



UK English Symboloud Grid Family

A graduated UK English vocabulary pathway from Easy Access 4 to Core Communication 90

8 coordinated options	24 → 984 distinct labels	100% label retention at each step	3 → 70 words visible on Home
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Purpose

This report presents the Symboloud grid family as it stands today. It describes the eight finished UK English content options, explains how vocabulary expands from a 2 x 2 display to a 10 x 9 display, and sets out the thinking behind the language, layout and colour system. It is intended for AAC professionals, educators, families, service leads and product reviewers who want a clear account of the current Symboloud offer.

The central proposition is simple: Symboloud offers eight coordinated content options rather than eight unrelated boards. A person can begin with a low-density display and move to substantially richer language without entering a completely different vocabulary system. Every larger set retains every distinct label from the preceding set and adds new language, new topic depth or more direct routes.

The Symboloud offer today

The finished family provides a credible content pathway from immediate agency to broad generative communication. Easy Access 4 protects I, want and not while preserving routes to people, actions, support and personal language. Each step then adds partners, help, feelings, body vocabulary, questions, verbs, description, everyday topics, social language and grammar. Core Communication 90 culminates in 984 distinct labels, with 70 words and 19 topic routes visible from Home; spelling is available through the device keyboard.

The pathway is not a developmental ladder and the smaller sets are not lesser language systems. They are access-focused entry points with deliberately reduced content. The value of the family is that a more accessible layout can still contain purposeful language, while a move to a larger set brings visible and measurable vocabulary growth without discarding familiar labels.



1. The finished Symboloud family

1.1 Product names and files

Grid name	Vocabulary description
Easy Access 4	A highly accessible 2 × 2 vocabulary set with large targets and four choices per screen. Home provides I, want, not and More words, with linked vocabulary for people, actions, personal information and urgent support. Contains 25 tile placements and 24 distinct labels across 8 pages.
Easy Access 6	A spacious 3 × 2 vocabulary set that retains everything from Easy Access 4 while adding you, help, feelings and body-and-health vocabulary. It supports basic interaction, refusal, requesting assistance and reporting physical or emotional needs. Contains 51 tile placements and 48 distinct labels across 10 pages.
Easy Access 12	A compact 4 × 3 communication set with 11 immediately available Home words, including I, you, want, like, go, stop, more, yes, no and help. It introduces broader everyday vocabulary covering description, things, places, food and drink, home life and quick phrases. Contains 177 tile placements and 109 distinct labels across 16 pages.
Easy Access 18	A 6 × 3 vocabulary set providing direct access to questions, needs, actions and completion words such as what, where, need, do, can and finished. It opens the complete range of everyday topics, including time, learning, activities, social language, colours and numbers from 0 to 20. Contains 378 tile placements and 207 distinct labels across 22 pages.
Easy Access 24	A 6 × 4 vocabulary set that retains the familiar Easy Access 18 structure while adding more immediately available language and greater depth within every topic. New Home vocabulary includes feel, have, make, get, here and there, supporting more detailed and generative communication. Contains 501 tile placements and 305 distinct labels across 22 pages.
Core Communication 30	A broad 6 × 5 core-communication set with 24 words and 6 direct routes on Home. It provides deeper topic vocabulary and faster access to People, Actions, Describe, Feelings, More words and Quick phrases. Its expanded Time page keeps useful day-and-time vocabulary together, while spelling is available through the device keyboard. Contains 627 tile placements and 396 distinct labels across 22 pages.
Core Communication 50	A comprehensive 10 × 5 communication set with 40 words and 10 direct routes on Home. It adds pronoun contrasts, question words, auxiliary verbs, grammar, descriptors and substantially deeper topic vocabulary while retaining the familiar structure of the smaller sets. Contains 1,018 tile placements and 683 distinct labels across 22 pages.
Core Communication 90	Symboloud's most comprehensive 10 × 9 vocabulary set, providing 70 words and all 19 topic routes directly on Home. It offers the fullest core, grammar, personal, support and topic vocabulary in the family, while retaining every distinct label introduced in the smaller sets. Spelling is available through the device keyboard. Contains 1,578 tile placements and 984 distinct labels across 20 pages.

