FREE HANDBOOK · ARABIC DASHBOARDS

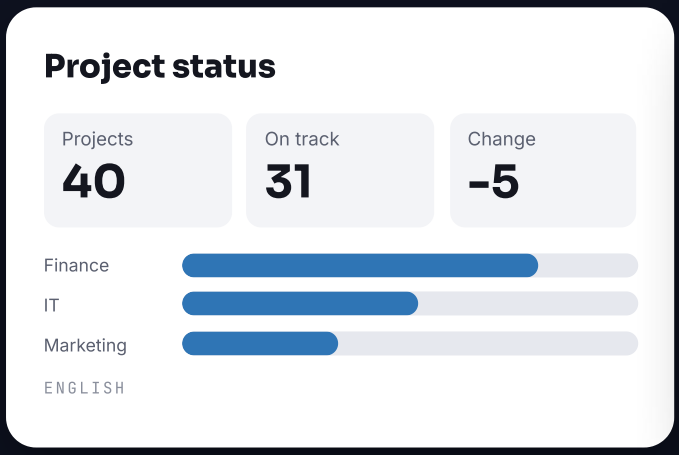
Right to left.

48

problems,
with a fix for each

Things that break when a dashboard goes Arabic, and how to fix each one.

عندما يتحول الداشبورد إلى العربية: 48 مشكلة وحلولها





Typed as **-5**. Shown as **5-**. Same value, two different looks.

INSIDE

1 Direction and layout
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6 Charts
7 Export, print and phone
+ Words and checklist

Tested, not guessed. Every rendering bug in this handbook was reproduced in Chrome and Firefox, and every Excel claim on Excel 365, in October 2026.

DQ
DARWISH QANNAN.
darwishqannan.com

BEFORE YOU START

One line flips the page. It does not fix the dashboard.

Adding dir="rtl" in HTML, or switching a sheet to right-to-left in Excel, mirrors the layout in seconds. What it leaves behind is in this handbook: numbers that move, signs that jump, names that count twice, and words nobody says.

Each item

has what happens, the fix, and a before and after.

The tags

GENERAL applies anywhere.
EXCEL means a spreadsheet.
HTML means a web page or a web dashboard.

Who it is for

analysts, PMO teams, designers and developers who build reports in Arabic and English.

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1 Direction and layout

Switching a page to right-to-left mirrors it in seconds. These are the parts that need a decision.

اعكس اتجاه القراءة، لا القيم نفسها.

1.1 Mirror the reading, never the values

GENERAL

Teams flip everything, including the things that must stay as they are, or flip almost nothing and call it Arabic.

FIX Mirror the layout, menus, card order, table columns and progress. Keep digits, codes like P-001, logos and up/down value arrows exactly as they are.

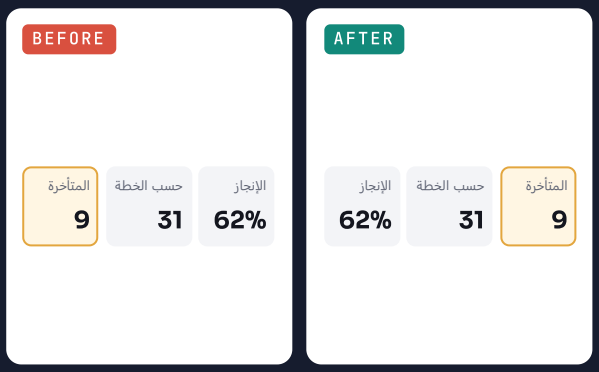
FLIPS layout · menus · card order · table columns · progress · next/back arrows
STAYS digits · codes and IDs · logos · ▲▼ value arrows · brand names

1.2 The most important number goes top right

GENERAL

The English layout puts the headline number top left. In Arabic the eye starts top right, so the key number ends up read last.

FIX Re-order the cards for the reading direction, not just the text inside them. Check the first card a reader meets on a phone too.



