KEY-STONE
Marketing research and consulting

IOS
Report Quantitative research

August 2024

Methodology

Premises and main objectives

Objectives

The **quantitative phase** covered:

- **Target profiling** (socio-demographics of owners, practice type, size, specialization, geography)
- Measurement of **strengths** and **criticalities** of the concept
- Acceptance of **proposed pricing** and its **impact** on purchase intention

Methodology and statistical note

The sample (thus the survey) does not represent the overall market but rather the segment of those who intend to purchase an IOS device

The research was carried out **exclusively on dentists interested in purchasing an IOS in the near future**, drawing from two different basins: non-owners who are planning to purchase a scanner for the first time, and owners who already own at least one scanner but would like to purchase another one (either as a replacement or in addition to the one they already own).

This research is not intended to measure the potential market but to evaluate the satisfaction and purchase intention for the Sirios scanner, also providing insights on pricing and suggestions for communication.

The quantitative survey has been performed on **371 Dentists owners/non-owners/prospects of IOS** randomly selected from fully representative sample of GPs from Key-Stone Data Bases in **France**, **Italy** and **Spain**.

The interviews were conducted online (CAWI) in July 2024, the collected data was processed using EXCEL and SPSS.

Based on the objectives and question types, the analyses were carried out using the most modern and appropriate statistical techniques and methodologies.

GLOSSARY

- The confidence level indicates the reliability of the research. For example, a confidence level of 95% means that the phenomenon identified by the research is certain in 95% of cases.
- The confidence interval indicates how much the research data may deviate from reality. **In the current study**, with a 95% confidence level, the **maximum error (confidence interval) is +/- 5,1%**.

Executive Summary

Executive summary

Sample Segmentation: Implant Users

Implantology is a common practice in most dental clinics, with greater specialization in France. Spain has a high proportion of intensive implant users, indicative of a well-developed market. Although the sample of potential intraoral scanner buyers is not representative of the entire implantology market, it is useful for evaluating the value proposition of the new scanner compared to the leading brands.

Sample Segmentation: Aligners Users

In France, orthodontics, and specifically aligners, is a niche market due to regulatory factors. This data helps evaluate the use of aligners in Italy and Spain and is valuable for analyzing related responses. Align Technology, Dentsply Sirona, and Straumann are key players in the scanner market, with their customers analyzed for differences in purchasing behavior and perception.

Sample Segmentation: Consumable Customers

To separately evaluate the results for Straumann customers, a statistically significant segment was created by grouping users of Straumann, Neodent, Anthogyr implants, and ClearCorrect. The analysis also revealed that customers of Dentsply Sirona (implants and aligners) and Invisalign users are statistically relevant segments. The sample segmentation identified customers of three companies (Align Technologies, Straumann, and Dentsply Sirona) whose statistical representativeness is sufficient to analyze potential differences in purchasing behavior perception.

New prospects profile

Among potential buyers of intraoral scanners, nearly 40% are potential future owners, 45% are current owners looking to purchase another scanner, and 16% own multiple scanners but plan to acquire more. In Spain, there is a higher proportion of non-owners considering a purchase (50%), while in Italy, there are more scanner owners among potential buyers. Non-owners are also more common among those over 54 years old and in smaller practices.

Drivers of Choice

The most important factors in choosing an intraoral scanner include high reading accuracy, scan resolution, and affordable price. In France, economic accessibility is less of a priority, but product training is highly valued. In Spain, affordability and flexible scanning are crucial, while wireless charging is appreciated in both Italy and France.

Compatibility with Invisalign: Concerns and Priorities

Compatibility with Invisalign has emerged as a significant concern in focus groups. Among the 15% who consider compatibility with aligners important, two-thirds specifically value compatibility with Invisalign, indicating that 60% of those who view "compatibility with clear aligners" as important see it as a major issue. This translates to 9% of the overall sample. This concern is less pronounced in France due to a more specialized market, while in Italy and Spain, where the market is broader, the concern is around 9-10%. Among IOS owners, 10% consider compatibility with Invisalign crucial, compared to 7% of non-owners.

Executive summary

Usefulness of IOS

The perceived usefulness of the scanner is high in all analyzed situations, with particular emphasis on time optimization, clinical effectiveness, and internal planning. In Spain, the scanner is considered less useful for time optimization compared to other countries, while in Italy it is positively evaluated across all areas. In France, the focus is primarily on optimization and clinical effectiveness, with less attention given to communication and marketing. Differences between owners and non-owners are evident, especially regarding the use for communication and marketing.

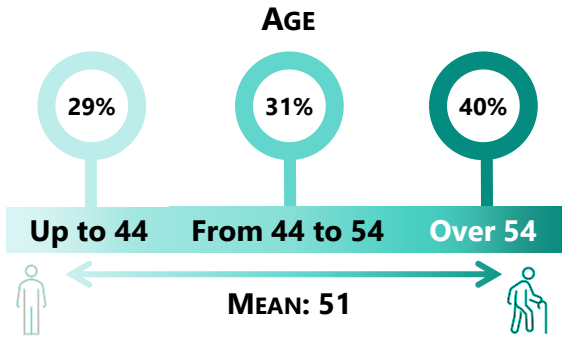
IOS: Limits and Barriers

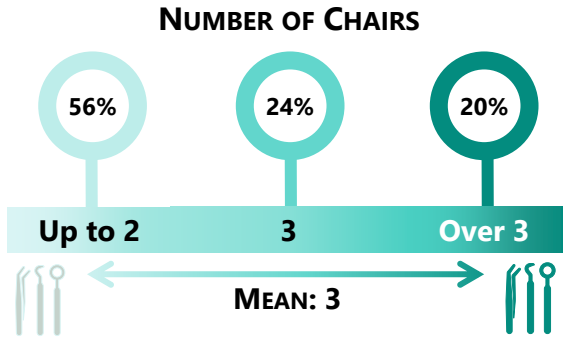
Among those who do not own a scanner, 30% cite excessive cost as a major issue. Internet connectivity and digital reliability are minor concerns. Price sensitivity varies by country: 20% in France view price as a significant barrier, while nearly 50% in Spain see it as such. Full arch scanning is less problematic in France but more relevant in Spain. In Spain, team mindset and compatibility with laboratories are also significant concerns, along with some issues related to compatibility with aligner brands.

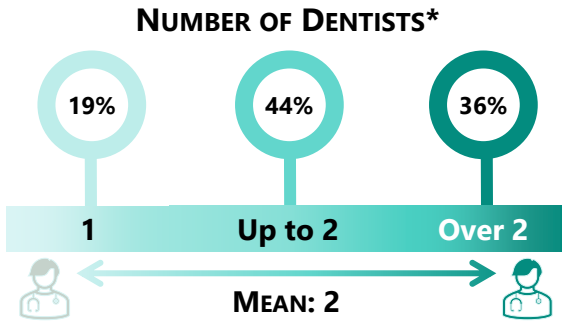
SEGMENTATION

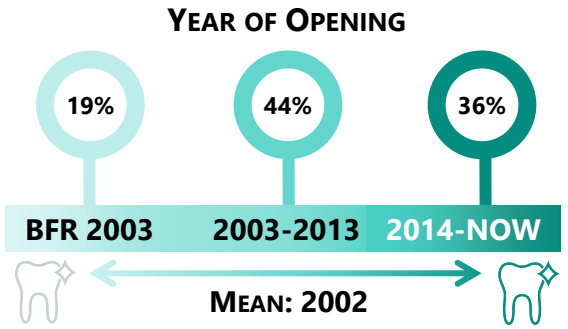
Segmentation parameters

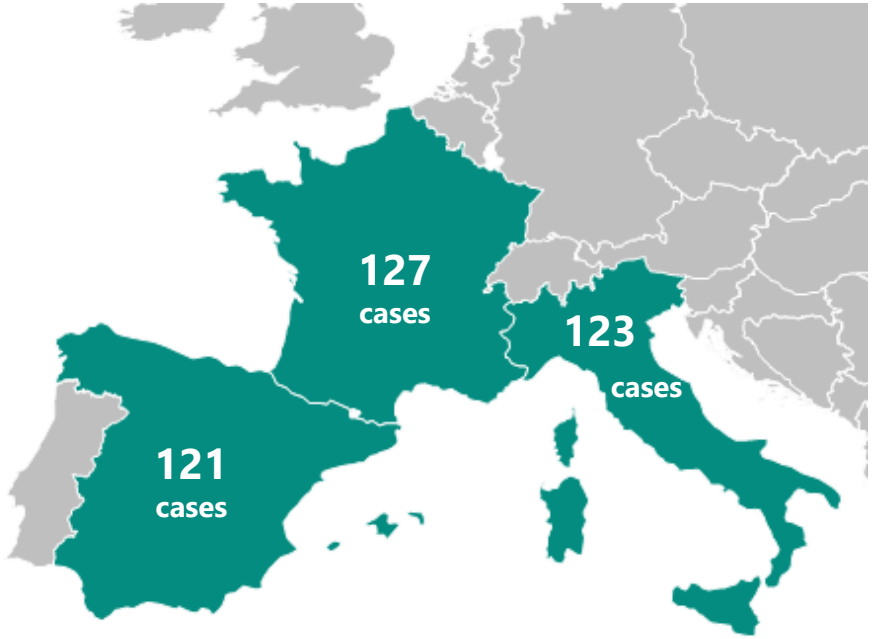
The main segmentation parameters related to the structures (center size, number of dentists, and year of establishment) and the respondent (age and any specializations) have been considered in the analysis of the results.