1.2 Research and professional guidance

The evidence base was drawn from full documents in the Symboloud research collection. Priority was given to peer-reviewed grid-display studies, systematic and state-of-the-science reviews, Project Core reports, the ASHA Practice Portal, UK professional guidance, university repository copies and published product documentation relevant to UK implementation. Abstract-only records, inaccessible publisher pages and internal Symboloud development files are not presented as research evidence.

The review covers individual combinations of button number, size and spacing; fixed versus changing symbol locations; 32- and 50-symbol displays; visual grouping and background colour; core and fringe vocabulary; developmental aided-language learning; literacy access; and current RCSLT guidance on vocabulary organisation and navigation.

1.3 Verified family specification

Grid Name	Grid	Screens	Build positions	Tile placements	Distinct labels	Content role
Easy Access 4	2 × 2	8	32	25	24	A highly reduced starting layout that protects agency, refusal, personal language and urgent support.
Easy Access 6	3 × 2	10	60	51	48	Adds partner reference, help, feelings and body vocabulary while retaining large targets.
Easy Access 12	4 × 3	16	192	177	109	A compact functional system with responses, refusal, movement and the first broader topic range.
Easy Access 18	6 × 3	22	399	378	207	Extends question-making, action and completion language and opens all major topic areas.
Easy Access 24	6 × 4	22	522	501	305	Adds more generative verbs and location words without increasing the number of page routes.
Core Communication 30	6 × 5	22	648	627	396	First Core Communication set, with substantially deeper vocabulary and keyboard-based spelling.
Core Communication 50	10 × 5	22	1,039	1,018	683	Broad generative core, grammar and topic access while retaining the 10-column architecture of the largest set.
Core Communication 90	10 × 9	20	1,597	1,578	984	Highest-capacity benchmark and source architecture for the reduced sets.



Build positions count every tile, folder route and spacer recorded across all screens. Tile placements exclude folder nodes and spacers. Distinct labels count different visible tile labels, so a word repeated on more than one page is counted once. Core Communication 90 contains no reserved spacer cells in the final V4 file. These are verified product records, not research findings.

1.4 What the number in each title means

The number in each grid name indicates the intended number of positions on its main display. Nearly every page remains at or below that number. Two specialist pages deliberately preserve complete, coherent sequences instead of cutting content at arbitrary boundaries: the Numbers page in Easy Access 18 contains 21 items so that 0 to 20 remain together, and the Time page in Core Communication 30 contains 35 items so that useful day and time vocabulary remains together. These are transparent content-led exceptions, not hidden continuation pages.

The reduced sets still contain genuinely smaller total vocabularies. A route does not reveal the complete Core Communication 90 inventory behind a smaller Home screen. Growth between the grid sets therefore remains real and measurable.

2. Design foundations shared by all eight sets

2.1 Several field sizes, not one assumed optimum

The family therefore offers several direct-touch field sizes because target size, number of simultaneous choices and total language availability interact. With fixed-width cells, changing the number of columns and rows is the practical way to offer different access demands.

Bertuccio and Sanger's individualised touchscreen-access model combined selection speed and error rates to estimate the button number, size and spacing likely to maximise information rate - the amount of information that could be selected accurately over time. The study involved 10 children with dyskinetic cerebral palsy and 10 age-matched typically developing children. Six of the children with cerebral palsy returned for a second task comparing their model-predicted layouts with a standard 28-button layout. Across those six children and the two highlighting conditions, predicted optima ranged from 4 to 24 buttons and included 4, 6, 12, 18 and 24. The authors concluded that the best combination differed between children (Bertuccio and Sanger, 2018) [2]. The sample was small and the study did not examine Symboloud vocabulary, but it supports offering several sizes rather than treating one field as universally suitable.

