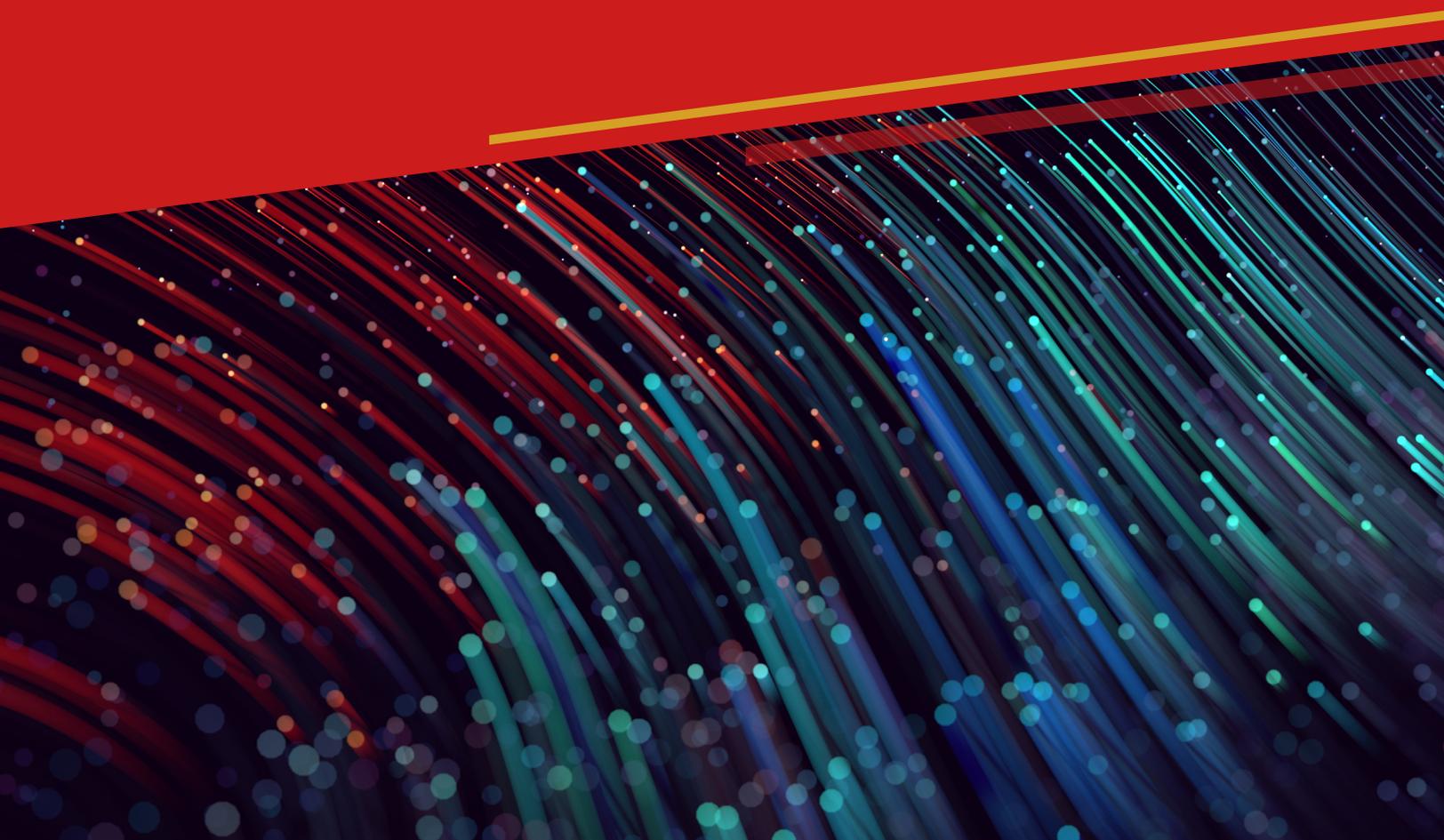




# VISUAL & WRITING STYLE GUIDE



## INTRODUCTION

We have created these guidelines to preserve the integrity and strength of the Aras brand.

These guidelines ensure that the Aras brand is being used in a consistent and professional manner across all media. These standards will be applied to visual design elements of website, events, and branded collateral moving forward.

By following this guide while creating any Aras branded materials, you will help define the Aras brand. If you create content for Aras — in the form of sales sheets, presentations, company letters, etc. — this guide is for you.

In the pages that follow there are explicit instructions on how to use — and not use — the logo, company color palette, and typography. Through consistent use of these brand guidelines, the Aras brand will stay memorable and recognizable.

This guide is composed of both a visual style guide and a writing style guide. You'll also find a lexicon of commonly used terms and their meanings.

For questions on the visual guide or if you are looking for other branding resources not covered in this guide such as partner certification logos or templates, please reach out to [Heather O'Connor](#) and for the writing guide, please contact [Marilyn Guisbond](#).