Before addressing the questions related to purchasing behavior and the evaluation of the new Straumann proposal, some information is provided regarding possible useful segmentation parameters, particularly related to the use of implants and aligners.

Eventual statistical significance will be highlighted according this segmentation parameters.

**The total number of dentists is obtained by adding the number of full-time dentists and the number of part-time dentists calculated at 33%.*

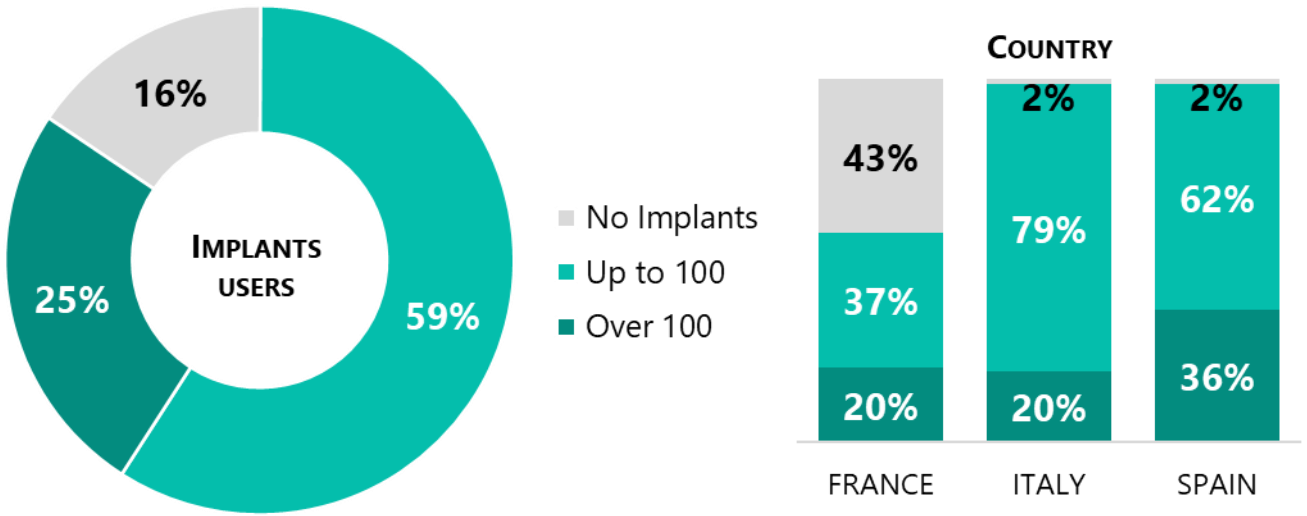
Implants users

Implantology is practiced in almost every dental practice except France

The research shows that **implantology** is practiced in **almost all dental practices**, **except in France** (greater specialization). In **Spain**, there is a higher proportion of **heavy implant users** (highly developed implantology market).

This is a specific sample of **potential IOS buyers** and therefore is not representative for conducting an analysis of the implantology market. However, it is very **useful for cross-referencing data** related to the value proposition of the new scanner concerning the main brands being used.

Straumann and **Dentsply Sirona implant customers** has been **highlighted** because both companies offer **their own IOS** and are **multi-brand**.



IMPLANTS BRANDS		FR	IT	ES
STRAUMANN	21%	30%	21%	15%
ZIMVIE	14%	15%	13%	15%
NOBEL BIOCARE	13%	19%	7%	14%
DENTSPLY SIRONA	8%	12%	9%	5%
SWEDEN & MARTINA	8%		17%	4%
GALIMPLANT	8%			21%
JDENTALCARE	6%		15%	2%
MIS IMPLANT	6%	10%	3%	8%
BTI	5%	1%	1%	11%
NEODENT	5%		7%	6%
BIOTECH DENTAL	4%	14%	1%	3%
ANTHOGYR	4%	10%	2%	2%
BIOHORIZONS	4%		1%	9%
KLOCKNER	4%			10%
GLOBAL DENTAL	4%	14%	1%	
ALPHA BIO	3%	4%	2%	3%

Other mentioned brands account for 60% (FR: 33%; IT: 79%; ES: 56%) of the responses provided and comprise 72 brands.

How many implants do you approximately place in a year in your dental practice?
Which implant brands do you use in order of importance in your dental practice?

Base: 371 (total sample)

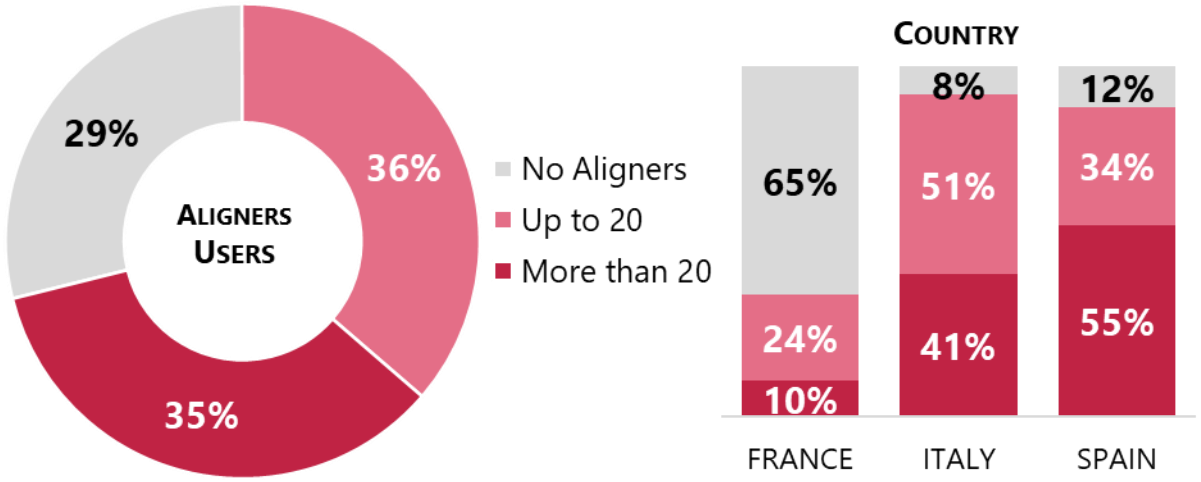
Aligners users

Aligner treatment in France affects only a niche of dental practices

In **France**, **orthodontics** specifically **aligners**, represent still a **niche market** (mainly due to regulatory reasons). On the contrary aligners are **extensively used in Italy and Spain**.

While these **data** are not intended for an analysis of the aligner market, they are very **useful for profiling** the subsequent responses related to this topic.

Align Technology, **Dentsply Sirona**, and **Straumann** are the **three largest groups among companies that offer scanners**, making it important to analyze any differences in purchase behavior and perception among their respective customers.



ALIGNERS BRANDS		FR	IT	ES
ALIGN TECHNOLOGY	65%	52%	61%	74%
ORMCO	14%	11%	7%	21%
DENTSPLY SIRONA	8%	9%	4%	11%
GEO BIOMAX	6%		15%	
STRAUMANN	5%	5%	6%	3%
UNBRANDED LAB	3%	7%	5%	
BIOTECH DENTAL	3%	16%		1%
QUICKSMILE	3%			7%
ANGELALIGN TECHNOLOGY	2%	2%	1%	4%
PROCLINIC	2%			6%
GENIOVA	2%			5%

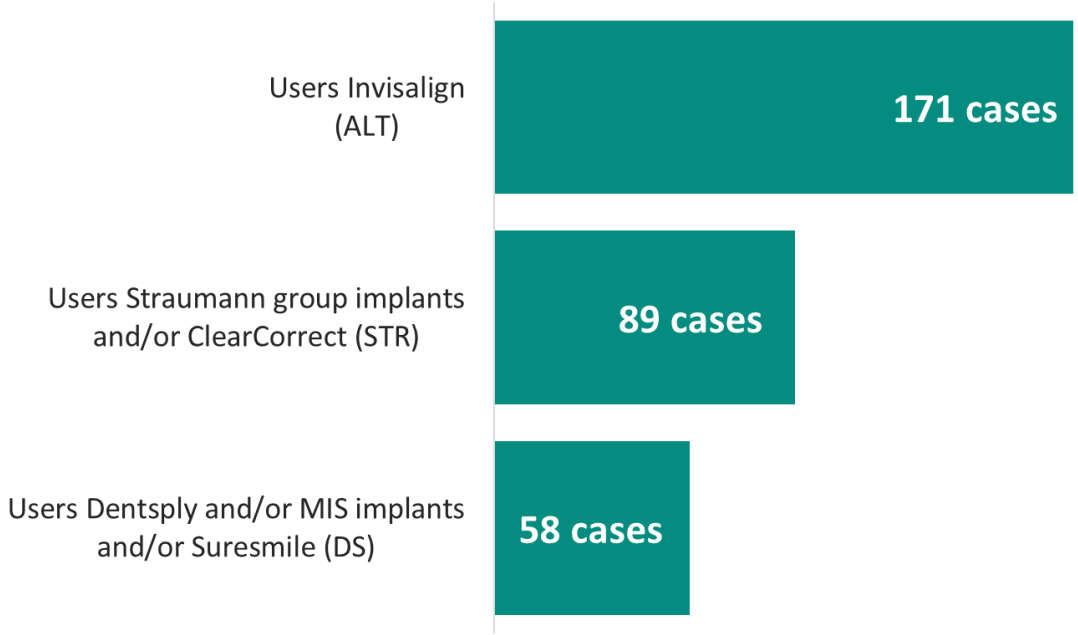
Other mentioned brands account for 21% (FR: 25%; IT: 31%; ES: 8%) of the responses provided and comprise 27 brands

How many aligners do you approximately place in a year in your dental practice?
Which aligner brands do you use in order of importance in your dental practice?