1.3 Numbers lose their alignment when mirrored

GENERAL EXCEL HTML

Digits are written left to right in both languages, so the ones digit is always on the right. Mirroring tools push numbers to the left, and the columns stop lining up.

FIX Keep number columns right-aligned in both languages. With decimals, show the same number of places on every row.



1.4 English rows jump to the left in an Arabic table

HTML

Setting dir="auto" on every cell sounds safe. Any cell that starts with an English word turns left-to-right and its text jumps to the other side of the column.

FIX Give the table one direction and keep cell alignment fixed. Isolate only the English words inside the cell with <bdi>.

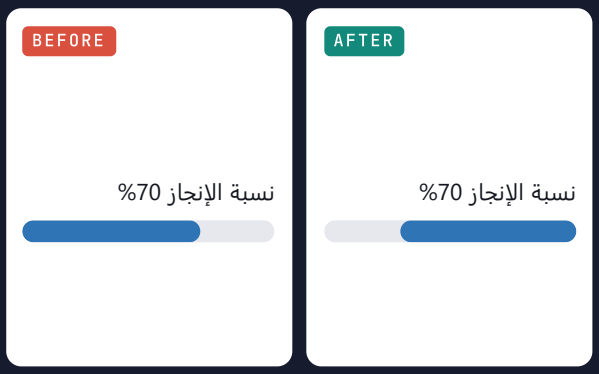


1.5 Progress bars still fill from the left

GENERAL HTML

The page is mirrored but the bars still grow from the left, so progress seems to run backwards against the reading.

FIX Progress bars and step indicators fill from the right in the Arabic version. A slider or a numeric axis is not the same case: decide by what the control means to the reader, then keep that decision everywhere.



1.6 Columns re-ordered by hand in Excel

EXCEL

People rebuild an Arabic sheet by moving columns around so the first one sits on the right. Every formula and copy-paste after that is a risk.

FIX Switch the sheet itself: Page Layout, Sheet Right-to-Left (shown when Arabic is an editing language). Column A moves to the right and every formula stays the same.



2 Numbers

The value stays the same. What changes is how it looks, and the reader does not know which one to trust.

الرقم الواحد يخرج بثلاثة أشكال. اختر واحدا والتزم به.

2.1 The minus sign jumps to the other side

HTML

A negative number on its own in a right-to-left cell is laid out by the Arabic direction around it: -5 shows as 5-. The same card says -5 in English and 5- in Arabic.

FIX Pick one way to show negative numbers and use it everywhere. In HTML put dir="ltr" on signed numbers. Excel has the same choice under Format Cells, Alignment, Text direction.

BEFORE

5-

AFTER

-5

2.2 Phone numbers come out backwards

HTML

A phone number with spaces after an Arabic label is split into groups, and the groups are laid out right to left. The plus sign ends up on the far right.

FIX Isolate phone numbers, IDs and codes as left-to-right with <bdi dir="ltr">.

BEFORE

الجوال: 4567 123 50 966+

AFTER

الجوال: +966 50 123 4567

2.3 Two digit systems on one card

GENERAL HTML

Eastern Arabic digits (١٢٣) and Western digits (123) are both correct Arabic. The trouble is the mix, and it usually comes from a default: the Saudi Arabic browser locale (ar-SA) formats numbers as ١٢٣.

FIX Decide with the readers, then set it on purpose. In JavaScript, ar-SA-u-nu-latn keeps 123 inside Arabic text.