## THE LOGO

The Aras logo was redesigned in 2018. There is the primary horizontal logo and a stacked version. Please use these versions of the logo, when required, on all communications. The logo type utilizes Nimbus Sans Bold. When using the logo in any way, be aware of the clear space requirements for all sides of the logo. Make sure that text or other elements do not encroach on the clear space. For questions on which logo to use, [contact the creative team](#). Logo files are available on [aras.com](https://aras.com).

### HORIZONTAL (PRIMARY)



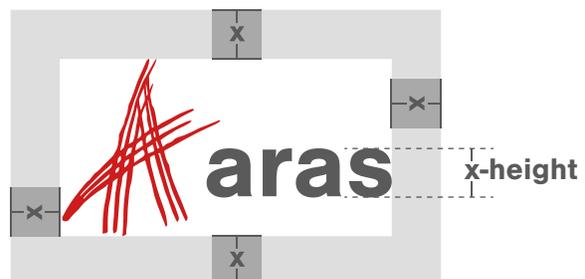
### STACKED (SECONDARY)



### ONE COLOR



### CLEAR SPACE REQUIREMENTS



Both the horizontal and stacked versions of the logo can be used knocked out in white on a dark background or photo.

## PRODUCT LOGO

Unlike the Aras logo, the stacked version is the primary option for the Aras Innovator logo.

### STACKED (PRIMARY)

**aras**  
*INNOVATOR*

### HORIZONTAL (SECONDARY)

**aras** *INNOVATOR*

### ONE COLOR



Both the stacked and horizontal versions of the logo can be used knocked out in white on a dark background or photo.

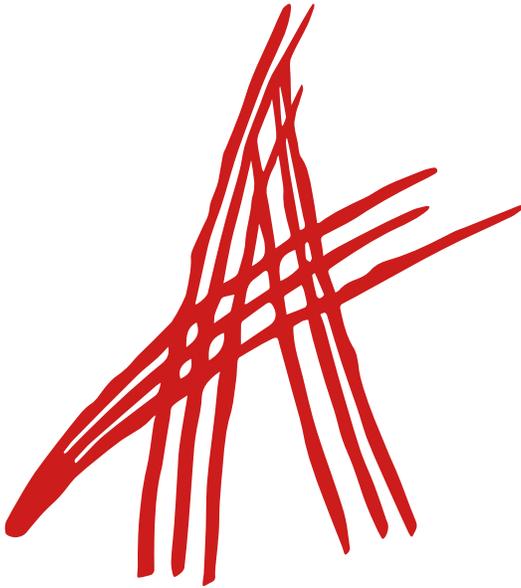
### CLEAR SPACE REQUIREMENTS (APPLIES TO ALL LOGOS)



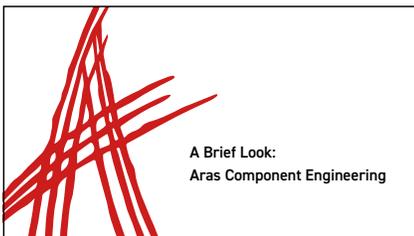
## USING THE ARAS A

The Aras A can be used in a variety of ways (in its entirety or cropped) as a bold, graphic design element, or as a watermark. The Aras A should only be used in red or white.