Base: 371 (total sample)

Consumable customer segmentation

Opinions and behaviors of customers of consumable products and services from Align Technologies, Straumann, and Dentsply Sirona can be analyzed separately



With the intention to separately evaluate the results of Straumann's customers, users of **Straumann**, **Neodent**, and **Anthogyr** implants, as well as **ClearCorrect**, were grouped together. This allowed for the definition of a **statistically significant** segment of **89 cases**. During the analysis, it was noted that **Dentsply Sirona's customers** (implants and aligners) also represent a statistically significant segment, as do the **171 Invisalign users**.

The segmentation questions conducted on the sample allowed for the identification of customers from three companies, whose statistical representativeness is considered sufficient to attempt to identify potential differences in purchase behavior perception. For convenience, these three companies are referred to in the charts with the following abbreviations: **Align Technologies (ALT)**, **Straumann (STR)**, and **Dentsply Sirona (DS)**.

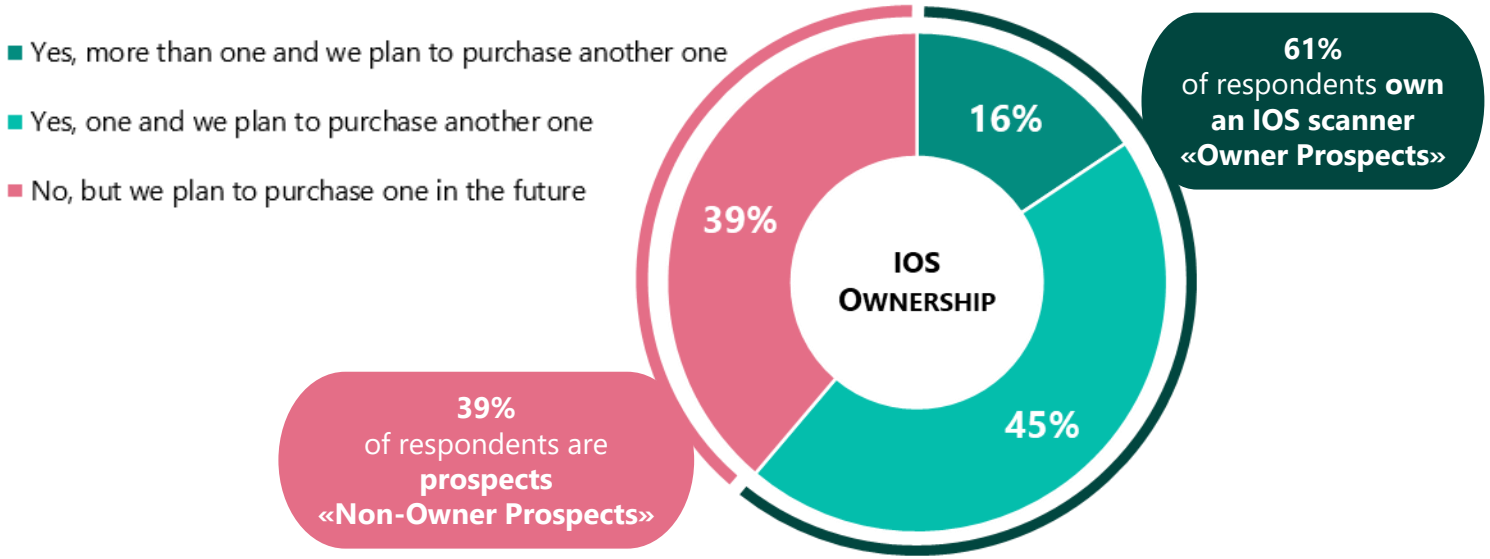
This segmentation explicitly **excludes** owners of **Itero** or **Dentsply Sirona scanners** because the same parameter cannot be used for **Straumann**, which **has not yet been mentioned as a scanner brand** (the 39 Itero owners and 43 DS Scanner owners were nonetheless isolated for possible considerations).

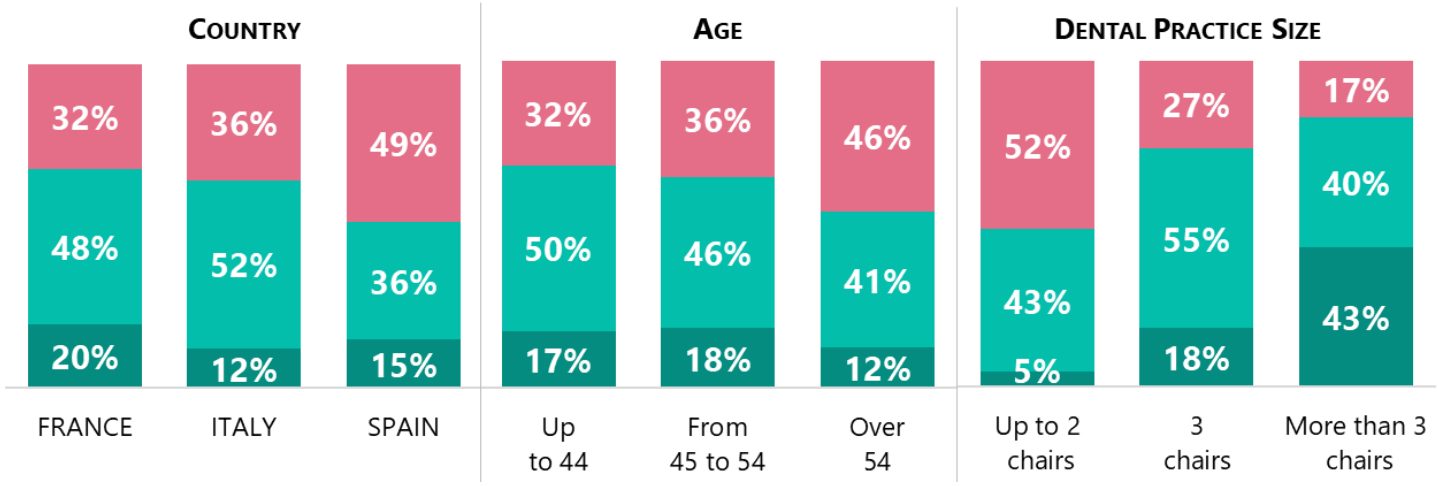
Base: 371 (total sample)

IOS Penetration

Prospective buyers from future and current owners

Those who already own IOS represent a highly relevant and strategic segment





The prospects can be categorized into **two groups: potential future owners** (about 40% of the sample) who don't own a scanner, and **current owners** (about 60% of the sample) **who wish to purchase additional scanners**.
*Previous and recent surveys confirm that **among repurchasers, 80% plan to add more while 20% plan to substitute the current technology**. However, in practices with two or more scanners, the focus shifts toward replacing older scanners. This trend is influenced by the size of the dental practice and the age of their initial scanners.*

Across **countries**, there are no significant differences except in **Spain**, where it was found a **higher rate of non-owners** who are considering a purchase: among the prospects in Spain, **non-owners make up 50%**.
In Italy, those who already own a scanner have a greater presence.
The proportion of **non-owners** among prospects is much **higher** among those **over 54** and in **smaller dental practices**.

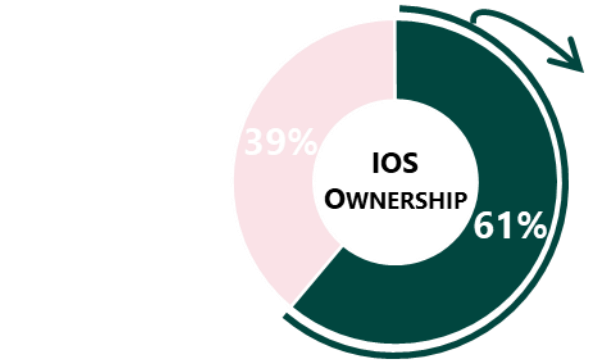
Do you have intraoral scanners in your practice?