2.2 A progressive vocabulary rather than hidden overflow

Total vocabulary is intentionally reduced as grid size decreases. Putting the full 90-cell vocabulary behind many smaller continuation pages would reduce target density but greatly increase navigation, memory demands and the number of selections needed to reach words. It would also remove meaningful vocabulary growth between the grid sets.

RCSLT guidance explains that different routes to vocabulary place different demands on learning and memory, and that navigation skills must be considered when selecting an AAC system (Royal College of Speech and Language Therapists, 2026) [14]. More pages can provide more vocabulary, but they can also increase navigation or repetition. The reduced Symboloud sets therefore lower both display density and total vocabulary instead of merely redistributing the same inventory.

2.3 Core plus fringe and language beyond requesting

Across the family, every set protects a reusable core and retains routes to personal, topic, safety and communication-repair vocabulary. Even the smallest version includes agency through I, want and not. Larger sets progressively add partners, responses, questions, verbs, descriptors, grammar and topic depth.

Project Core and The Universal Core Vocabulary: Technical Report support high-utility language used across contexts, partners, purposes and functions (Erickson et al., 2019; Project Core, 2019b) [5, 11]. The American Speech-Language-Hearing Association, Binger and colleagues, and NHS AAC West support broader systems that combine core with fringe, personal language and multiple communication functions (American Speech-Language-Hearing Association, n.d.; Binger, Harrington and Kent-Walsh, 2024; North Bristol NHS Trust AAC West, n.d.) [1, 3, 9]. Research comparing core vocabularies across languages also cautions against treating one frequency list as universal (Soto and Tönsing, 2024) [17].

2.4 Vocabulary inheritance and stable locations

Vocabulary inheritance is a defining feature of the family: every smaller set's distinct labels are retained in the next larger set. The finished files achieve 100% label retention at every transition. Exact coordinates cannot remain identical when a grid changes from 2 to 10 columns, so the family carries forward a recognisable semantic-syntactic direction while each individual set maintains its own stable map.



Shin found significantly faster three-symbol sentence construction with a fixed 15-symbol array than with changing locations in 32 adults without disabilities (Shin, 2017) [15]. Project Core guidance and wider display research also support consistent location, deliberate spacing and repeated exposure (Project Core, 2019a; Light et al., 2019; Wilkinson, Gilmore and Qian, 2022) [10, 8, 20]. These findings support a stable arrangement within each chosen Symboloud set and planned transitions rather than casual movement of vocabulary.

2.5 Spatial organisation and the Modified Fitzgerald Key

The same Modified Fitzgerald Key runs through every set: yellow for people and pronouns; green for actions and verbs; orange for naming words; blue for describing words; purple for questions; grey for little words and navigation; pink for social language and whole phrases; and red for important function words. This palette follows a familiar UK implementation convention documented in Smartbox's Super Core guidance (Smartbox, 2022) [16].

Yellow people/pronouns	Green actions/verbs	Orange naming words	Blue describing words
Purple question words	Grey little words/navigation	Pink social/whole phrases	Red important function words

Spatial grouping and orderly arrangement have stronger and more consistent support than background colour alone. Thistle and Wilkinson found faster responses for word-class arrangement in a 4 x 4 laboratory task with 52 young children without disabilities, while colour did not produce a significant benefit (Thistle and Wilkinson, 2017) [18]. Römer's pilot study of 58 university students found faster message reconstruction with colour on a 5 x 10 display, but not the same benefit on a smaller 4 x 8 display (Römer, 2024) [12]. A recent review and a study involving people with Down syndrome likewise emphasise the interaction between grouping, crowding and colour rather than colour alone (Kamonsitichai and Weinstein, 2025; Wilkinson, Gilmore and Qian, 2022) [6, 20]. Colour is therefore retained as a familiar UK organisational cue, not treated as a proven language-learning mechanism.

2.6 Topic pages, high-consequence language and keyboard spelling

The content sequence gives first priority to safety, refusal, repair, people, actions and personal language. Feelings and body vocabulary follow at 6 cells; broader everyday topics and Quick phrases at 12; the remaining topic categories at 18; and deeper vocabulary from 24 cells upward. The V4 family uses the device keyboard for spelling rather than reserving grid space for a separate alphabet page. This order balances agency and high-consequence communication against available capacity.