### RED (PREFERRED)



### WHITE



Video graphic or divider slide



Banner stand



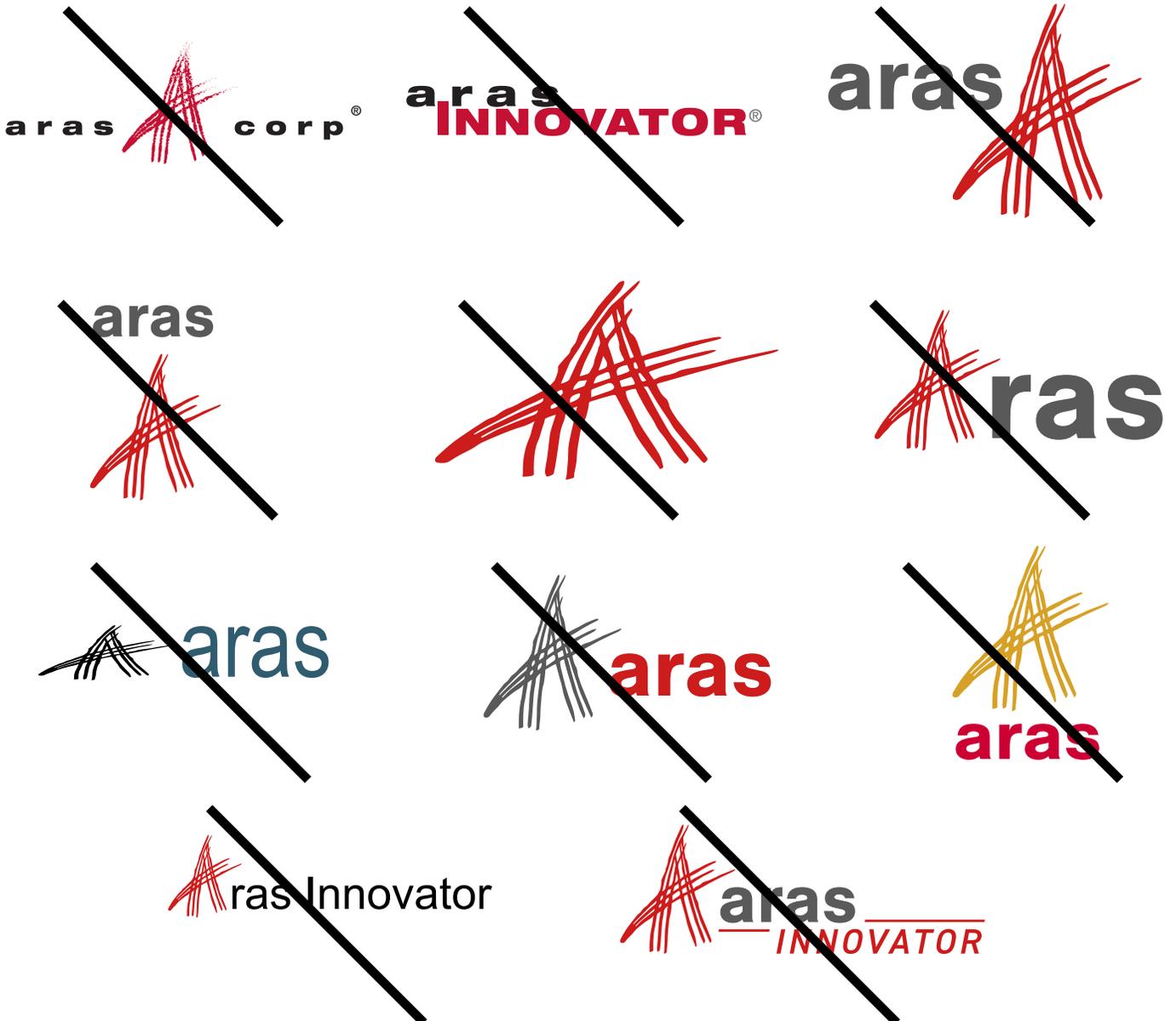
Office signage

\* Samples above are mockups and do not necessarily indicate existing graphics or materials.

## MISUSE OF THE LOGO & THE ARAS A

Please use only the provided versions of the logos, do not alter the color, relative size, position, or typography.

- Do not use any old versions of logos
- Do not rearrange logo components
- Do not stretch or distort elements
- Do not use the Aras A as a letter "a" in text or as a logo
- Do not modify text and graphic scale, relationship and typography
- Do not swap or change the logo colors
- Do not combine the Aras A with another Aras logo



## COLOR PALETTE

The Aras color palette should be used thoughtfully across all Aras branded materials.

### CORE COLORS

Aras Red

RGB: 204 / 28 / 28

HEX: CC1C1C

PMS: 200 C

CMYK: 3 / 100 / 70 / 12

Aras Charcoal

RGB: 90 / 90 / 90

HEX: 5A5A5A

PMS: Cool Gray 11 C

CMYK: 66 / 57 / 51 / 29

Black

White

### SECONDARY COLORS

Aras Slate

RGB: 48 / 91 / 113

HEX: 305B71

PMS: 7700 C

CMYK: 93 / 62 / 32 / 12

Aras Navy

RGB: 11 / 20 / 75

HEX: 0B144B

PMS: 2748 C

CMYK: 100 / 93 / 24 / 23

Aras Khaki

RGB: 186 / 166 / 156

HEX: BAA69C

PMS: 436 C

CMYK: 36 / 38 / 31 / 1

### ACCENT COLORS

Aras Purple

RGB: 98 / 28 / 108 PMS: 267 C

HEX: 621C6C CMYK: 77 / 97 / 0 / 0

Aras Orange

RGB: 242 / 105 / 35 PMS: 158 C

HEX: F26923 CMYK: 2 / 66 / 98 / 0

Aras Gold

RGB: 213 / 160 / 37 PMS: 1245 C

HEX: D5A025 CMYK: 0 / 28 / 100 / 18

Aras Green

RGB: 113 / 185 / 55 PMS: 360 C

HEX: 71B937 CMYK: 61 / 0 / 95 / 0

## COLOR PALETTE TINTS & SHADES

Below is an expanded tint and shade guide to the color palette. See the recommended text color to use for each tint or shade in the swatches.

