juice 4. Carbonated water	Each month has an associated birth stone. **January** – Garnet **February** – Amethyst **March** – Aquamarine **April** – Diamond **May** – Emerald

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List best practices

- Stem sentences
- Four-or-more rule
- Easy to read
- Parallel construction

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Stem sentences

A stem sentence is a lead-in phrase or sentence used to introduce any list, table, or figure.

The punctuation of the stem sentence varies, depending on its structure and what it introduces.

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Stem sentence punctuation for unordered lists

If the stem sentence …	Then …
forms a complete sentence	use a colon.
is a sentence fragment	use no punctuation.
introduces a list of standalone sentences	use a colon.

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Four-or-more rule for lists

Always use a list when

- there are four or more list items, or
- at least one list item has four or more words.

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Application of the four-or-more rule

The team included a writer and a SME.

The team included a new writer and an experienced SME.

The team included a new writer and a witty, engaging facilitator.

The team included
- a new writer, and
- a witty, engaging facilitator.

The team included a new writer, an experienced SME, an editor, and an enthusiastic sponsor.

The team included
- a new writer
- an experienced SME
- an editor, and
- an enthusiastic sponsor.

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Parallel construction

Parallel construction is a writing technique in which similar clauses or sentences use the same grammatical structure.

To test for parallel construction in an unordered list, read the stem sentence with each list item separately.

The sales department has

- 25 Sales reps
- 12 Junior sales reps
- manages a $2.3 million annual budget, and
- hires 4 to 5 interns per year.

The sales department ~~has~~

- has 25 Sales reps
- has 12 Junior sales reps
- manages a $2.3 million annual budget, and
- hires 4 to 5 interns per year.

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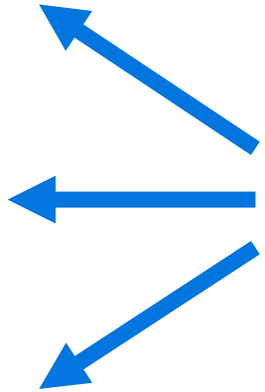
Lists must be easy to read

- The mean percentage of Type I PNH RBCs was 33.198% in the Drug A group at baseline and this reduced to 6.114% at Week 16, a mean CFB of –28.159%. In the Drug B group, the mean of Type I PNH RBCs was 28.040% at baseline and this increased to 37.466% at Week 16, a mean CFB of 8.701%.
- The mean percentage of Type II PNH RBCs was 20.219% in the Drug A group at baseline and this reduced to 2.518% at Week 16, a mean CFB of –15.086%. In the Drug B group, the mean percentage of Type II PNH RBCs was 22.654% at baseline and this reduced to 16.511% at Week 16, a mean CFB of –6.194%.
- The mean percentage of Type III PNH RBCs was 46.581% in the Drug A group at baseline and this increased to 91.337% at Week 16, a mean CFB of 42.738%. In the Drug B group, the mean percentage of Type III PNH RBCs was 50.276% at baseline and this reduced to 46.044% at Week 16, a mean CFB of –3.509%.
- In both treatment groups, changes from baseline in the proportion of PNH granulocytes and monocytes were minimal. In the Drug A group, the CFB ranged from 0.53% to 1.53% between Week 2 and Week 16. In the Drug B group, the CFB ranged from –0.062% to 5.00%



Don’t do this!

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Tables

Generic rules for tables

Tables must be easy to read

Measure	Details
Type I PNH RBCs	The mean percentage of Type I PNH RBCs was 34.198% in the Drug A group at baseline and this reduced to 6.114% at Week 16, a mean CFB of –28.084%. In the Drug B group, the mean of Type I PNH RBCs was 24.040% at baseline and this increased to 33.466% at Week 16, a mean CFB of 9.426%.
Type II PNH RBCs	The mean percentage of Type II PNH RBCs was 21.219% in the Drug A group at baseline and this reduced to 3.508% at Week 16, a mean CFB of −17.711%. In the Drug B group, the mean percentage of Type II PNH RBCs was 23.654% at baseline and this reduced to 17.511% at Week 16, a mean CFB of −6.143%.
Type III PNH RBCs	The mean percentage of Type III PNH RBCs was 46.581% in the Drug A group at baseline and this increased to 91.337% at Week 16, a mean CFB of 44.756%. In the Drug B group, the mean percentage of Type III PNH RBCs was 50.276% at baseline and this reduced to 46.044% at Week 16, a mean CFB of −3.509%.
PNH granulocytes and	In both treatment groups, changes from baseline in the proportion of PNH granulocytes and monocytes were minimal. In the Drug A group, the CFB ranged from 0.53% to 1.53% between Week 2 and

Don't do this!