BEFORE

الميزانية: ١,٢٥٠,٠٠٠
المتأخر: 3 من ٤٠

AFTER

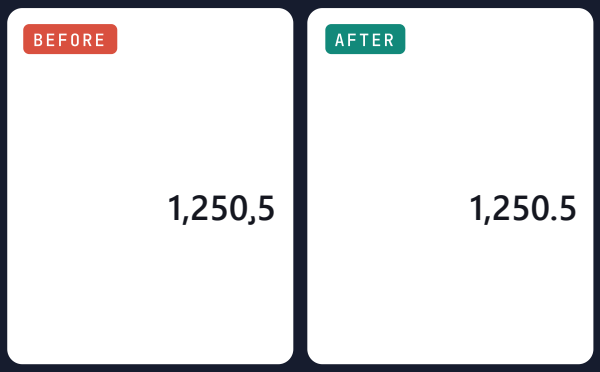
الميزانية: 1,250,000
المتأخر: 3 من 40

2.4 Separators from two systems

GENERAL

Eastern Arabic digits use their own separators (, for thousands, , for decimals). Copying between systems produces numbers like 1,250,5 that nobody can read.

FIX Keep digits and separators from the same system: 1,250.5 or ١٬٢٥٠٫٥, never a mix.

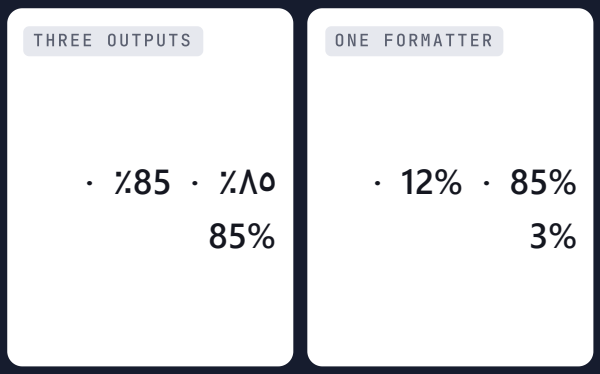


2.5 The percent sign moves with the settings

HTML GENERAL

The same 85 percent can come out as ٨٥٪, as 85 with the Arabic percent sign on the left, or as 85%. Each is valid; three of them on one page is not.

FIX Use one number formatter for every value and check what it actually prints.

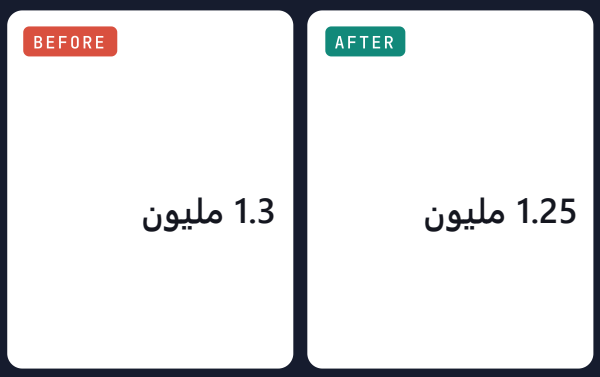


2.6 Short numbers round without telling you

HTML

Compact formatting writes 1,250,000 as 1.3 مليون in Arabic. It reads well, and what it shows is 50,000 higher than the value behind it.

FIX Set the decimals (maximumFractionDigits: 2 gives 1.25 مليون) and keep the full value in the tooltip. In Arabic, write ألف and مليون, not K and M.



2.7 Decimals that change from row to row

GENERAL EXCEL

12.5, 3 and 7.25 in one column cannot be compared at a glance, in any language.

FIX Same number of decimal places for the whole column.

BEFORE

أ	12.5
ب	3
ج	7.25

AFTER

أ	12.50
ب	3.00
ج	7.25

2.8 The currency in every cell

GENERAL

ر.س in one cell, SAR in the next, ريال in the third: the column looks messy and the reader cannot tell if they are the same.

FIX Put the currency in the column header once: الميزانية (ر.س). The new riyal symbol (2025) is not in every font and phone yet; test it before you switch.

BEFORE

البوابة	85,000 ر.س
الحملة	SAR 9,000
النقل	500 ريال

AFTER

المشروع	الميزانية (ر.س)
البوابة	85,000
الحملة	9,000
النقل	500

2.9 Currency typed as text is not counted

EXCEL

Typing "85,000 ر.س" into a cell turns it into text. SUM skips it without an error, so the total is simply wrong. In our test, the total came out as 9,000 instead of 94,000.