TINTS (ADDING WHITE)			ORIGINAL	SHADES (ADDING BLACK)	
75%	50%	25%	100%	25%	50%
242-198-198 #F2C6C6	230-142-142 #E68E8E	217-85-85 #D95555	204-28-28 #CC1C1C	136-19-19 #881313	68-9-9 #440909
214-214-214 #D6D6D6	173-173-173 #ADADAD	131-131-131 #838383	90-90-90 #5A5A5A	60-60-60 #3C3C3C	30-30-30 #1E1E1E
203-214-220 #CBD6DC	152-173-184 #98ADB8	100-132-148 #648494	48-91-113 #305B71	32-61-75 #023D4B	16-30-38 #101E26
194-196-210 #C2C4D2	133-138-165 #858AA5	72-79-120 #484F78	11-20-75 #0B144B	7-13-50 #070D32	4-7-25 #040719
238-233-230 #EEE9E6	221-211-206 #DDD3CE	203-188-181 #CBBCB5	186-166-156 #BAA69C	124-111-104 #7C6F68	62-55-52 #3E3734
216-198-218 #D8C6DA	177-142-182 #B18EB6	137-85-145 #895591	98-28-108 #621C6C	65-19-72 #411348	33-9-36 #210924
252-218-200 #FCDAC8	249-180-145 #F9B491	245-143-90 #F58F5A	242-105-35 #F26923	161-70-23 #A14617	81-35-12 #51230C
245-231-201 #F5E7C9	234-208-146 #EAD092	224-184-92 #E0B85C	213-160-37 #D5A025	142-107-25 #8E6B19	71-53-12 #47350C
220-238-205 #DCEECD	184-220-155 #B8DC9B	148-203-105 #94CB69	113-185-55 #71B937	75-123-37 #4B7B25	38-62-18 #263E12

## ANGLE CUT

Use a 9° shear angle or rotation on shapes when designing graphics.

This echos the angle of the Aras A.



## TYPOGRAPHY

There are three approved typefaces to use in your communications, DIN 2014, Noto Sans CJK JP and Arial. Italic fonts should be used sparingly.

### English Design Environments - DIN 2014

Extra Light	<i>Extra Light Italic</i>
Light	<i>Light Italic</i>
Regular	<i>Italic</i>
<b>Demi</b>	<b><i>Demi Italic</i></b>
<b>Bold</b>	<b><i>Bold Italic</i></b>
<b>Extra Bold</b>	<b><i>Extra Bold Italic</i></b>

### Japanese Design Environments - Noto Sans CJK JP

すべての Noto Sans CJK JP Thin  
 すべての Noto Sans CJK JP Light  
 すべての Noto Sans CJK JP DemiLight  
 すべての Noto Sans CJK JP Regular  
 すべての Noto Sans CJK JP Medium  
**すべての Noto Sans CJK JP Bold**  
**すべての Noto Sans CJK JP Black**

### System Font - Arial

Regular	<i>Italic</i>
<b>Bold</b>	<b><i>Bold Italic</i></b>
<b>Black</b>	

## WRITING GUIDE

Words are important and your choice of words in various forms of communication can have an impact on our business. It's crucial that your messaging conforms to both our brand, in terms of tone, and is an accurate reflection of our marketing messages. Whatever your role, if you are creating any type of written communication for an external audience, the following guidelines are for you. Please don't hesitate to reach out to [Marilyn Guisbond](#) for assistance.

## GENERAL BEST PRACTICES

- Avoid beginning sentences with “and” or “but” as this often results in fragments rather than sentences.
- Do not double space after sentences.
- Show vs. tell. Use anecdotes, metaphors or data where possible to bring information to life.
- Avoid being wordy or long-winded with your prose.
- Consider your audience and use words and terms that are relevant and meaningful to that group.
- Use the active voice whenever possible. Active voice is when the subject performs the action, rather than the passive voice in which the subject is being acted upon.
- Do not punctuate bullets unless they form complete sentences.
- Avoid using jargon and acronyms. When using acronyms, spell out the words on first mention and put the acronym in parenthesis. For example: Product Lifecycle Management (PLM).
- When including role titles, present them as name, title, company.
- When writing the date, start with the day of the week followed by the month, date and year. For example Monday, January 3, 2024.
- In a headline, capitalize the first word of every letter, except articles, coordinating conjunctions, and prepositions of three letters or fewer. The first or last word in the headline should always be capitalized regardless of the part of speech.
- Proofread and check links.

## COMPANY & PRODUCT NAME

### Aras Corporation

Most appropriate to use only in legal and financial communications.

### Aras

Appropriate for general use and all other marketing and communication purposes. Here are a couple of other guidelines on company name usage.

- Do not write the company name in all capital letters (ARAS), it is not an acronym.
- Do not use Aras Corp. in any case.
- The possessive form of Aras is always written Aras' NEVER Aras's.
- Even though the Aras name is a registered trademark, it is not necessary to include a registration (®) symbol with the company name. If you have a question of when to use the ® symbol, please contact [trademarks@aras.com](mailto:trademarks@aras.com).
- The registration mark is included with the Aras name in the company boilerplate.