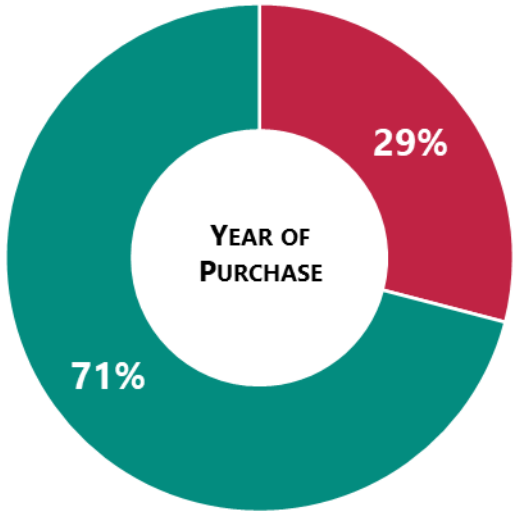
Base: 371 (total sample)

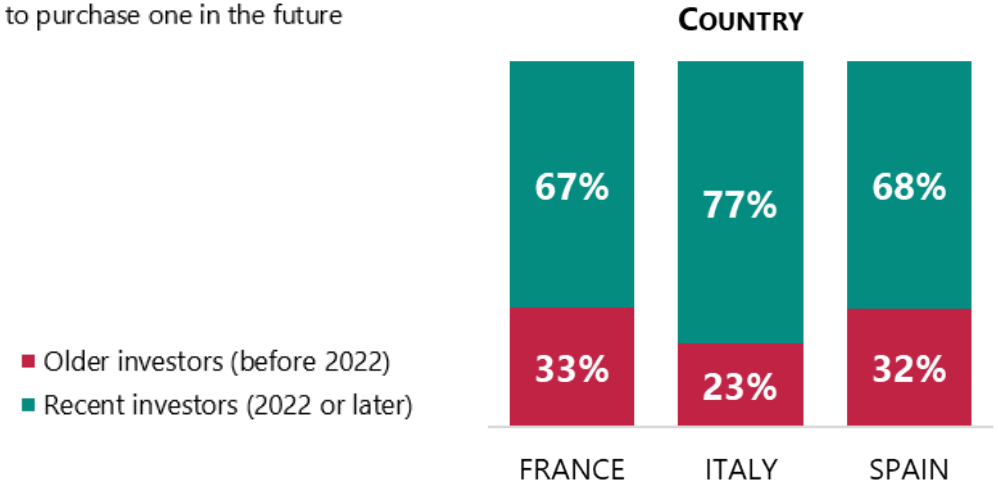
IOS owner prospects: period of purchase

The market potential of those who already own a quite recent IOS should not be overlooked, but price sensitivity is a discriminant factor

OWNERS ONLY







Focusing on **prospects who already own scanners** (repurchasers), it was observed that over 70% of the sample has made a recent purchase, indicating a **strong likelihood of intending to buy additional machines**.

*However, **it is important not to overlook the impact of pricing strategies in Italy and Spain**, where aggressive bundling offers (especially in Spain) and significant tax incentives (in Italy) starting at the end of 2020 have driven prices down significantly (on average, reducing the investment by 50% compared to the supplier's agreed price, with reductions of nearly 90% in Southern Italy due to a second tax incentive).*

*This **trend of paying a very reduced price for scanners in recent years**, due to commercial or fiscal reasons, **has influenced the price perception, particularly among those who already own scanners**, especially if they purchased them recently.*

*This information was gathered to assess potential **differences in behavior** and **evaluations** of Straumann's **scanner value proposition**. Hence, the purpose of this data analysis is to provide new insights when examining purchase behavior and value propositions.*

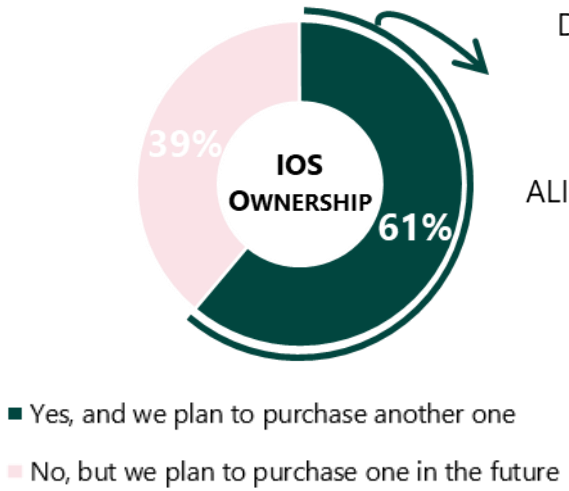
What is the year of purchase of your intraoral scanner?

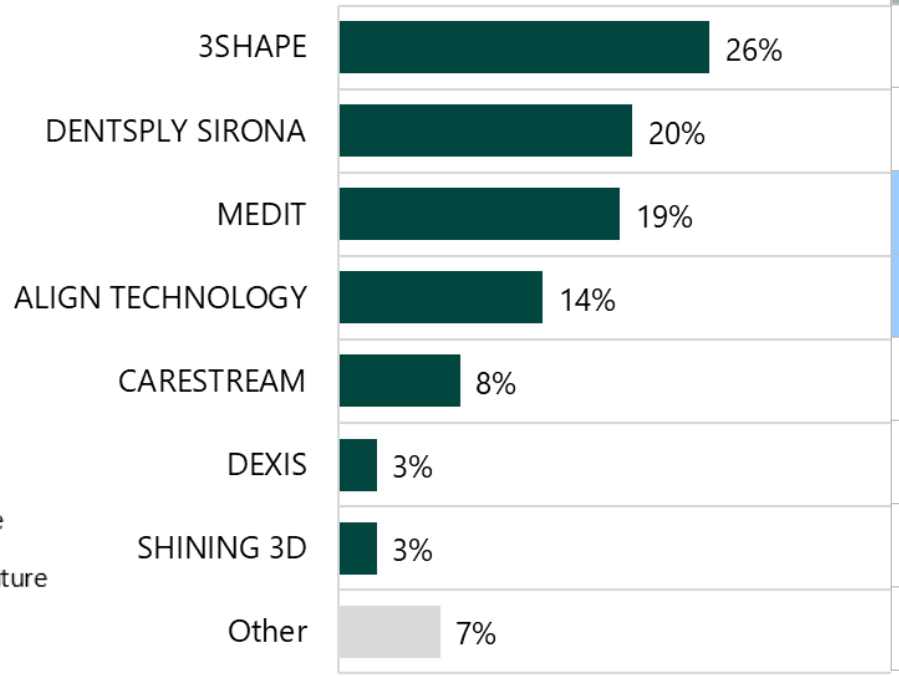
Base: 227 (respondents who have IOS)

IOS owner prospects: installed brands

Strong correlation between implant and IOS DS users

OWNERS ONLY





Blue cells indicate the main significant differences

	FR	IT	ES	Up to 44	45-54	Over 54	ALT*	STR*	DS*
3SHAPE	27%	27%	23%	38%	16%	23%	30%	35%	20%
DENTSPLY SIRONA	22%	15%	24%	19%	20%	22%	18%	18%	44%
MEDIT	28%	13%	16%	14%	26%	19%	16%	14%	11%
ALIGN TECHNOLOGY	5%	11%	31%	15%	14%	14%	26%	12%	9%
CARESTREAM	8%	14%	2%	8%	7%	10%	4%	11%	7%
DEXIS	5%	3%		4%	3%	1%	2%	2%	2%
SHINING 3D	1%	6%		1%	4%	3%	1%	2%	2%
Other	5%	11%	5%	1%	11%	9%	7%	6%	4%

Considering only the **prospects intending to make a purchase**, it is interesting to evaluate purchasing behavior and the assessment of Straumann's value proposition based on the **brands already owned**. It was found a strong presence of **Medit** in **France** and a significant presence of **Align Technology** in **Spain**: these are two factors to be considered. It is also noteworthy that **3Shape** is more prevalent among the **younger audience**.

Given the number of cases, **this analysis** is not an evaluation of the installed base of equipment but aims to **identify** those who own specific brands to see if they have **different purchasing intentions** and if they **evaluate** Straumann's value proposition **differently compared to those using other brands**.

*As explained in the segmentation section, these are clients who use implants and/or aligners from Straumann, Dentsply Sirona, or Align Technologies.