FIX Numbers stay numbers. Show the currency with the cell format or in the header, never typed into the cell.

BEFORE

Report.xlsx
85,000 ر.س
9,000
=SUM → **9,000**

AFTER

Report.xlsx
85,000
9,000
=SUM → **94,000**

3 Dates and time

Month names, calendars and the working week all depend on where the reader sits.

للشهر الواحد اسمان، والأسبوع لا يبدأ عند الجميع في اليوم نفسه.

3.1 The same month has two Arabic names

HTML EXCEL

Saudi Arabia, the Gulf and Egypt say أكتوبر. Jordan, Palestine, Syria and Iraq say تشرين الأول. The locale code decides which one you get, in the browser and in Excel.

FIX Pick the locale of the readers with the calendar and digits set in it: ar-SA-u-ca-gregory-nu-latn. ar-JO gives تشرين الأول instead of أكتوبر. In Excel, [$-ar-SA] or [$-ar-JO].

AR-SA

14 أكتوبر 2026

AR-JO

14 تشرين الأول 2026

3.2 Two calendars, no main one

GENERAL EXCEL

Some reports need the Hijri date, some the Gregorian, some both. Showing both at the same size makes every date twice as long to read.

FIX Show one as the main date and the other small under it. Excel shows Hijri with the format code B2 (for example B2dd/mm/yyyy); check it against the official Umm al-Qura calendar for your dates.

MAIN + SECOND

14 أكتوبر 2026

3 جمادى الأولى 1448 هـ

EXCEL FORMAT

Report.xlsx

```
B2dd mmmm yyyy
```

3.3 Short dates nobody can read safely

GENERAL

05/10/2026 is 5 October to some readers and 10 May to others. In a bilingual report both readings are likely.

FIX In reports, write the month name: 5 أكتوبر 2026. Keep the short form for data entry only.

BEFORE

05/10/2026

AFTER

5 أكتوبر 2026

3.4 The week starts on the wrong day

EXCEL GENERAL

The Saudi week runs Sunday to Thursday. NETWORKDAYS assumes a Saturday and Sunday weekend, so a Sunday-to-Thursday week counts 4 days, not 5.

FIX Use NETWORKDAYS.INTL with weekend code 7 (Friday and Saturday), and check where your tool starts the week. Some Excel settings use ; between arguments.

BEFORE

Report.xlsx

```
=NETWORKDAYS(
DATE(2026,10,18),
DATE(2026,10,22))
→ 4
```

AFTER

Report.xlsx

```
=NETWORKDAYS.INTL(
DATE(2026,10,18),
DATE(2026,10,22),7)
→ 5
```

3.5 AM and PM jump in front of the time

HTML GENERAL

An English AM or PM after an Arabic label can be laid out right to left, so "3:30 PM" shows as "PM 3:30". Whether it happens depends on the markup around it and the direction settings, so check it rather than assume it.

FIX In Arabic, use ص and م (the ar-SA time format prints 3:30 م), or a 24-hour clock in tables.

BEFORE

الوقت: PM 3:30

AFTER

الوقت: 3:30 م

3.6 Numbers glued to Arabic words

HTML

Building text like "قبل " + n + " يوم" gives wrong Arabic for most numbers: Arabic changes the word after 2, after 3 to 10 and after 11.

FIX Let the formatter write it, and pass numeric: "auto". The default is "always", which gives قبل يوم واحد instead of أمس. With auto you get أمس, أول أمس, قبل 3 أيام and قبل 11 يوما.

BEFORE

app.js

```
RelativeTimeFormat(
"ar")
→ قبل يوم واحد
```

AFTER

app.js

```
RelativeTimeFormat(
"ar",
  { numeric: "auto"
})
→ أمس
```

3.7 Arabic day names in Excel

EXCEL

Weekly reports often need the day name in Arabic. People type it by hand, and it goes wrong the first time a date moves.

FIX Let Excel write it: =TEXT(A2,"[$-ar-SA]dddd") returns الأربعاء for 14 October 2026.