### Aras Innovator®

Never refer to the product as just "Innovator," it must always be Aras Innovator. You may refer to the product as the Aras platform when talking about the underlying technology.

- You must write **Aras Innovator®** (including the registration symbol) upon first usage in a communication, i.e. a web page, a PowerPoint presentation, a press release, or a white paper. Subsequent mentions of Aras Innovator in the same document do not require the registration symbol.
- When being specific about releases, use Aras Innovator Release 22 on the first usage and then thereafter it can be shortened to Aras Innovator 22, Release 22 or R22 as needed. The "R" for release is capitalized and there is no space between the R and the numeral in the shortest version. **It is recommended to be consistent with one shortened variation within a document.**
- Do not write the release number as 22.0, you do not need the dot or the zero.
- Regarding application releases you should add the release number directly after the application name. You do not need to include an "R", i.e. Component Engineering 14.

## PRODUCT TRADEMARKS

It is important that marketers familiarize themselves with the company's product trademarks and understand when to use appropriate trademark symbols.

The trademark symbol for a trademarked product should be used in the most prominent appearance of the trademark in a communication.

### Registered Symbol

The ® registered symbol indicates that a product is an official, trademarked product registered with the US Patent & Trademark Office or a similar governmental entity in another country where we have registered the product. Aras does not register all of its trademarks. Questions about the use of the ® symbol should be directed to the legal department.

### Trademark Symbol

The ™ is used to indicate that a company has claimed a trademarked product name and does not require filing of any paperwork. The ™ symbol is not legally binding and does not protect the trademark from use by other companies or competitors.

The Aras logo, in both formats, is a registered trademark in the United States, Europe, and Belarus. It is up to the company's discretion as to whether or not the registered symbol is included in the design of the logo. Aras has chosen to not include the registration mark.

## POWERED BY ARAS

Unless otherwise instructed by Aras in writing at any moment in time, any Aras OEM partner authorized in writing shall use the phrase “powered by Aras” with the first occurrence of the partner product name in all instances, including but not limited to all packaging, internet content, press releases, product presentations, training materials, videos, webinars, advertising, initial splash screen and related marketing material regarding the partner product, and in the accompanying documentation.

Please contact [trademarks@aras.com](mailto:trademarks@aras.com) for further information regarding the use of the powered by Aras label.

## TROUBLESOME WORDS

### **eBook**

Although there are various schools of thought as to how this “word” is spelled/capitalized, at Aras we use “eBook.”

### **ItemType**

This is the term used within Aras Innovator to define different items, it should be written as one word with a capital “I” and capital “T.”

### **MyInnovator**

This is the instance of Aras Innovator used by Aras employees and partners. It should be written as one word with a capital “M” and capital “I.”

### **white paper**

When mentioning this type of content, at Aras, we write it as two separate words.

## CULTURAL CONSIDERATIONS

### **Jargon and Phrases**

Be conscious of using jargon or colloquial phrases as they may be understood incorrectly in different parts of the world.

## BULLETED LISTS

When using bulleted lists, be consistent with capitalization, punctuation and structure. If items in a bulleted list are complete sentences, use proper punctuation.

Start bulleted sentences with an active verb whenever possible for stronger, more compelling content and make sure the beginning of each bullet is in agreement in terms of tense and phrasing with the sentence introducing the bulleted list.

As a general guideline, bullets should be concise and not go beyond a single line of text.

## NAMES AND TITLES

### Industry Names

Industry names are common nouns and should be presented in lowercase, i.e. aerospace, automotive, life sciences, high-tech manufacturing.

### Titles

Capitalize formal titles when they appear before a person's name, but lowercase titles if they are informal, appear without a person's name, follow a person's name, or are set off before a name by commas.

## NUMBERS AND MONETARY FIGURES

### Numbers

Spell out numbers of nine or less within the text. Use numerals for higher numbers.

Exceptions to this rule include ages, monetary units, and percentages and when two numbers are listed together. When used in a complete sentence, spell out "percent" instead of using the % symbol. Phone numbers can be presented with a hyphen or periods between groupings, i.e. 800-123-4567 or 800.123.4567, just be consistent within the document.

### Monetary Figures

The acronym USD should be used following monetary figures to distinguish it from other dollar currencies.

For monetary figures of \$1 million and above, use the proper currency symbol (e.g. \$) and numerals up to two decimal places (e.g. \$6.25 million).

The terms millions and billions may be abbreviated by using a capital letter (e.g. \$1.5M in profit). There should be no space between the number and the letter.

Ranges of monetary figures should include the currency sign before both numbers in the range. Do not eliminate the million or billion in the first figure of the range. Lastly, do not use a hyphen to represent ranges of monetary figures in the millions and above.