The grey Support folder groups safety, consent, pain, urgent help and communication repair. The grey Topics helper provides a short route to subject-based pages. These are navigation labels; the vocabulary inside the folders continues to use the Modified Fitzgerald Key.

Easy Access 4 and 6 use every topic-page position for topic-specific vocabulary because a repeated core strip would consume too much of the screen. From 12 to 50 cells, ordinary topic pages reserve one bottom row for stable reusable language and use the remaining positions for the topic the person deliberately opened. Numbers and Quick phrases are purpose-specific pages and use their available field for their own content. Core Communication 90 uses a fuller repeated-anchor architecture. Across V4, concise visible labels are used where needed for legibility, while fuller spoken wording may be retained when its meaning is unchanged. Shared concepts use consistent symbols across the family. Where one spelling serves distinct meanings or grammatical roles, separate cells are retained: order is orange as a naming word and green as an action word; right is blue when it means correct and grey when it gives a direction. The symbol, colour and placement distinguish these cells without making their labels or speech unnatural.

Fixed-location and display-organisation studies support stable positions and orderly grouping, while core-and-fringe guidance supports keeping reusable language available alongside situation-specific words (Light et al., 2019; Project Core, 2019b; Römer, Scholz and Kehl, 2022) [8, 11, 13]. No published study establishes a universal one-row ratio or the exact Symboloud core-row words. This allocation is therefore an evidence-informed product decision.



3. How vocabulary grows across the family

Transition	Visible content growth
Easy Access 4 to 6	24 to 48 labels (+24). Home grows from 3 to 5 words, adding you and help; Feelings and Body & health join the routed vocabulary.
Easy Access 6 to 12	48 to 109 labels (+61). Home grows from 5 to 11 words with movement, continuation and responses; six everyday topic families and Quick phrases are added.
Easy Access 12 to 18	109 to 207 labels (+98). Home gains what, where, need, do, can and finished; Time, learning, activities, social language, numbers and colours are added.
Easy Access 18 to 24	207 to 305 labels (+98). The route range stays familiar while Home gains feel, have, make, get, here and there and each ordinary topic becomes deeper.
Easy Access 24 to Core Communication 30	305 to 396 labels (+91). Five high-value topic routes plus More words become directly visible on Home, topic depth increases and spelling remains available through the device keyboard.
Core Communication 30 to 50	396 to 683 labels (+287). Home grows from 24 to 40 words and from 6 to 10 direct routes, adding pronoun contrasts, grammar, questions and much deeper topics.
Core Communication 50 to 90	683 to 984 labels (+301). Home expands to 70 words and all 19 topic routes; the full topic, grammar, personal and support architecture becomes immediately available, with spelling through the device keyboard.

Every transition retains 100% of the distinct labels in the preceding set. New content is added rather than obtained by exchanging one small vocabulary for another. This makes the family suitable as a continuing pathway while still allowing any set to be used as a stable long-term option.

3.1 What remains familiar

All distinct labels remain available as the family grows, so larger vocabularies add rather than replace language. The same UK-oriented Modified Fitzgerald Key is used from Easy Access 4 to Core Communication 90, and people, questions, actions, descriptors, grammar and routes retain a recognisable organisational direction even when exact coordinates change between grid sizes.

Immediate agency is also protected throughout the family. I, want and not are present from the 2 x 2 starting point upward, while help, stop, response and communication-repair language become more immediately available as capacity allows.

3.2 What expands

The progression moves from three immediately visible words on Home to seventy, supporting increasingly varied sentence construction with less navigation. Familiar topic areas gain more specific nouns, actions, descriptors and phrases, while frequently used routes move from Topics onto Home: one route is visible in the smallest sets, six at Core Communication 30, ten at 50 and all nineteen at 90.