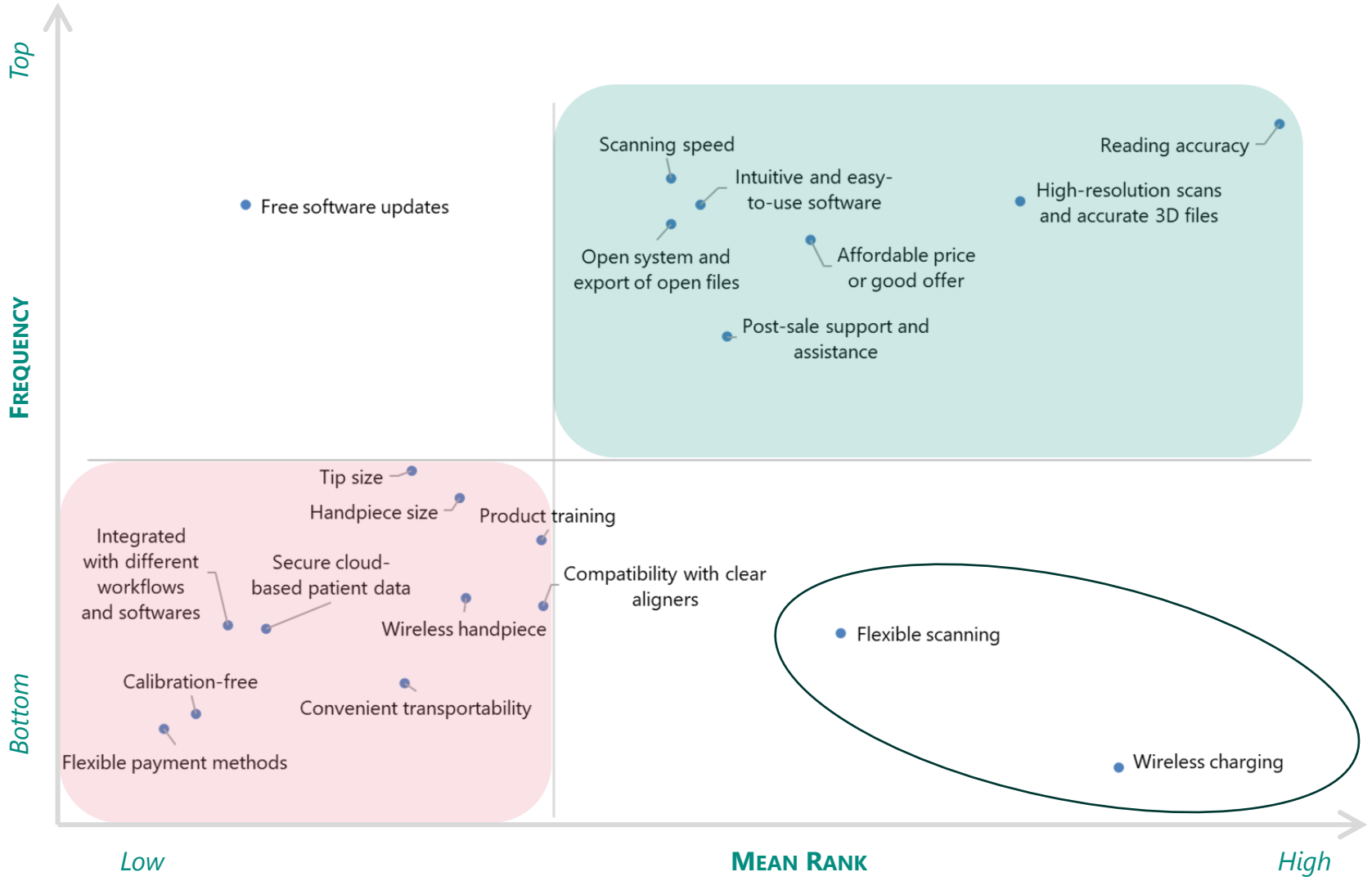
What is the brand of your intraoral scanner?

Base: 227 (respondents who have IOS)

Factors supporting IOS choice

Relevant elements when choosing a scanner

In the top right quadrant, the strongest items for a winning value proposition



Selection and ranking of top 5 items. The most frequently chosen items are on the vertical axis and their level of importance is on the horizontal axis, leading to strategic insights.

In the top right quadrant, the elements truly relevant for the majority of respondents are shown. These are actual "prerequisites."

Flexible scanning and **wireless charging**, two of the strengths of Straumann's value proposition, are mentioned by fewer respondents, but those who do mention them place **significant importance**. T**hese are features that are not widely known or prevalent but** could be **strong differentiators if properly communicated**.

The elements in the bottom left are not particularly differentiating.

Free software updates are mentioned by many, but their **importance is low**, suggesting that they may be taken for granted.

How important are the following factors to you when choosing a scanner?

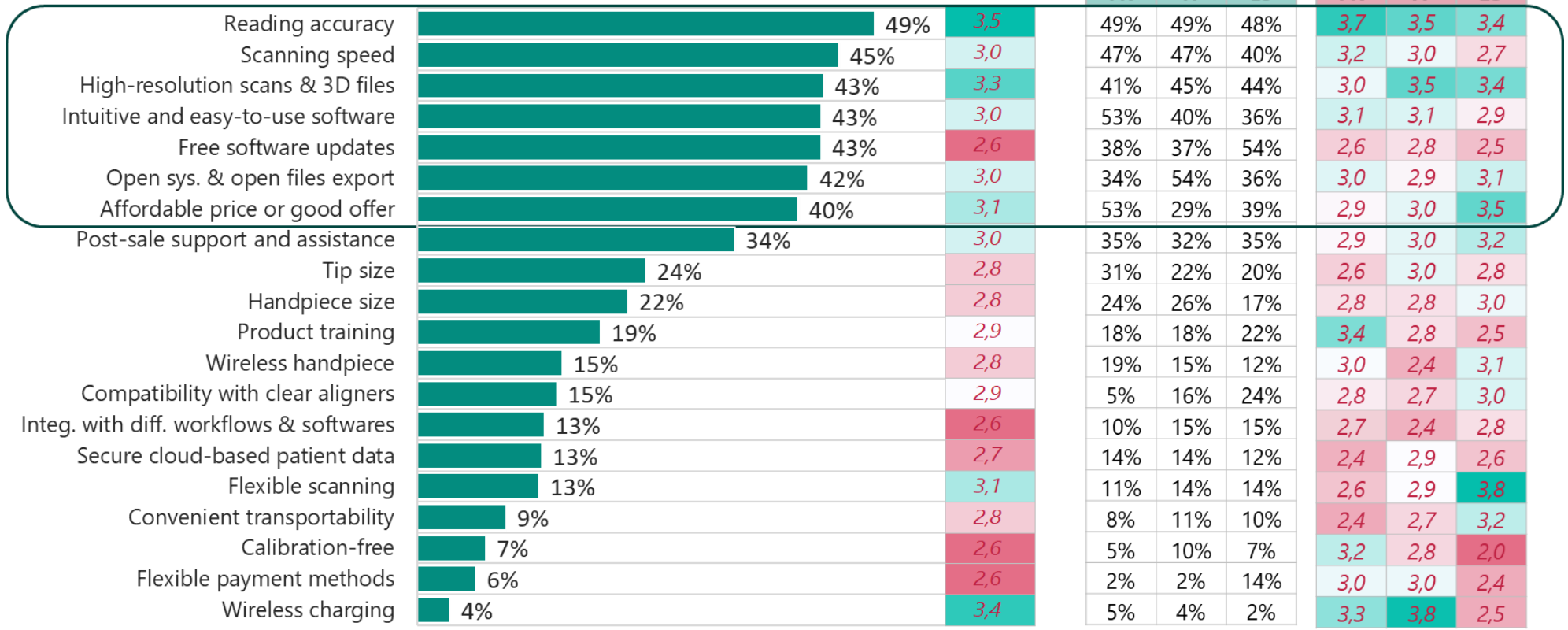
Base: 371 (total sample)

Relevant elements when choosing a scanner

Main decision-drivers in choosing a scanner show differences in the three countries

Within the box, you can see the most relevant elements in choosing a scanner that were mentioned by over 40% of respondents. Regarding the rankings, there are **high scores** for **reading accuracy, high resolution of the scans and 3D files**, **affordable price** or good offer.

Considering the three countries, an **affordable price** scores **below average in France** but is particularly **high in Spain**, while **product training** is especially valued in **France**. **Flexible scanning** is considered particularly **relevant only in Spain**, while **wireless charging** is appreciated in **Italy** and **France**.



	FREQUENCY			MEAN RANK		
	FR	IT	ES	FR	IT	ES
Reading accuracy	49%	49%	48%	3,7	3,5	3,4
Scanning speed	47%	47%	40%	3,2	3,0	2,7
High-resolution scans & 3D files	41%	45%	44%	3,0	3,5	3,4
Intuitive and easy-to-use software	53%	40%	36%	3,1	3,1	2,9
Free software updates	38%	37%	54%	2,6	2,8	2,5
Open sys. & open files export	34%	54%	36%	3,0	2,9	3,1
Affordable price or good offer	53%	29%	39%	2,9	3,0	3,5
Post-sale support and assistance	35%	32%	35%	2,9	3,0	3,2
Tip size	31%	22%	20%	2,6	3,0	2,8
Handpiece size	24%	26%	17%	2,8	2,8	3,0
Product training	18%	18%	22%	3,4	2,8	2,5
Wireless handpiece	19%	15%	12%	3,0	2,4	3,1
Compatibility with clear aligners	5%	16%	24%	2,8	2,7	3,0
Integ. with diff. workflows & softwares	10%	15%	15%	2,7	2,4	2,8
Secure cloud-based patient data	14%	14%	12%	2,4	2,9	2,6
Flexible scanning	11%	14%	14%	2,6	2,9	3,8
Convenient transportability	8%	11%	10%	2,4	2,7	3,2
Calibration-free	5%	10%	7%	3,2	2,8	2,0
Flexible payment methods	2%	2%	14%	3,0	3,0	2,4
Wireless charging	5%	4%	2%	3,3	3,8	2,5

How important are the following factors to you when choosing a scanner?