## TIME AND DATES

### Time

Use a colon to separate hours from minutes when writing out the time and use p.m. and a.m. with periods. Spell out noon and midnight. Use the shortened time zone abbreviations, e.g. ET rather than EST or EDT. Example: The session begins at 9:00 a.m. ET.

### Dates

When writing the date, start with the day (optional), then the month followed by the date and year. For example, Monday, January 3, 2022. For communications specific to a region, local conventions may be used. When communicating the fiscal year in text, write out Fiscal Year 2022 upon first reference and then abbreviate as FY 2022. On slides, charts and social media, the abbreviation FY22 may be used.

## SPACING, WIDOWS, AND ORPHANS

### After Punctuation

Include only one space between sentences.

### Line spacing or indentation

Separate paragraphs with a line space instead of using indentation.

### Avoid widows and orphans

When formatting and laying out marketing materials, avoid having one word or line of text alone at the top or bottom of a paragraph, column or headline.

### Widow

A widow is a line of text that is separated from the rest of the paragraph by a column or page.

### Orphan

An orphan is a single word on its own line at the end of a paragraph or headline.

## **HYPHENS, DASHES, AND ELLIPSES**

Hyphens and dashes serve different purposes.

### **Hyphen or Dash (-)**

Hyphens are used to tie together two things that are closely related, such as a single concept noun or adjective, i.e. two-thirds, long-term outlook.

### **En Dash (–)**

Slightly longer than a hyphen, en dashes are used to indicate a range, i.e. the June–August issues; pages 18–20. En dashes are also used to tie together proper compound nouns. No spacing is needed before or after an en dash\*.

### **Em Dash (—)**

The longest dash type, em dashes are versatile punctuation marks that can be used in place of a comma, colon or parenthesis to separate phrases. For the sake of clarity it is recommended there be no more than two appearances of the em dash per sentence. For Aras materials, we do not include spaces between words and the em dash\*.

### **Ellipsis (...)**

Ellipses should not be used except to indicate an omission within a quotation. When an ellipsis is used, it should not have a space before and after the three dots.

\* Note for those using Adobe InDesign for layout. Please insert a Thin Space around en and em dashes for better legibility. Go to Type > Insert White Space > Thin Space from the menu.

## PUNCTUATION

### Apostrophes

Apostrophes are used to indicate the possessive form of a noun. For single common nouns ending in "s", add "'s" unless the next word begins with "s". For single proper names ending in "s" use only an apostrophe.

### Ampersands

Do not use an ampersand in place of a word in text unless it is an official part of the name or used within an acronym, i.e. A&D for Aerospace and Defense. Exceptions may include event agendas and PowerPoint slides where spaces is at a premium.

### Commas

At Aras, we always use the Oxford comma in lists. That means there will always be a comma before the "and" or "or" at the end of the list.

### Parentheses

If a dependent clause or other sentence fragment is in parentheses, the final punctuation goes outside the parentheses. If the parenthetical matter is an entire sentence, the final punctuation goes inside the parentheses.

### Periods and Hyperlinks

If a sentence ends with a URL or an email address, the closing punctuation, usually a period, should be included but not part of a hyperlink depending on the format.

### Quotation Marks

Commas and periods always go inside the quotation marks, and colons and semicolons (dashes as well) go outside. For question marks and exclamation points, if they apply to the quoted material, they go within the quotation marks. If they apply to the whole sentence, they go outside it. For example:

- Joe asks, "How do I fix this?"
- Is it true that your parrot says "Polly wants a cracker"?

In all cases always use proper quotation marks (i.e. "x") and not apostrophes (i.e. 'x').

## COMMON ARAS AND INDUSTRY TERMS

Term	Definition
<b>Agile</b>	Refers to the Agile methodology for software development and deployment (rapid/iterative).
<b>ALM</b>	Application lifecycle management is used to manage the development of embedded software and firmware.
<b>App</b>	Specifically used to describe Mobile “apps” at Aras. We use the full word “application” to describe complete enterprise applications.
<b>Application</b>	Used to describe the software functionality delivered by Aras, a Partner or the Open Community. An application is a discrete piece of software that can be installed, and in many cases, downloaded directly. Can be either a Product or a Project (see those definitions).
<b>Aras Applications</b>	Software applications developed and released by Aras.
<b>Aras Platform</b>	General term for the underlying Aras technology.
<b>Community</b>	Our Community is a key aspect of the way Aras operates which includes all open users, subscribers, partners, and Aras personnel.
<b>Connectors</b>	Refers to the pre-packaged integrations such as CAD Connectors, Office Connectors, Simulation Connectors, ERP Connectors, PDM Connectors.
<b>Cross-discipline</b>	Refers to the ability to span the different domain-specific disciplines such as mechanical, electronics, electrical, software, firmware and others.
<b>Cross-functional</b>	Refers to the ability to span across different functions within an organization from product development and manufacturing to supply chain and field service.
<b>Deployment</b>	The overall term for getting enterprise software into a global company. Covers installation, implementation, integration, training, and rollout and may include other phases as well.
<b>Digital Thread</b>	Meaningful relationship connections between all of a product’s digital assets, and their revisions, including (but not limited to) versions of BOMs, parts, software, electronics, CAD models, documents, requirements, process plans, service manuals, etc. It allows companies to trace information both forward and backward throughout the entire product lifecycle.
<b>Digital Transformation</b>	Applying digital technology in new ways to fundamentally change how a business delivers value and operates.
<b>Digital Twin</b>	An exact digital representation of the physical “thing” at a specific point in time.
<b>Digitalization</b>	The use of digital technologies and information to transform business operations. It is part of the activities that go on during Digital Transformation.
<b>Enterprise Open Source</b>	Openness means an open data model, use of open standards, open APIs for connectivity to disparate systems, and open data sharing for interoperability.