FORMULA

Report.xlsx

```
=TEXT(A2,
"[$-ar-SA]dddd")
```

RESULT

الأربعاء

4 Text and fonts

Mixed text, cut text and fonts that were never meant to sit next to each other.

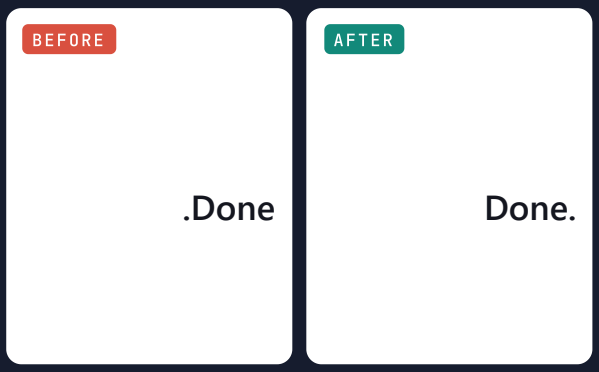
الكلمة الإنجليزية داخل جملة عربية تحتاج اتجاهها الخاص.

4.1 Full stops jump to the start

HTML

English text that ends with a full stop inside an Arabic cell gets the full stop on the wrong side: "Done." shows as ".Done". LinkedIn does the same to English lines in Arabic posts.

FIX Isolate the English phrase with its own punctuation: <bdi dir="ltr">Done.</bdi>. Leaving the full stop outside moves it instead of fixing it.

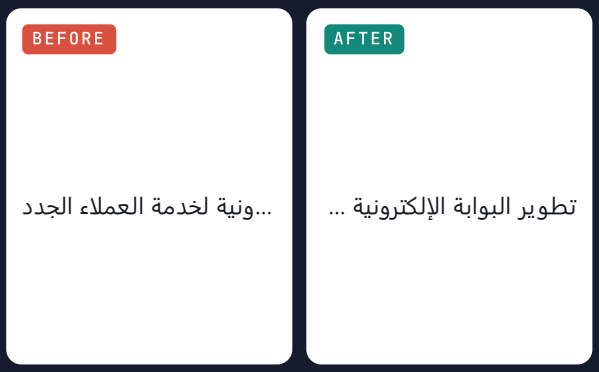


4.2 Cut text hides the start of the sentence

HTML

When a long Arabic title is shortened with "..." but the element has no direction set, the browser cuts the beginning of the sentence, not the end.

FIX Set dir="rtl" (or the lang and direction of the page) on any element that cuts Arabic text.

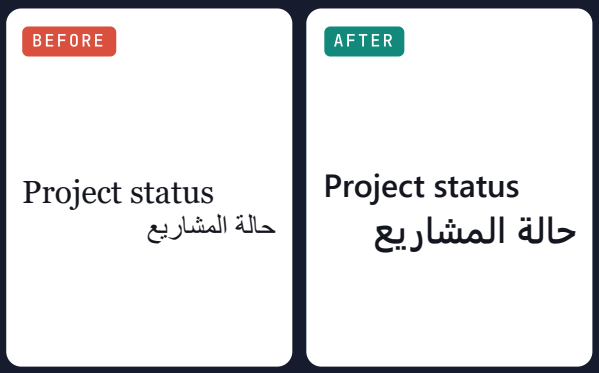


4.3 Two fonts that do not match

GENERAL

A Latin font for English and whatever the system picked for Arabic. Weights and sizes do not match, and the card has two personalities.

FIX Pick one family covering both scripts so the weights match: Segoe UI alone, or IBM Plex Sans with IBM Plex Sans Arabic. The same choice decides whether a PDF of it searches (7.2).