Base: 371 (total sample)

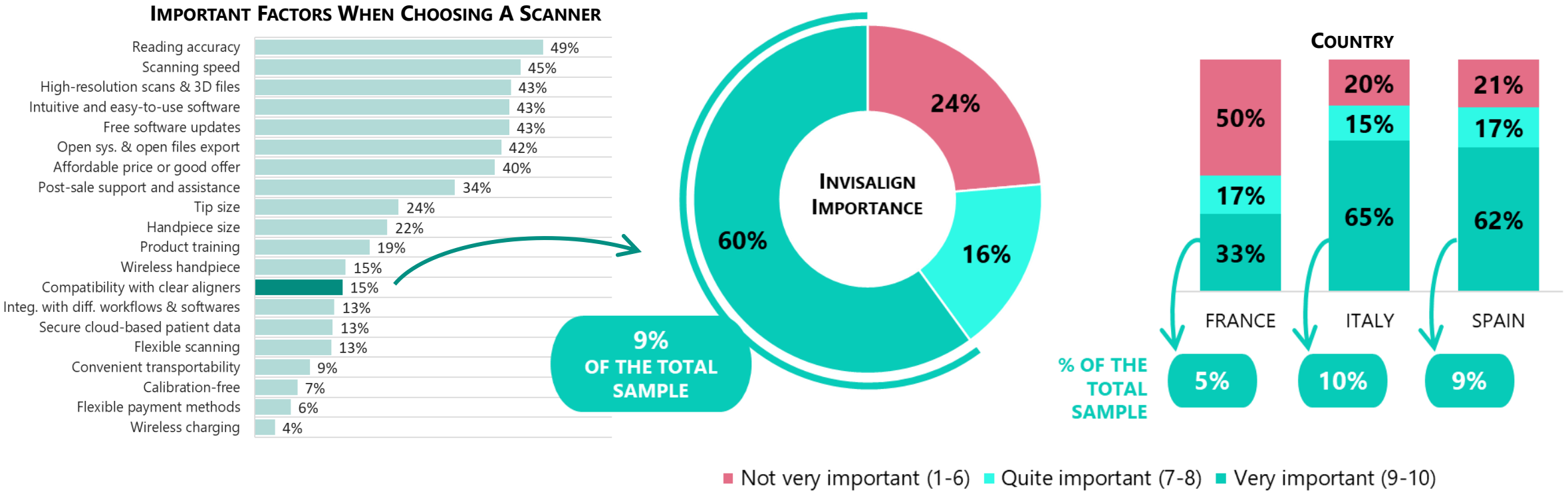
Focus on compatibility with clear aligners

The "insurmountable" barrier of incompatibility with Invisalign affects 9% of the sample

Since the issue of **compatibility with Invisalign** emerged during the **focus groups**, an analysis was conducted of those who identified aligner compatibility as important when choosing a scanner. Of this 15%, **two-thirds** specifically **value compatibility with Invisalign**. Therefore, for 60% of those who answered "Compatibility with clear aligners" to the previous question, this is a **significant issue**, likely a barrier.

Recalculating the weight of these respondents, it was found that for **9% of the overall sample**, this is a highly relevant issue. It is a **less significant** concern in **France**, where there are fewer aligner users due to a more specialized market, while in **Italy** and **Spain**, where the market is more generalist, the **percentage** is around **9-10%**.

Among **IOS owners**, the percentage of those who consider **compatibility with Invisalign** to be crucial is **10% of the overall sample**, compared to **7% of non-owners**.



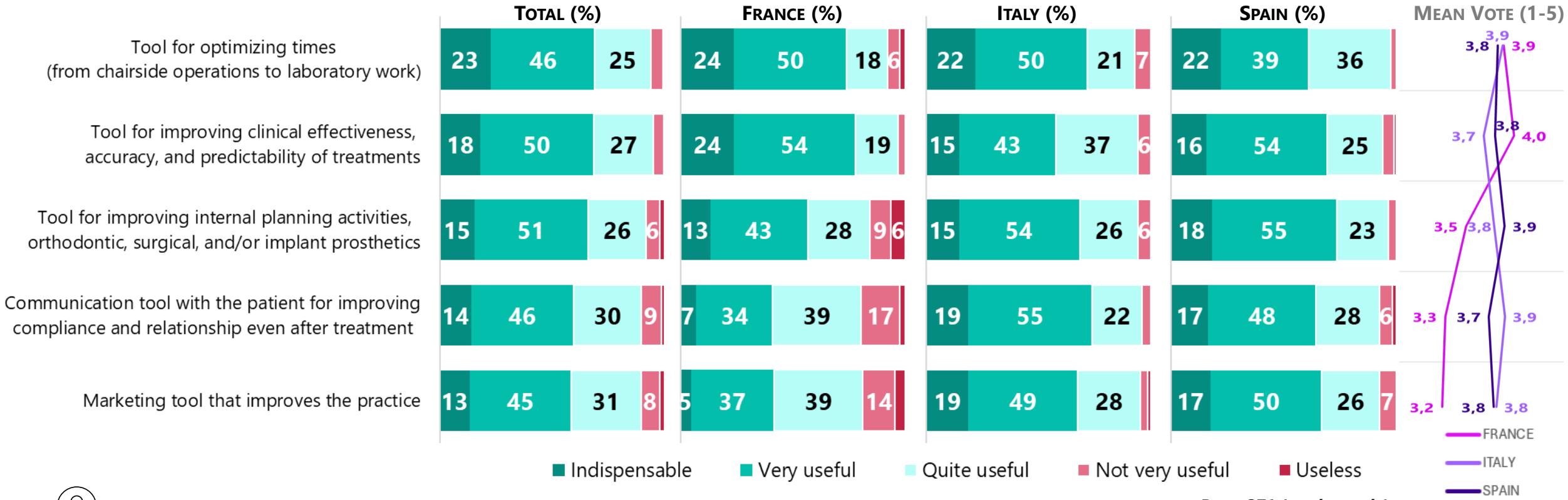
How important is compatibility specifically with Invisalign for you?

Base: 55 (respondents who choose Compatibility with clear aligners)

Usefulness of the IOS in different situations

There is **not a significant difference** in the perceived usefulness of the scanner **across the different situations** listed as all of them receive a high level of consideration. However, **time optimization**, **improving clinical effectiveness**, and **internal planning activities** are the three situations where the scanner is considered **most useful**.

Spain considers the scanner **less useful** as a tool **for optimizing times** compared to the other two countries. **Italian dentists**, on the other hand, find the scanner quite useful in all the listed situations, with **slightly less** emphasis **on improving effectiveness**. In **France**, respondents show **less importance toward** the usefulness of the scanner for **improving internal planning activities**, as a **communication** tools, and as a **marketing** tool, showing a **strong orientation** towards **optimization and clinical effectiveness**. In fact, **only French dentists place less value on communication and marketing topics**, while in other countries, all topics are rated very positively.



How useful do you consider the use of an intraoral scanner in the following situations?

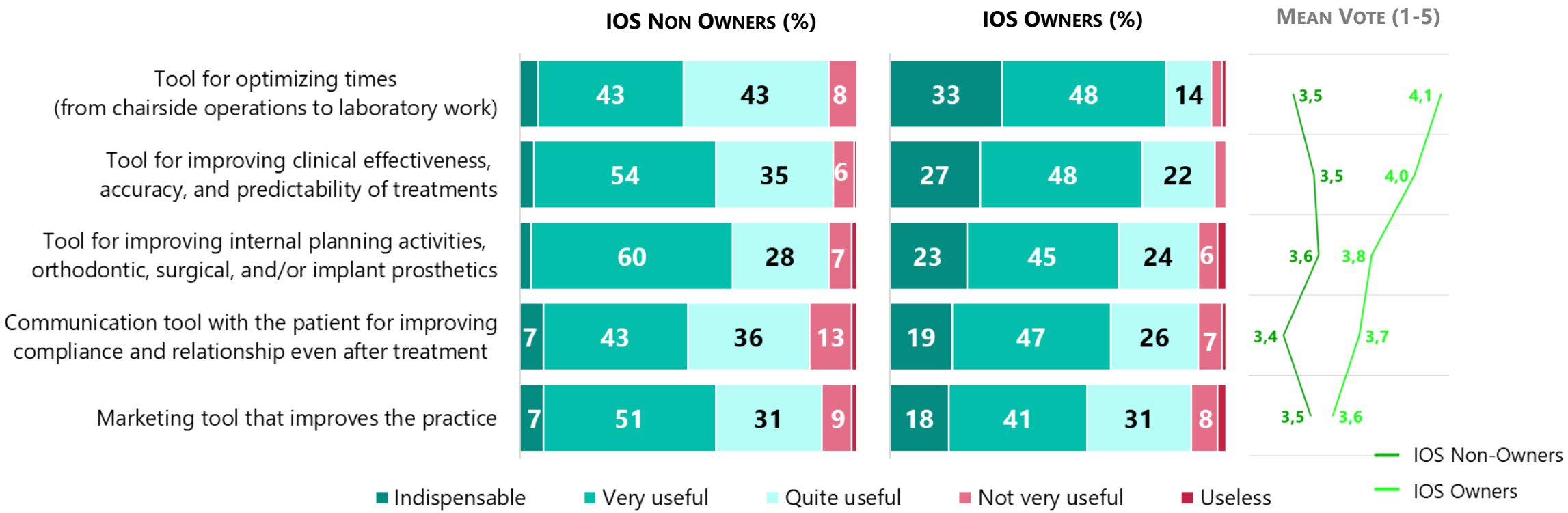
Base: 371 (total sample)

Usefulness of the IOS in different situations

Those who already use the scanner place much more value on all the proposed topics

The differences between owners and non-owners are quite evident, except for the case of **improving internal planning activities** and as a **marketing tool**: these items show aligned values for **both owners and non-owners**.