<b>Extended Enterprise</b>	Sometimes called the “supply chain” or a “value chain”, the extended enterprise refers to businesses beyond an organization—such as suppliers, partners and even customers—that are linked by a mutual interest in the enterprise's goods and/or services.
<b>Federation</b>	Refers to a specific type of integration where data from another system is exposed within Aras Innovator through the security model in such a way that it is not only visible, but also editable.
<b>Flexible (Key Differentiator)</b>	Flexibility is the ease with which Aras can be customized to support processes, data models, and business rules for digital transformation.
<b>Incorporation</b>	100% re-implementation of the original product functionality on the Aras Platform, and 100% integration of the people and processes into the Aras culture and way of doing business.
<b>Infrastructure Software</b>	All the different types of software in the stack underneath the Aras applications and platform including databases, operating systems, networking security, etc.
<b>Integration</b>	Refers to our ability to make custom connections to other systems using a variety of techniques including REST, XML/SOAP, as well as other older integration techniques and even flat file exchange.
<b>IIoT</b>	Industrial Internet of Things. The use of technologies to enhance manufacturing and industrial processes using sensor data and machine-to-machine (M2M) communication to transform the factory.
<b>IoT</b>	Internet of Things. IoT adds autonomy to products and assets by including sensors to monitor, operate, understand and predict use.
<b>IoT data</b>	Data collected and shared via a network, known as the Internet of Things (IoT) of physical devices, vehicles, home appliances and other items embedded with electronics, software, sensors, actuators, and connectivity.
<b>Low-Code Platform</b>	When we say that the Aras Platform is low-code, we are referring to the way applications are developed. Enabled by the Modeling Engine, which describes the data, processes, multiple methods of logic, and user interface, software developers can create mission-critical applications—using a drag & drop UI instead of extensive coding.
<b>Model-based</b>	Refers to the way the Aras Platform technology works for modeling.
<b>Modeling</b>	Refers to the way applications and functionality are created in Aras Innovator. We model processes, forms, workflows, business rules and more without complex programming and compiling.
<b>MRO</b>	Maintenance, Repair & Overhaul includes all actions in order to retain or restore a complex product or asset to a state in which it can perform its required function reliably and safely.
<b>Open APIs</b>	An open API is a publicly available application programming interface that provides developers with programmatic access to a proprietary software application or web service. APIs are sets of with another. Aras Innovator has completely open, published APIs.
<b>Open Architecture</b>	Aras' open architecture includes an open data model, open APIs, open source applications and adherence to open standards.
<b>Open Data Model</b>	Unlike the other major providers, Aras provides an Open Data Model which customers, partners and open users can use, modify and share.

<b>Open Download</b>	Aras Innovator is a freely available download.
<b>Open Source</b>	Aras has open sourced many of the Aras Applications and maintains/participates in numerous open source projects on GitHub.
<b>Open Users</b>	Open Users are those who are not Aras subscribers, but rather use the free version on Aras Innovator.
<b>Out-of-the-Box</b>	Pre-packaged software that can't be/is difficult to customize.
<b>Own the Lifecycle</b>	Aras provides the means to own the lifecycle of product data and processes across the extended enterprise—including customer experience, new business and product innovations, and the technology infrastructure that enables it—by offering a resilient platform for digital industrial applications across for the engineering, manufacture, and maintenance of complex products that spans the value chain.
<b>PDM</b>	Product data management is primarily responsible for managing CAD files. It can manage the CAD BOM and related design changes, but does not handle the full system level BOM or enterprise-wide change processes well (or at all).
<b>Product Lifecycle Management (PLM)</b>	Product lifecycle management (PLM) is the process of managing the entire lifecycle of a product from inception, through engineering design and manufacture, to service and disposal of manufactured products.
<b>SAFe</b>	Scaled Agile Framework—a specific Agile methodology for enterprise wide software development and deployment.
<b>Scalable (Key Differentiator)</b>	Scalability is the ability to scale up and out to support massive user counts, data sets and deployment scopes.
<b>Service Oriented Architecture (SOA)</b>	A style of software design where services are provided to the other components by application components, through a communication protocol over a network.
<b>SPDM</b>	Simulation Process & Data Management enables users to manage simulation-related process and data for Computer Aided Engineering.
<b>Systems Thinking</b>	Systems Thinking is a holistic approach to analyzing and understanding how the system's constituent behaviors and elements interrelate, how they change over time, and how they fit in the context of a larger system. It is not a tool, but it is enabled through the right set of data models, tools, processes and underlying platforms.
<b>Upgradeable (Key Differentiator)</b>	Upgradeability is the ability to customize while still being able to take updates of new releases without impacting your customizations. Nobody else can do this—all other systems require a reimplementing of customizations after performing an upgrade.