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Tables must be easy to read

Drug A had significant impacts on all three PNH RBC types.

Two types of reference tables

1. Comparison

Measure	Drug A	Drug B
Type 1 baseline	34.198	24.040
Type 1 week 16	6.114	33.466
Type 1 mean CFB	**-28.084**	**9.426**
Type 2 baseline	21.219	23.654
Type 2 week 16	3.508	17.511
Type 2 mean CFB	**-17.711**	**-6.143**
Type 3 baseline	46.581	50.276
Type 3 week 16	91.337	46.044
Type 3 mean CFB	**44.756**	**-4.232**
PNH granulocytes and monocytes baseline	0.530	0.062
PNH granulocytes and monocytes week 16	1.530	5.000
PNH granulocytes and monocytes		

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Tables must be easy to read

Two types of reference tables

2. Look-up

Drug A had significant impacts on all three PNH RBC types.

Drug	Baseline	Week 16	Mean CFB
Type 1 PNH RBCs	34.198	6.114	-28.084
Type 2 PNH RBCs	21.219	3.508	-17.711
Type 3 PNH RBCs	46.581	91.337	44.756

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Visuals

Generic rules for visuals
Stem sentence structure

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Visuals

Examples of visuals

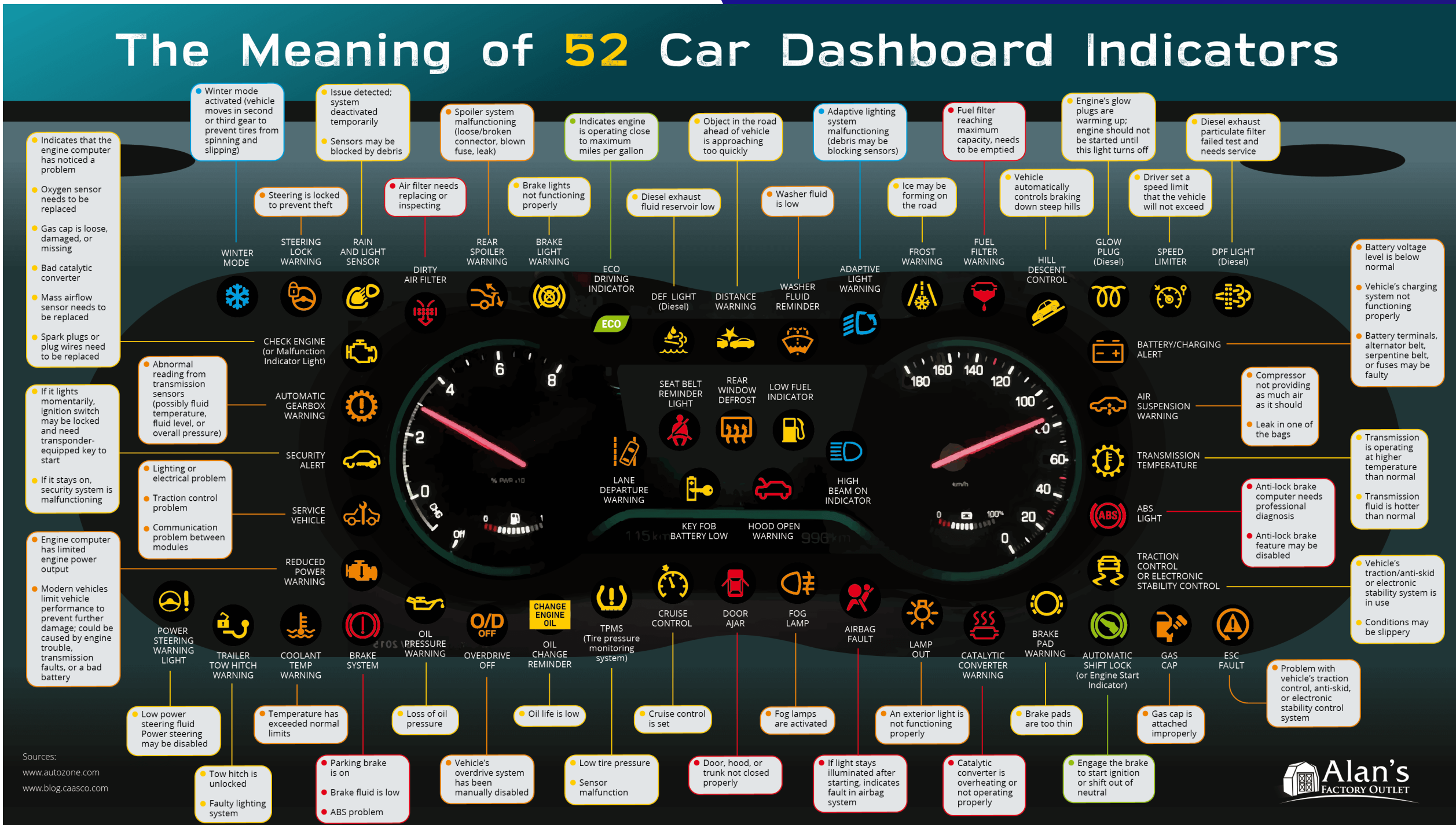
Examples include

- graphic references
- graphic principles
- graphic process
- diagrams
- graphs and charts
- videos, and
- animations.

General rules for visuals

- Keep visuals clear and simple.
- Avoid positional references – "below" or "the following“.
- Always use a period to end the stem sentence.
- Write the stem sentence to summarize the visual.