Regarding the other proposed topics, **owners generally find the scanner quite useful**. It is worth noting that **non-owners** consider the scanner **useful for improving clinical effectiveness** and **as a marketing tool**.



How useful do you consider the use of an intraoral scanner in the following situations?

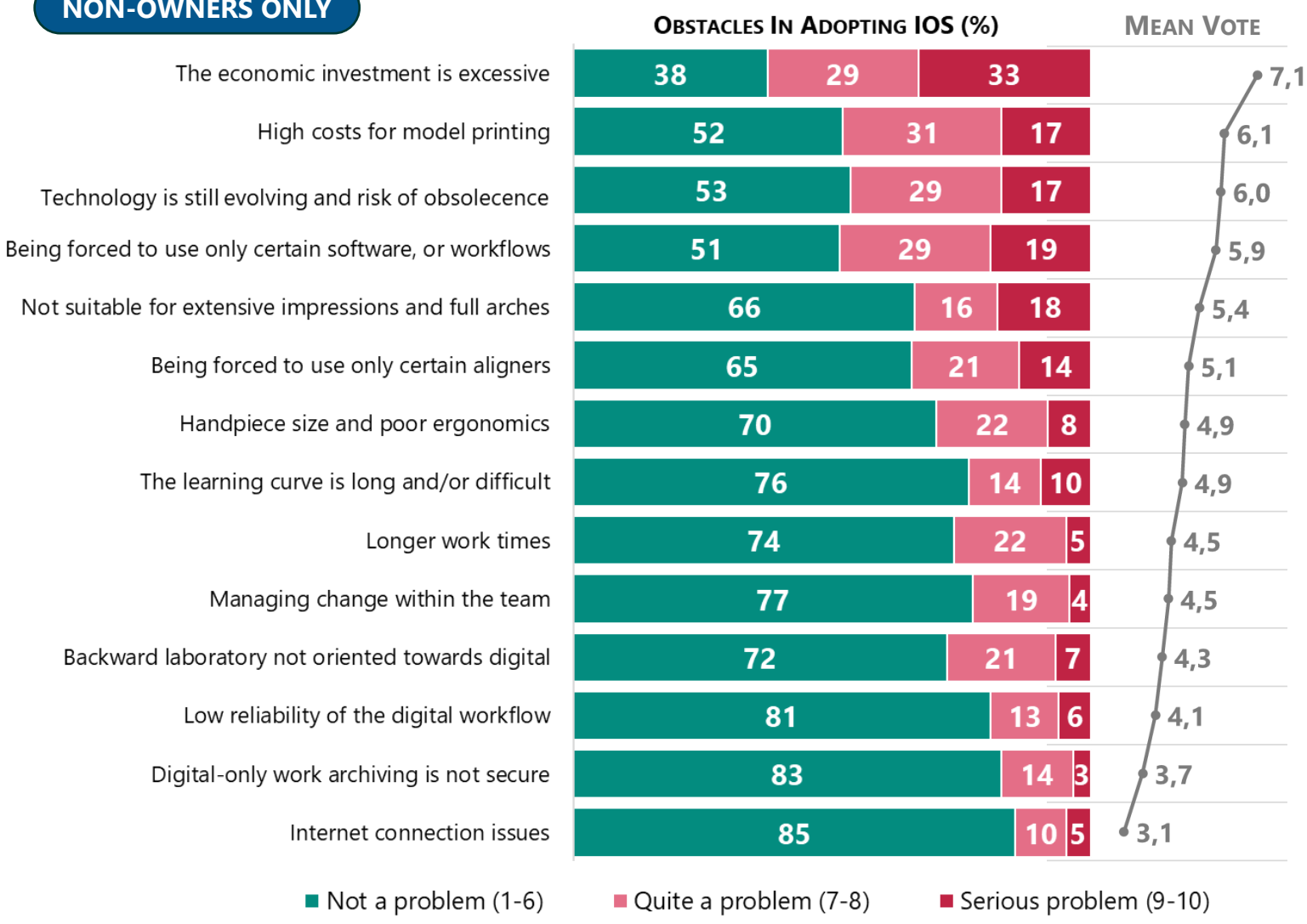
Base: 371 (total sample)

IOS: limits and barriers for non owners only

Barriers for non-owner prospects

On this sub-target, the three most important elements pertain to the economic area

NON-OWNERS ONLY



*Among those **who do not own a scanner**, the phenomenon can be observed in the ratings, which range from 1 to 10 and have been grouped as indicated in the legend.*

The issue of **excessive economic investment** represents a **serious problem for 33%** of the respondents.

Other marginal issues, such as problems related to **internet connectivity** and **digital reliability** in general, are **relatively minor**, although they are occasionally mentioned in focus groups.

The next slide will show the details by **country**, where there is **significant variability in price sensitivity** among the three countries: in **France**, price is a concern for only **20%** of respondents, but it is a major issue in **Spain**, where nearly **50%** of dentists consider it an obstacle to purchase.

The **full arches** issue is also perceived as a **minor** one **in France** but is seen as a **serious problem in Spain**.

Additionally, in **Spain**, issues related to the **mindset** of the team and the labs, are considered **problematic**. The issue of **compatibility with** a particular brand of **aligners** is **slightly higher in Spain**, but this topic will be explored in detail later. **Italians seem to place less importance on economic issues** as a barrier to the first purchase.

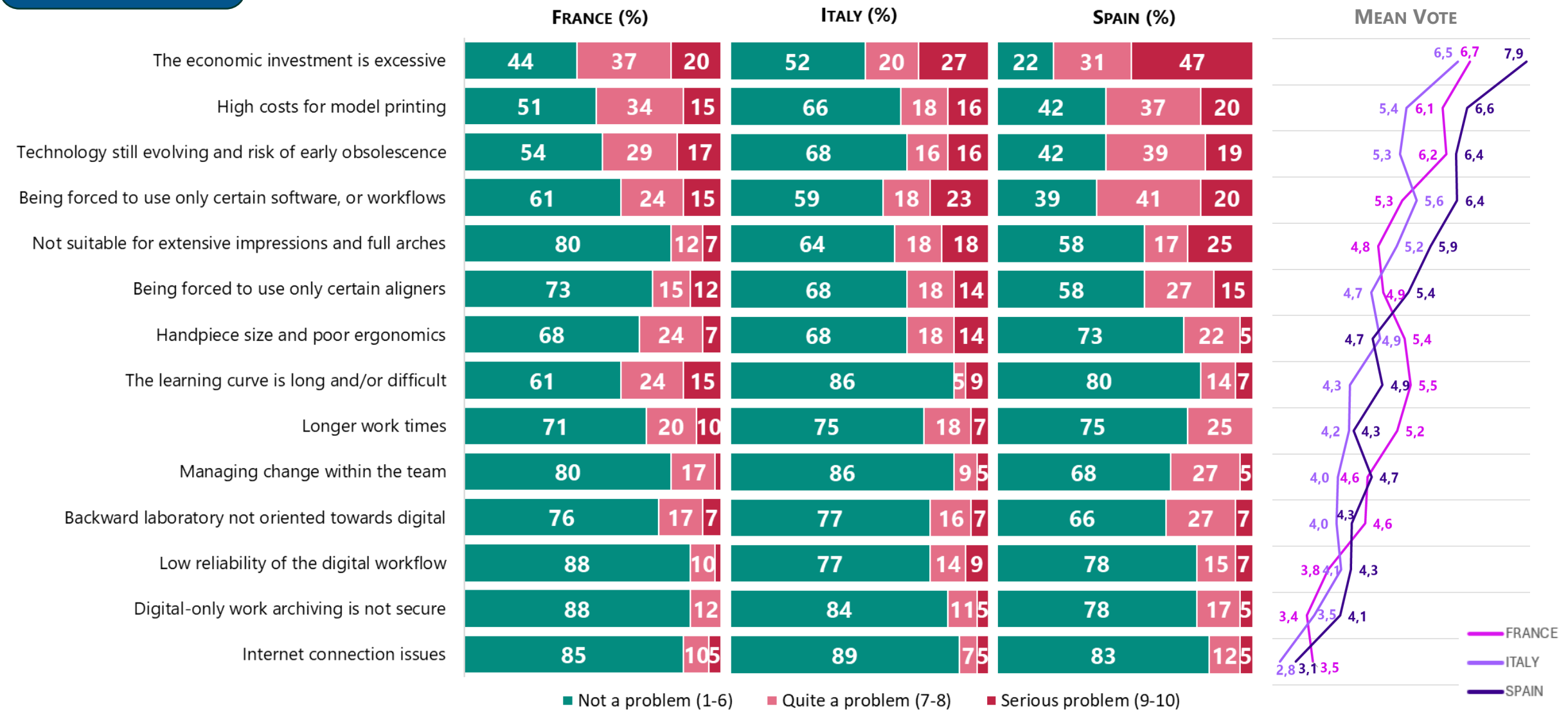
How much do you consider the following aspects an obstacle to adopting an intraoral scanner in your practice?