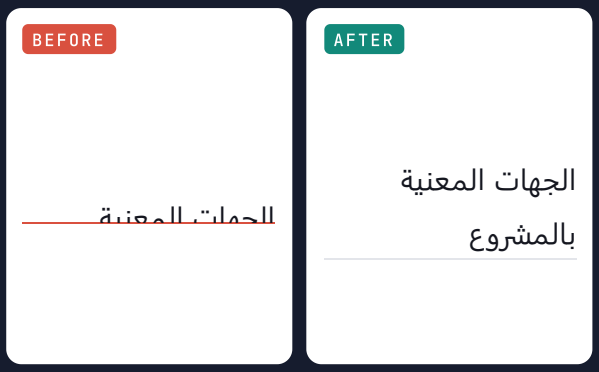


4.4 Arabic looks smaller and gets clipped

GENERAL EXCEL

At the same font size Arabic looks smaller, and in tight table rows the lower strokes of the letters get cut off.

FIX Balance the visible size by eye, usually a step up for Arabic, and give Arabic rows more line height. In Excel, check row heights after the text is in.

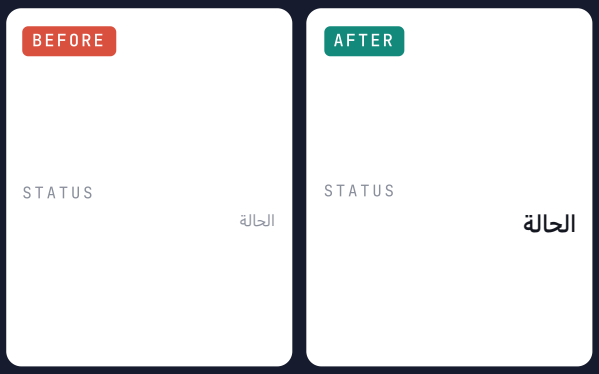


4.5 Tiny capital labels do not translate

GENERAL HTML

Small all-caps labels look neat in English. Arabic has no capitals, so the same style makes Arabic labels tiny and faint.

FIX Give Arabic labels their own size and weight instead of reusing the English caps style.



4.6 The currency breaks away from its number

GENERAL HTML

In a narrow card, a line can end with 1,250,000 and the next line start with ر.س. We saw it at the same width in Chrome and Firefox.

FIX Join the number and its unit with a non-breaking space: in HTML, Ctrl+Shift+Space in Word and Outlook.



5 Names and data

The most expensive Arabic bugs are not on the screen. They are in the data, and every tool counts them differently.

> إملاء واحد لكل اسم، وإلا اختلفت الأدوات في حسابه.

5.1 One department, three spellings

EXCEL GENERAL

الإدارة المالية, الادارة المالية and الإداره الماليه are the same department to a person. A PivotTable lists them as three.

FIX Fix the spelling at the source: names come from a list, not free typing.

BEFORE

الإدارة	العدد
الإدارة المالية	2
الادارة المالية	1
الإداره الماليه	1

AFTER

الإدارة	العدد
الإدارة المالية	4

5.2 Your formula and your pivot disagree

EXCEL

In our Excel 365 test, COUNTIF counted الإدارة and الادارة as the same department (3 rows), XLOOKUP matched them too, but the PivotTable showed them as two lines (2 and 1). EXACT treats them as different. Same data, three answers.

FIX Never compare totals from formulas and pivots on raw Arabic names. Clean the names first, then count.

FORMULAS

Report.xlsx

```
=COUNTIF(B:B,
"الإدارة المالية")
→ 3
```

PIVOTTABLE

Report.xlsx

2	الإدارة المالية
1	الادارة المالية

5.3 The decorative stretch (ـ) splits the count

EXCEL

Some people type مشـروع with the stretching character (tatweel) for looks. In our Excel 365 test, UNIQUE merged it with مشروع, but the PivotTable listed them as two.

FIX Remove tatweel (U+0640) when data comes in: =SUBSTITUTE(A2,UNICHAR(1600),"").

BEFORE

مشـروع

AFTER

مشروع

5.4 Invisible direction marks, inconsistent answers

EXCEL HTML

Copied text can carry an invisible mark (U+200F). In our Excel 365 test it broke EXACT on Arabic and MATCH on English.