The Meaning of 52 Car Dashboard Indicators



Sources:
www.autozone.com
www.blog.caasco.com

Alan's Factory Outlet

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Precision Content Writing structures

Reference

Unordered list

Inline list

Item-description list

Ordered list

Look-up table

Comparison table

Graphic reference

Graph or chart

Diagram

Part-description

Part-function

Concept

Unordered list

Inline list

Item-description list

Ordered list

Definition

Example

Counter-example

Analogy

Contrast table

Principle

Unordered list

Inline list

Principle statement

Graphic principle

Principle note

Process

Unordered list

Inline list

Ordered list

Stages

When-then condition tree

Graphic process

Task

Unordered list

Inline list

Ordered list

Steps

If-then decision tree

Graphic task

Core writing structures

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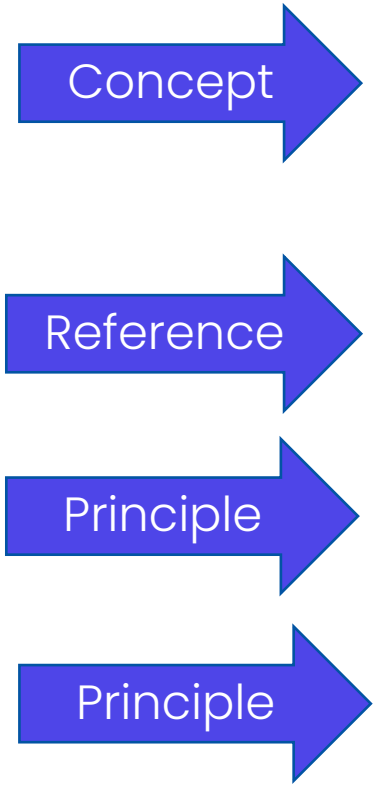
Topic



Chunking

Definition

Chunking is an organizing function that requires a writer to break content into small, digestible pieces of information, or chunks, for improved reader comprehension.

Purpose of chunking

Chunking creates easily digestible pieces of content to solve the information overload problem for users.

Chunking rule

Always split content into small, focused chunks that adhere to the recommended limits.

Chunking limits

Limit the number of items in a chunk to between five and nine (7 +/- 2).

- Avoid breaking content into more than nine items.
- When you have more than nine items, create another chunk.