Questions, pronoun contrasts, little words and inflections expand progressively. In V4, spelling is handled by the device keyboard throughout the family, avoiding duplication of an alphabet page while preserving grid space for communication vocabulary.

3.3 Why this is a strong Symboloud content pathway

The family gives Symboloud users a ready-made starting point without treating a stock vocabulary as permanent or universal. The smallest grids contain meaningful communication rather than isolated requesting buttons. The middle grids add increasingly generative language and a recognisable topic structure. The largest grids make more language available with fewer route selections and provide a broad base for individual vocabulary.

Because the labels accumulate, moving upward has a clear purpose: more immediately available language, more precise topic vocabulary, more grammar and more direct routes. Spelling remains available through the device keyboard. This is more coherent than offering unrelated small, medium and large boards with no planned relationship between them.

4. Easy Access 4 (2 x 2)

Build measure	Verified implementation
File	V4_Symboloud_Access_4_2x2.symboloud
Main display	2 x 2; 3 words and 1 route folder visible on Home.
Finished content	8 screens/pages; 25 tile placements; 24 distinct tile labels.
Largest page	4 positions.
Home	I want not More words
Topic-page allocation	All available cells carry topic-specific vocabulary; no repeated core strip.
Vocabulary growth	People; Actions; Support; Personal.



Easy Access 4 is designed as an agency-and-support system rather than a miniature catalogue. Home protects I, want and not and keeps More words visible.

The routed pages extend the small Home screen into people, actions, urgent support and personal identity. The Core words page also provides you, help, yes and no. This gives the 2 x 2 option communicative purpose beyond choosing an object.

A four-button option fell within the range produced by Bertuccio and Sanger's individualised touchscreen-access model, but the study did not test this vocabulary (Bertuccio and Sanger, 2018) [2]. Core, fringe and developmental-language research supports the communication priorities, while the exact selection remains Symboloud's product design (Binger, Harrington and Kent-Walsh, 2024; Erickson et al., 2019) [3, 5].

5. Easy Access 6 (3 x 2)

Build measure	Verified implementation
File	V4_Symboloud_Access_6_3x2.symboloud
Main display	3 x 2; 5 words and 1 route folder visible on Home.
Finished content	10 screens/pages; 51 tile placements; 48 distinct tile labels.
Largest page	6 positions.
Home	I you want not help More words
Topic-page allocation	All available cells carry topic-specific vocabulary; no repeated core strip.
Vocabulary growth	4-cell routes, plus Feelings and Body & health.

With six cells, the additional capacity is used for a communication partner, direct help, feelings and body vocabulary, while the complete Easy Access 4 vocabulary remains available.

Easy Access 6 doubles the distinct vocabulary of Easy Access 4 while retaining every earlier label. It remains visually sparse but supports interaction, assistance and basic emotional or physical reporting.

The continued low-density field reflects the principle that access needs differ between individuals (Bertuccio and Sanger, 2018) [2]. ASHA and RCSLT guidance supports access to feelings, needs and health vocabulary; the exact selection remains a Symboloud product decision (American Speech-Language-Hearing Association, n.d.; Royal College of Speech and Language Therapists, 2026) [1, 14].

6. Easy Access 12 (4 x 3)

Build measure	Verified implementation
File	V4_Symboloud_Access_12_4x3.symboloud
Main display	4 x 3; 11 words and 1 route folder visible on Home.
Finished content	16 screens/pages; 177 tile placements; 109 distinct tile labels.
Largest page	12 positions.
Home	I you want like go stop not more yes no help More words
Topic-page allocation	Ordinary topic pages: 8 topic cells plus a stable bottom row of I, want, not and help.
Vocabulary growth	Adds Describe, Things, Places, Food & drink, Home & daily life and Quick phrases.

At 12 positions, Home becomes compact but recognisably generative, adding like, go, stop, more, yes and no while the routed vocabulary widens.

This is the first Easy Access set with a recognisably broad everyday vocabulary. It supports requesting, refusal, movement, response, preference and short original combinations while keeping the four-column field compact.