## COMMON INDUSTRY ACRONYMS

Term	Definition
<b>ALM</b>	Application Lifecycle Management
<b>AML</b>	Adaptive Markup Language
<b>API</b>	Application Programming Interface(s)
<b>BOM</b>	Bill of Materials
<b>CAD BOM</b>	Portion of the BOM that comes from the CAD tool. (Typically only mechanical and does not include electronics, software/firmware or manually added parts & components like packaging, grease, glue, oil, etc.)
<b>CAD or 3D CAD</b>	Computer Aided Design or 3 Dimensional Computer Aided Design
<b>CAE</b>	Computer Aided Engineering (Typically refers to using simulation during design of products.)
<b>CFD</b>	Computational Fluid Dynamics (A specific type of simulation)
<b>EBOM</b>	Engineering Bill of Materials
<b>ECAD</b>	Electronic CAD (Typically used to describe designing at the board level.)
<b>EDA</b>	Electronic Design Automation (Typically used to describe designing at the chip level.)
<b>ERP</b>	Enterprise Resource Planning
<b>FEA</b>	Finite Element Analysis (A specific type of simulation.)
<b>GD&amp;T</b>	Geometric Dimensioning & Tolerancing
<b>IIoT</b>	Industrial Internet of Things
<b>IoT</b>	Internet of Things
<b>M2M</b>	Machine-to-Machine
<b>MBD</b>	Model-based Definition (Sometimes also used for Model-based Design. Aras uses the term to mean Definition, not Design.)
<b>MBE</b>	Model-based Enterprise (Sometimes also used for Model-based Engineering. Aras uses the term to mean Enterprise, not Engineering.)
<b>MBOM</b>	Manufacturing Bill of Materials
<b>MBSE</b>	Model-based Systems Engineering (Not to be confused with Model-based Engineering which is totally different.)
<b>MCAD</b>	Mechanical Computer Aided Design
<b>MDD</b>	Model-driven Development (Only used in software development, not for physical products. Typically means using a UML model to produce code which must then be compiled. Aras does not use this term.)
<b>MES</b>	Manufacturing Execution System

<b>MOM</b>	Manufacturing Operations Management
<b>MRO</b>	Maintenance, Repair & Overhaul
<b>MRP</b>	Manufacturing Resource Planning
<b>OSLC</b>	Open Services for Lifecycle Collaboration (A set of specifications that enable linked data.)
<b>PDM</b>	Product Data Management
<b>PLM</b>	Product Lifecycle Management
<b>PMI</b>	Product Manufacturing Information (Includes GD&T as well as other information for a CAM/CNC machine.)
<b>PoC</b>	Proof of Concept
<b>QMS</b>	Quality Management System
<b>RDF</b>	Resource Description Framework (A linked data model for encoding semantic relationships between items of data so that these relationships can be interpreted computationally.)
<b>SBOM</b>	Service Bill of Materials
<b>SOA</b>	Service Oriented Architecture
<b>SPDM</b>	Simulation Process & Data Management
<b>Semantic PMI</b>	Product Manufacturing Information that is machine readable.
<b>SysML</b>	Systems Modeling Language (A general-purpose modeling language for systems engineering applications.)
<b>TDP</b>	Technical Data Pack (Used in defense industry to communicate specifications to suppliers.)
<b>UML</b>	Unified Modeling Language
<b>XML</b>	eXtensible Markup Language (A markup language much like HTML that was designed to store and transport data.)



Aras provides the most powerful low-code platform with applications to design, build, and operate complex products. Our technology enables the rapid delivery of flexible, upgradeable solutions that build business resilience. Aras' platform and product lifecycle management applications connect users in all disciplines and functions to critical product data and processes across the lifecycle and throughout the extended supply chain. Airbus, Audi, DENSO, Honda, Kawasaki, Microsoft, Mitsubishi, and Nissan are using the platform to manage complex change and traceability. Visit [www.aras.com](http://www.aras.com) to learn more and follow us on [X](#) and [LinkedIn](#).

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