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Three Guiding principles

Identify your **audience**

Identify the **purpose** of the information

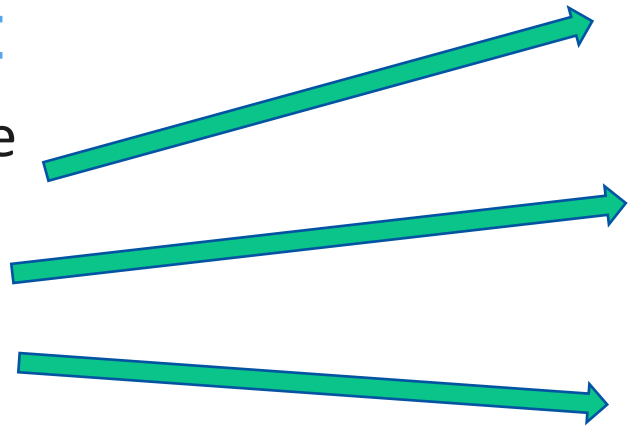
Identify the **intended user response** of the information

Precision Content Writing structures

Principle statement

Principle article

- Sub-article
- Sub-article



Chunking limits

Limit the number of items in a chunk to between five and nine (7 +/- 2).

- Avoid breaking content into more than nine items.
- When you have more than nine items, create another chunk.

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Precision Content Writing structures

Principle statement example

Written in 2nd person, active voice, present tense, imperative

Written as complete, standalone sentences

The main rule

Supporting rules

Supporting rules

Chunking limits

Standard title structure

Limit the number of items in a chunk to between five and nine (7 +/- 2).

- Avoid breaking content into more than nine items.
- When you have more than nine items, create another chunk.

More supporting rules (sub-articles), as needed, up to the chunking limit

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Structure of a Principle topic

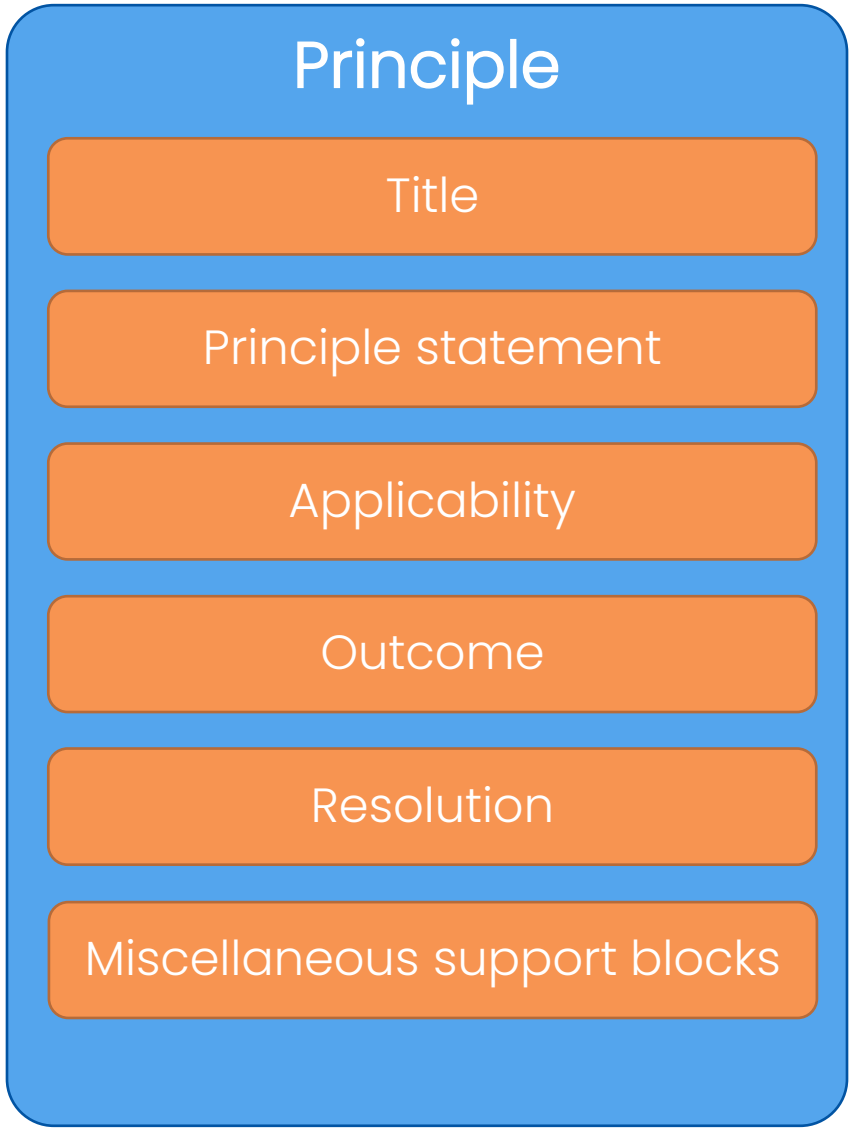
Principle statement is the principle itself

Applicability describes the conditions under

Outcome is what happens if the user does not follow the principle

Resolution is what the user does if they have violated the principle

Miscellaneous support blocks make the principle statement clearer to the user.