FIX Clean them when data comes in: =SUBSTITUTE(A2,UNICHAR(8207),""), and the same with 8206.

BEFORE

Report.xlsx

```
Arabic:
  MATCH → 1
  EXACT → FALSE
English:
  MATCH → #N/A
```

AFTER

Report.xlsx

```
cleaned, both:
EXACT → TRUE
MATCH → 1
```

5.5 Cleaning by swapping letters

GENERAL EXCEL

A quick fix replaces every ه with ة or every ي with ى across the column. It fixes some names and breaks others, because both letters are correct in different words.

FIX Keep the original column. Add a clean column filled from an approved list or a mapping table, and count that one.

MAPPING TABLE

الأصل	المعتمد
الادارة المالية	الإدارة المالية
الإداره الماليه	الإدارة المالية
مستشفي الملك	مستشفى الملك

5.6 One person, three English spellings

GENERAL

Mohammed, Mohamed and Muhammad. Abdulaziz and Abdul Aziz. Matching Arabic names to an English system by name loses people.

FIX Match people by employee ID or national ID, never by the written name.

BEFORE

Name
Mohammed Al-Harbi
Mohamed Alharbi

AFTER

ID	Name
10234	محمد الحربي
10234	M. Al-Harbi

5.7 Alphabetical order nobody chose

GENERAL EXCEL

Most Arabic department names start with ال, so an A-to-Z sort piles them together and the difference only starts a few letters in, while names without ال fall to one end. The result is alphabetical, and it is not the order anyone in the room would have asked for.

FIX Decide the order on purpose: add a Sort column with numbers and sort by that.

SORT COLUMN

الإدارة	ترتيب
الإدارة العامة	1
الإدارة المالية	2
التقنية	3
قسم الجودة	4

5.8 Empty, zero and dash mean three things

GENERAL

An empty cell, a 0 and a dash look alike in a busy table, but one means no data, one means a real zero, one means not applicable.

FIX Show "no data" clearly, keep a real zero as 0, and say what the dash means in a note under the table.

THREE MEANINGS

المشروع	المصروف
البوابة	0
الحملة	لا بيانات
النقل	لا ينطبق

6 Charts

Charts carry direction in places nobody checks: the axis, the legend, the labels and the arrows.

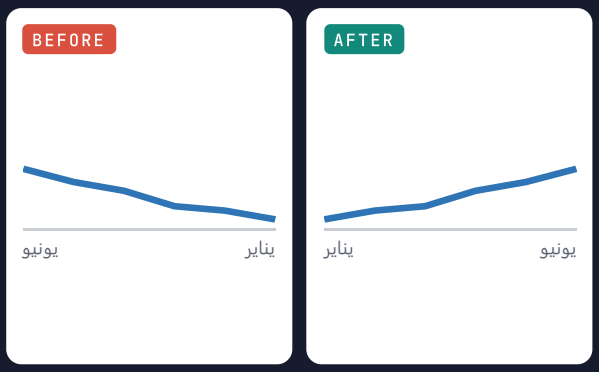
السهم الذي يشير إلى قيمة لا ينعكس.

6.1 The time axis runs both ways

GENERAL

The Arabic version mirrors the time axis and the English one does not. People who compare the two read the trend backwards.

FIX Decide once. If unsure, keep time left to right and mirror everything around it: it matches the English version and the source sheet.

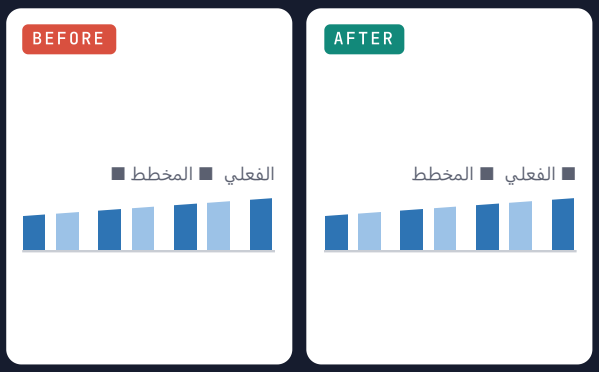


6.2 The legend stays on the left

GENERAL HTML

The chart is mirrored but the title and legend stay top left, so readers meet them last.