Core-vocabulary and developmental sources support reusable verbs, negation, responses and multiple communication functions (Binger, Harrington and Kent-Walsh, 2024; Erickson et al., 2019; Light and Drager, 2007) [3, 5, 7]. The exact 12-cell vocabulary and arrangement remain Symboloud design choices.



7. Easy Access 18 (6 x 3)

Build measure	Verified implementation
File	V4_Symboloud_Access_18_6x3.symboloud
Main display	6 x 3; 17 words and 1 route folder visible on Home.
Finished content	22 screens/pages; 378 tile placements; 207 distinct tile labels.
Largest page	21 (Numbers) positions.
Home	I you what where want need like do go stop can not more yes no help finished More words
Topic-page allocation	Ordinary topic pages: 12 topic cells plus a stable six-cell core row. The finished Numbers page contains 21 items.
Vocabulary growth	Adds Time, School & learning, Activities, Social, Numbers and Colours.

Easy Access 18 is the first reduced set to provide direct question words alongside need, do, can and finished, and to open every major topic category.

Easy Access 18 reaches every major topic category and keeps the useful 0 to 20 number sequence together. It offers substantially more participation vocabulary while retaining all 109 labels from Easy Access 12.

Core-vocabulary and developmental sources support questions, verbs, modifiers and multiple communication functions (Binger, Harrington and Kent-Walsh, 2024; Erickson et al., 2019; Light and Drager, 2007) [3, 5, 7]. The exact threshold and 6 x 3 map are Symboloud design choices.

8. Easy Access 24 (6 x 4)

Build measure	Verified implementation
File	V4_Symboloud_Access_24_6x4.symboloud
Main display	6 x 4; 23 words and 1 route folder visible on Home.
Finished content	22 screens/pages; 501 tile placements; 305 distinct tile labels.
Largest page	24 positions.
Home	I you what where want need like feel have do make get go stop can not more here there yes no help finished More words
Topic-page allocation	Ordinary topic pages: 18 topic cells plus the same stable six-cell bottom core row.
Vocabulary growth	Same topic range as 18-cell, with deeper vocabulary on each page.

The extra six Home positions in Easy Access 24 add feel, have, make, get, here and there, while the familiar Easy Access 18 route range is preserved and every topic page becomes deeper.

Easy Access 24 uses its extra row mainly for language depth. Users gain more ways to describe events, possession, location and everyday topics without being asked to learn a new route structure.

Research supports a range of verbs, descriptors and communication functions rather than a noun-heavy vocabulary (Binger, Harrington and Kent-Walsh, 2024; Erickson et al., 2019; Light et al., 2019) [3, 5, 8]. The exact 24-cell vocabulary and arrangement remain Symboloud design choices.

9. Core Communication 30 (6 x 5)

Build measure	Verified implementation
File	V4_Symboloud_Core_30_6x5.symboloud
Main display	6 x 5; 24 words and 6 route folders visible on Home.
Finished content	22 screens/pages; 627 tile placements; 396 distinct tile labels.
Largest page	35 (Time) positions.
Home	I you what where want need like feel have do make get go stop can not more here there again yes no help finished People Actions Describe Feelings More words Quick phrases
Topic-page allocation	Ordinary topic pages: 24 topic cells plus the same stable six-cell core row. The finished Time page contains 35 items so its useful sequence remains together.
Vocabulary growth	Selected topic routes move onto Home and topic vocabulary becomes deeper; spelling uses the device keyboard.



Core Communication 30 marks the first full reduced-set architecture: five high-value topic routes plus More words are visible on Home, and topic vocabulary becomes substantially deeper. Spelling is handled by the device keyboard.

This set marks the move from the Easy Access range into a broad core-communication offer. It retains all 305 previous labels, adds 91 and brings frequent routes closer to Home. Its 35-item Time page deliberately keeps useful time vocabulary together, while spelling remains available through the device keyboard.

The closest direct grid-size comparison used a 4 x 8 display of 32 symbols, so it is an approximate comparator (Römer, 2024) [12]. Smartbox Super Core 30 is a relevant UK implementation example, not experimental proof of Symboloud's 6 x 5 design (Smartbox, 2022) [16].