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Structure of a Process topic

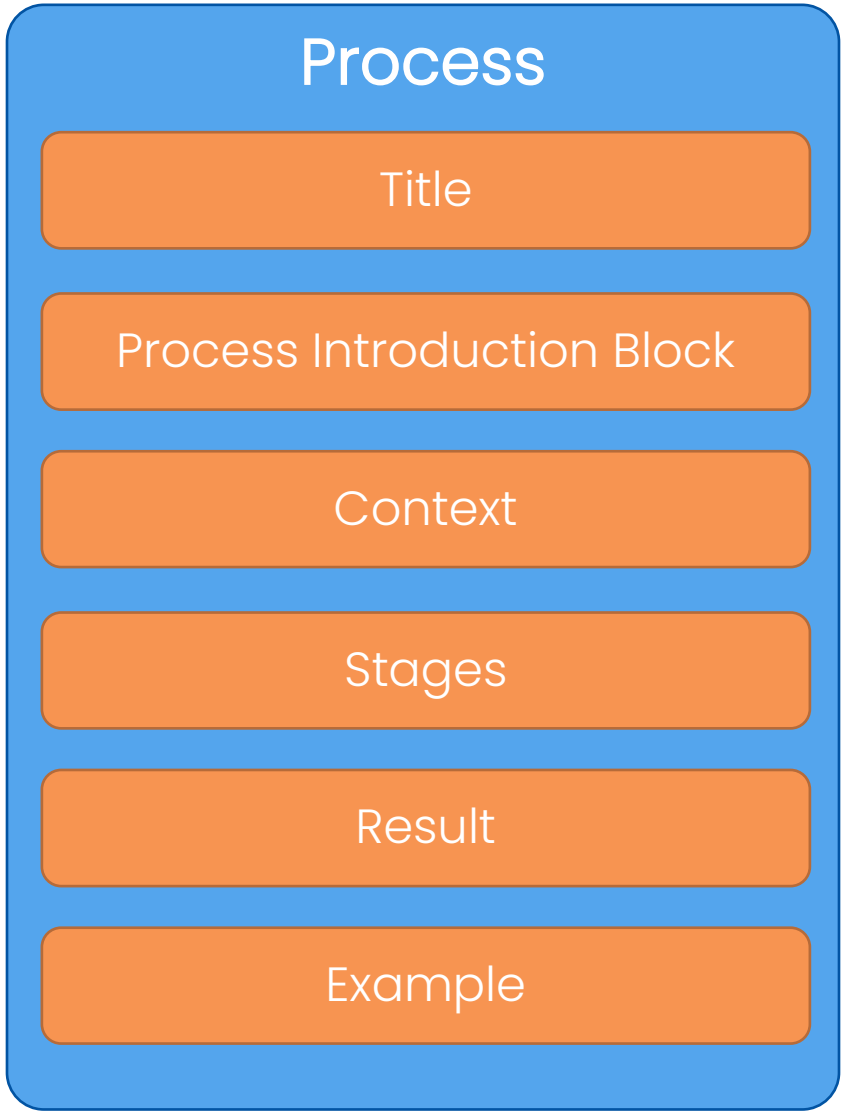
Process introduction is an overview of the process.

Context is information that is relevant to the process.

Stages block is the core content of the process.

Result is the outcome of the process.

Example is a demonstration of the process.



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Precision Content Writing structures

Process stages structure

Stages block

Stem sentence

Stage description

Stage description

Stage detail

Stage Info

Stage Result

Stage detail

Timeframe (optional)

Actor

Actions

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Stages block example

3rd person, active voice, present tense

Recruiting new employees

Standard title structure

Stem sentence to introduce the stages

These are the stages of recruiting a new employee.

Stage

1. The Human Resources administrator
   - writes a job description, and
   - advertises the vacancy on job search sites.

Actor

Actions

Stage

2. Within two business days of recieving an application, the recruiter
   - contacts the applicant to schedule an interview, or
   - informs the applicant that they are not being considered for the job.