Base: 144 (respondents who do not have IOS)

Barriers for non-owner prospects

NON-OWNERS ONLY

The issue of the economic effort is crucial in Spain



How much do you consider the following aspects an obstacle to adopting an intraoral scanner in your practice?

Base: 144 (respondents who do not have IOS)

Barriers for non-owner prospects – Factor Analysis

NON-OWNERS ONLY

The resistances are grouped into subjective and objective drivers

The factor analysis is a multivariate analysis technique used to study and interpret the correlations among a group of variables. The goal is to synthesize and reduce the data by summarizing the information contained in many variables into a few synthetic factors. Each factor showed its own common features, resulting statistically different from each other factor. The obtained factors have been considered to carry out the cluster analysis.

This factor analysis led to the identification of five factors into which the different variables considered were grouped.

CROSS LOADING: *When certain items are present in two factors, it means that they partially contribute to both drivers. The numerical values refer to the degree of correlation (mean 0, variance +/-1).*

Drivers of resistance →	Backwardness	Expensiveness	Resistance to change	Compatibility	Full-arch issues
Internet connection issues	0,738				
Handpiece size and poor ergonomics	0,502				0,400
Digital-only work archiving is not secure	0,554				
Low reliability of the digital workflow	0,492				
Backward laboratory not oriented towards digital	0,444				
The economic investment is excessive		0,806			
Technology is still evolving and risk of early obsolescence		0,440			
High costs for model printing		0,735			
The learning curve is long and/or difficult			0,683		
Longer work times			0,514		0,418
Managing change within the team			0,705		
Being forced to use only certain software, or workflows				0,618	
Being forced to use only certain aligners				0,788	
Not suitable for extensive impressions and full arches					0,654

- ✓ **BACKWARDNESS**: this driver encompasses elements that seem unrelated and may appear trivial, but from the researchers' perspective, it represents a single driver of justifications rooted in biases rather than real issues.
- ✓ **EXPENSIVENESS**: the problems in this area are related to convenience, where excessive investment is predominant, but also include concerns about technology evolution, although with a low correlation, and model printing.
- ✓ **RESISTANCE TO CHANGE**: this area encompasses issues related to mindset, in particular potential biases and prejudices from both dentists and their laboratories.
- ✓ **COMPATIBILITY**: this factor includes aspects related to compatibility with certain software or aligner systems.
- ✓ **FULL ARCH ISSUES**: the issues falling under this factor are related to full arches, including aspects related to the ergonomics of the handpiece and long working times.

How much do you consider the following aspects an obstacle to adopting an intraoral scanner in your practice?

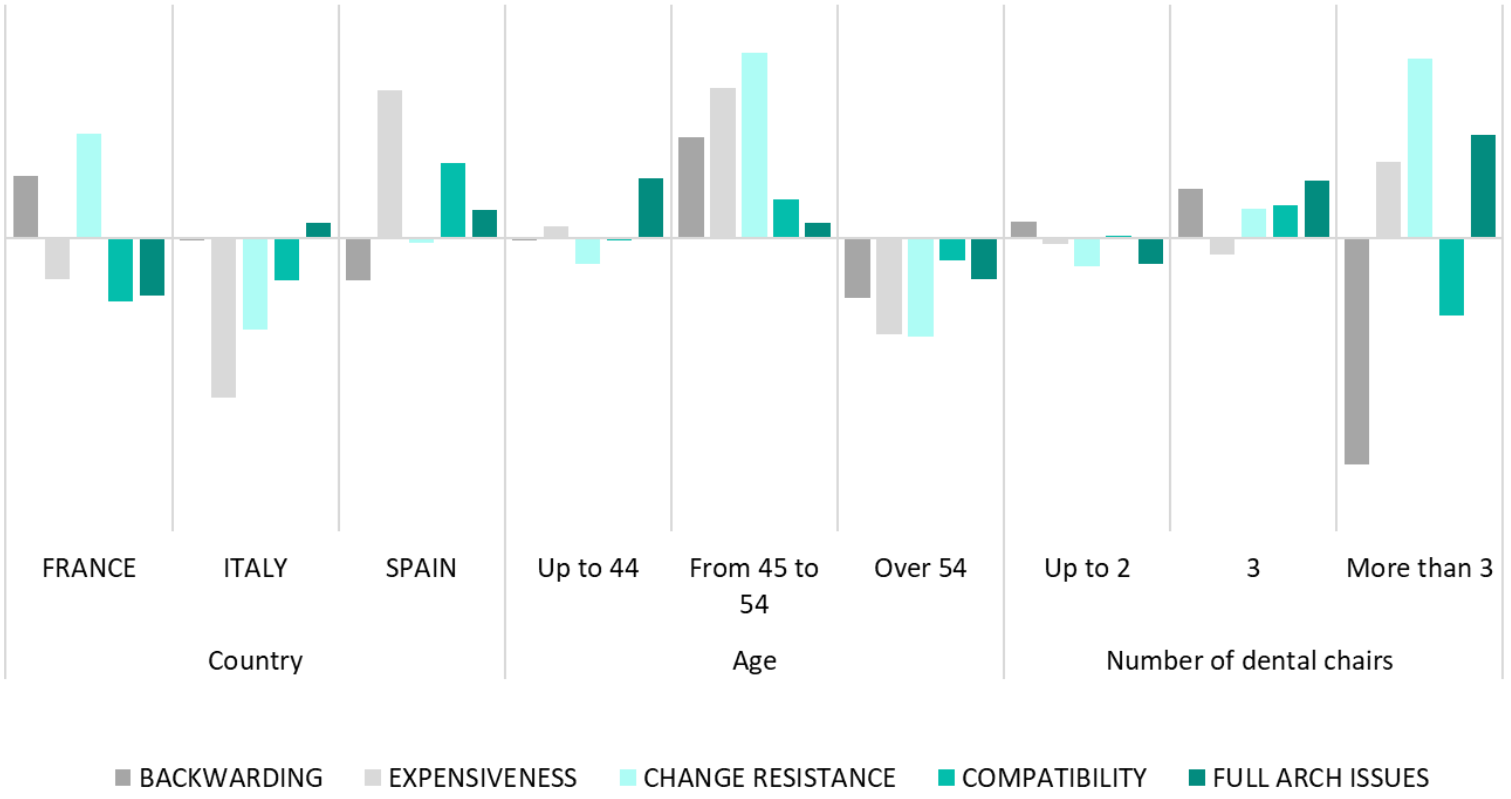
Base: 144 (respondents who do not have IOS)

Barriers for non-owner prospects – Factor Analysis

The factors help to highlight the differences and to profile the various segments

NON-OWNERS ONLY

Each factor has an average of 0, so by analyzing the average scores on individual cases, it is possible to statistically measure and visually observe the differences in the evaluation of each driver compared to the mean (horizontal axis).



- Regarding the countries, **France** exhibits more issues related to biases and stereotypes, which likely indicate a considerable **resistance to change**.
  On the other hand, Italy and Spain show statistically significant data (with opposing opinions) regarding the factor of **expensiveness**: **Italian dentists do not place much importance** on this factor, in contrast to **Spanish dentists**, for whom price-related issues are **of great significance**.
  In **Spain**, **compatibility** also emerges as a relevant issue, but it should be noted that the large share of Invisalign aligners and Itero scanners undoubtedly influences this perception.
- It is worth noting that **respondents aged 45 to 54** assign greater **importance** to the **top three factors**; this is a target group of **"affluents"** who have not yet made a purchase but feel they must do so.
  Dentists **over the age of 54** place **little weight on all factors in general** (it is possible that some aspects related to older respondents have not been investigated).
- Dental practices with **more than three chairs** significantly evaluate issues of **compatibility** and **full-arch prosthetics**.

How much do you consider the following aspects an obstacle to adopting an intraoral scanner in your practice?

Base: 144 (respondents who do not have IOS)

Via Severino Doppi 20/bis,
10095 Grugliasco (TO)

+39 0113119430

www.key-stone.it