10. Core Communication 50 (10 x 5)

Build measure	Verified implementation
File	V4_Symboloud_Core_50_10x5.symboloud
Main display	10 x 5; 40 words and 10 route folders visible on Home.
Finished content	22 screens/pages; 1,018 tile placements; 683 distinct tile labels.
Largest page	50 positions.
Home	I you he she it we they what where why want need like feel have do make get go stop is are can not more good this that to in on and here there again yes no help finished how People Actions Describe Feelings Things Places Food & drink Body & health More words Quick phrases
Topic-page allocation	Ordinary topic pages: 40 topic cells plus a stable bottom row of I, you, want, need, like, not, more, what, where and help.
Vocabulary growth	Same route family as 30-cell, with more routes visible on Home and deeper pages.

At 50 cells, the system broadens to include pronoun contrasts, more questions, auxiliary verbs, grammar, descriptors and ten direct Home routes.

Core Communication 50 adds 287 distinct labels in one step. It provides a substantial core, ten visible routes and deep topic pages while retaining the familiar ten-column direction used by the largest grid.

Römer directly compared 32- and 50-symbol grids. Colour improved message-reconstruction time in the 50-symbol condition but not the 32-symbol condition, supporting colour as a possible secondary cue rather than a universal benefit (Römer, 2024) [12].

11. Core Communication 90 (10 x 9)

Build measure	Verified implementation
File	V4_Symboloud_Core_90_10x9.symboloud
Main display	10 x 9; 70 words and 19 route folders visible on Home.
Finished content	20 screens/pages; 1,578 tile placements; 984 distinct tile labels.
Largest page	70 immediately available words plus 19 visible routes
Home	70 immediately available words plus 19 visible routes
Topic-page allocation	Full reference-page architecture with repeated anchors; no reserved spacers remain in V4.
Vocabulary growth	Full topic, utility, personal, support and grammar architecture; spelling uses the device keyboard.

Core Communication 90 serves as the family's highest-capacity option and source architecture. Home contains 70 words and all 19 topic-route folders.

Core Communication 90 is the destination for users who benefit from the broadest immediately available language. It adds another 301 distinct labels beyond Core Communication 50 and places every major route directly on Home.

The 10 x 9 display maximises immediately available core language and direct navigation while retaining broad topic, personal, support and grammar vocabulary. With spelling provided by the device keyboard, the build contains 1,578 labelled tile placements and 19 folder routes with no reserved spacer cells.

Research supports high-utility core, broad fringe, varied word classes, multiple functions, stable spatial organisation and personalisation (Binger, Harrington and Kent-Walsh, 2024; Erickson et al., 2019; Light et al., 2019; North Bristol NHS Trust AAC



West, n.d.; Soto and Tönsing, 2024) [3, 5, 8, 9, 17]. It does not establish a universal 10 x 9 optimum or the precise allocation of 70 words and 19 routes.

12. How the family supports Symboloud users

The family provides a meaningful starting point at every size. Even Easy Access 4 includes agency, refusal and routes to people, actions, support and personal vocabulary. Larger sets bring more communication functions, grammar, direct routes and topic precision rather than simply adding more examples of the same nouns. As capacity grows, more core words and more topic routes become visible on Home, reducing the navigation needed to reach a broader range of language. The device keyboard provides spelling without duplicating letters inside each grid.

Growth does not mean starting again. Every larger set retains every distinct label from the previous set, so new vocabulary has a planned relationship to familiar content. At the top of the family, Core Communication 90 provides 984 distinct labels across core language, everyday topics, support, personal language, quick phrases, numbers and colours; spelling is available through the device keyboard.

The range is a set of content options, not a sequence that everyone must complete. Some people may begin and remain with an Easy Access grid, while others may start directly with Core Communication 50 or 90. UK English wording and the Modified Fitzgerald Key give the whole family a consistent UK-facing identity, while personalisation remains available for names, relationships, interests, culture, routines and individual priorities, in line with professional guidance that AAC systems should reflect the individual communicator (American Speech-Language-Hearing Association, n.d.; Royal College of Speech and Language Therapists, 2026) [1, 14].