Timeframes

Stage

3. One week after all interviews are conducted, the recruiter offers the job to the successful applicant.

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Putting it all together

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Before

Time-based synchronization, also known as distributed clock synchronization, is characterized by the use of an external timing source such as GPS, 1588, or an external IRIG generator. The system timing module uses the external time reference to determine the present time and create a clock that is locked to the external source. The individual clocks of each module and device in the system are synchronized to the same external source, ensuring synchronization between nodes no matter how far apart they are. Devices act on timing signals originating from a local clock that is synchronized to the other clocks in the system, so instead of sharing timing signals directly, the devices periodically adjust their local timing sources to match the chosen external time reference.

Using the time-based synchronization method, you can perform the following actions:

- Create future time events that execute at a specific board time to control clock and trigger signals.
- Write and read timestamps to measure clock skew, record the start time of data acquisition, and troubleshoot timing issues.
- Create timed loops that run at a specific time of the day.
- Discipline the backplane clock to an external time reference.
- Return the current data and time, or the date and time when a measurement was taken.
- Generate a sample clock that starts and stops at a specific board time.

Synchronizing distributed clocks requires constant adjustment. A clock is essentially a two-part device that consists of a frequency source and an accumulator. In theory, if you set two clocks identically and their frequency sources run at the exact same rate, they are synchronized indefinitely. In practice, however, clocks are set with limited precision, frequency sources run at slightly different rates, and the rate of a frequency source changes over time and temperature. Most time-based TimeCo timing and synchronization devices use an over-controlled crystal oscillator (OCXO) or a temperature-controlled crystal oscillator (TCXO) as a frequency source, but even these highly accurate frequency sources vary due to initial manufacturing tolerance, temperature and pressure changes, and aging.

precision content

After

How time-based synchronization works

The individual clocks of each module and device in the system synchronize to the same external source. Devices act on timing signals originating from a local clock that synchronizes to the other clocks in the system. Instead of sharing timing signals directly, the devices periodically adjust their local timing sources to match the chosen external time reference.

Why synchronization is required

A clock is consists of a frequency source and an accumulator. Synchronization is required as follows:

In theory …	In practice …
you set two clocks identically	you can set clocks with limited precision
their frequency sources run at the exact same rate	frequency sources • run at slightly different rates, and • change rate over time and temperature
they are synchronized indefinitely	distributed clocks must be synchronized continually in frequency and phase

Time-based TimeCo device frequency sources

Most time-based TimeCo timing and synchronization devices use one of the following as a frequency source:

- an over-controlled crystal oscillator (OCXO), or
- a temperature-controlled crystal oscillator (TCXO).

Sources of variation

Even these highly accurate frequency sources vary due to

- initial manufacturing tolerance
- temperature and pressure changes, and
- aging.

Advantages and disadvantages of time-based synchronization

There are advantages and disadvantages to time-based synchronization.

Disadvantage

A time-based system is generally not as accurate as a signal-based system.

Advantages

Time-based synchronization enables you to

- synchronize complex systems with many different nodes distributed over a large area with no loss of accuracy, even when the nodes are moving, and
- measure the location, speed, and altitude of a node when using the GPS timing protocol.

precision content

Before and after

Before

QUESTION
What frequency sources do most time-based timing and synchronization devices use?

Time-based synchronization, also known as distributed clock synchronization, is characterized by the use of an external timing source such as GPS, 1588, or an external IRIG generator. The system timing module uses the external time reference to determine the present time and create a clock that is locked to the external source. The individual clocks of each module and device in the system are synchronized to the same external source, ensuring synchronization between nodes no matter how far apart they are. Devices act on timing signals originating from a local clock that is synchronized to the other clocks in the system, so instead of sharing timing signals directly, the devices periodically adjust their local timing sources to match the chosen external time reference.

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precision content

Before and after

After

QUESTION
What are the advantages of time-based synchronization?

How time-based synchronization works

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Before and after

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Wrap up

- A mini-introduction to microcontent
- The five fundamentals of Precision Content writing
- Key writing methods
- Exercises: Applying the methodology

Now go and practice!

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Raffle

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Speaker

Sophie Gravel

Precision Content

Learning consultant