13. How to understand the design

The published literature provides a foundation for the principles used across the family: several field sizes, core plus fringe vocabulary, language beyond requesting, stable organisation, meaningful spatial grouping, literacy access and personalisation (American Speech-Language-Hearing Association, n.d.; Bertuccio and Sanger, 2018; Light et al., 2019) [1, 2, 8]. In V4, spelling access is provided through the device keyboard rather than a dedicated alphabet page. The literature does not prescribe one universal grid size or the exact position at which every word should appear. Bertuccio and Sanger's individualised touchscreen-access model produced 4-, 6-, 12-, 18- and 24-button optima for different children with dyskinetic cerebral palsy; 30 is close to a 32-symbol research condition; 50 has been studied directly; and 90 is Symboloud's highest-capacity product benchmark (Bertuccio and Sanger, 2018; Römer, 2024) [2, 12].

Some display studies use laboratory tasks such as finding symbols or reconstructing prompted messages, and some involve small, indirect or diagnosis-specific samples (Dukhovny and Zhou, 2016; Thistle and Wilkinson, 2017; Wilkinson and Madel, 2019) [4, 18, 21]. Colour findings are mixed: colour may support orientation for some people or larger arrays, while arrangement, spacing, labels and learned location remain important (Kamonsitichai and Weinstein, 2025; Römer, Scholz and Kehl, 2022; Wilkinson, Gilmore and Qian, 2022) [6, 13, 20]. Research involving cortical visual impairment and motor reaching also reinforces the need for individualised visual and access decisions (Wilkinson et al., 2023; Wilkinson, Sowers and Sainburg, 2026) [19, 22]. For that reason, Symboloud uses the Modified Fitzgerald Key as a consistent organisational aid rather than claiming that colour alone teaches language.

The exact vocabulary, ordering, page thresholds and transition points are Symboloud design decisions informed by this wider evidence. The finished family provides a substantial and coherent starting base, but no stock vocabulary can contain every person's names, relationships, identity, health information, culture, interests and routines. Personalisation therefore remains part of the product's intended use rather than a correction to an incomplete design (American Speech-Language-Hearing Association, n.d.; Soto and Tönsing, 2024; Wilkinson et al., 2023) [1, 17, 19].

14. Final rationale

Symboloud's development team has created one coordinated language family rather than eight unrelated boards. Easy Access 4 begins with purposeful agency and routed support. Easy Access 6, 12, 18 and 24 progressively widen the available language while retaining structured, lower-density displays. Core Communication 30 introduces the full reduced-set architecture and deeper routed vocabulary; Core Communication 50 adds a broad generative core and deeper topics; Core Communication 90 provides the fullest 70-word, 19-route Home display and 984 distinct labels. Spelling is available through the device keyboard across the family.



The strongest product claim is the coherence of the content pathway. Every larger set retains all distinct labels from the one before it. Growth brings more language, more direct access, more topic precision and more grammar, while the device keyboard provides spelling. The evidence supports the principles behind that architecture: several field sizes, core plus fringe, multiple communication functions, stable organisation, meaningful grouping, support, personal language and literacy (Binger, Harrington and Kent-Walsh, 2024; Light et al., 2019; Soto and Tönsing, 2024) [3, 8, 17]. Symboloud takes responsibility for the exact implementation.

For Symboloud users, this means there is a credible starting option at several access levels and a clear route to richer vocabulary when a larger field is appropriate. The family is substantial enough to use immediately, consistent enough to feel like one product, and flexible enough to personalise around the individual communicator.

References

In-text citations use Harvard author-date form. The bracketed numbers point to the corresponding numbered entries below, providing a quick way to trace each claim. Only published or publicly available sources are listed. Internal Symboloud workbooks and design records were used to verify the build but are not presented as research references.

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