FIX Move the title and legend to the top right in the Arabic version.

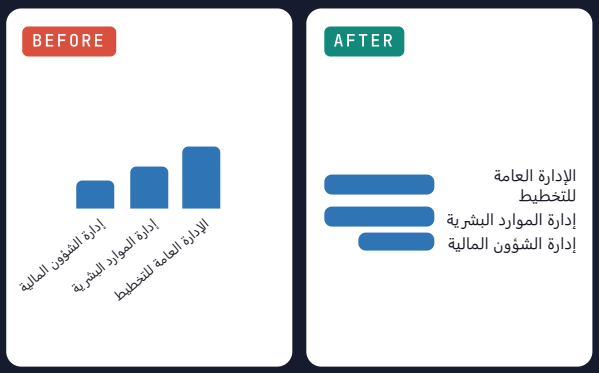


6.3 Long Arabic labels on a slanted axis

GENERAL

Arabic category names are often long. Slanted labels under a column chart are hard to read in any language and worse in Arabic.

FIX Use horizontal bars when the labels are long; the names then read in a straight line.



6.4 Arrows that point at a value get flipped

GENERAL HTML

Mirroring tools flip every icon. Next and back arrows should flip; the up and down arrows next to a value should not.

FIX Flip arrows that point along the reading (next, back, breadcrumbs). Keep arrows that point at a value (▲ ▼), check marks and clocks.

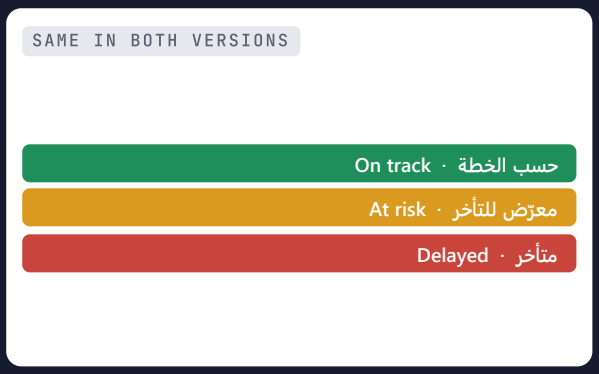


6.5 Colors that change meaning

GENERAL

In a hurry, someone swaps red and green along with the layout, or colors the Arabic version differently.

FIX Red, amber and green mean the same in both versions. Mirror positions, never meanings.

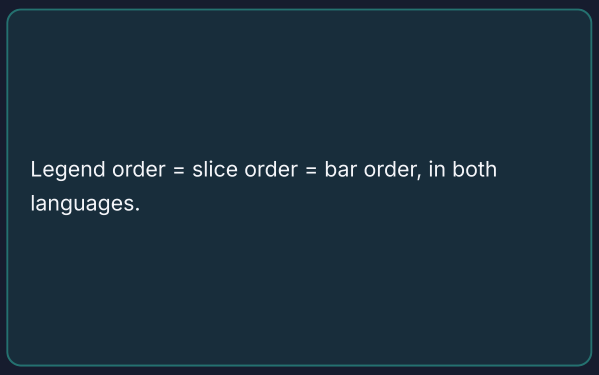


6.6 Legend order that does not match the chart

GENERAL

The donut runs one way and the legend lists the slices in another order, so readers match the wrong colors.

FIX Keep the legend in the same order as the slices or bars, in both versions.



7 Export, print and phone

Most Arabic bugs are invisible where the dashboard was built. They show up where it is read.

افحص الصيغ التي يقرأ بها الناس، لا الشاشة التي بنيت الداشبورد عليها.

7.1 Arabic CSV opens as gibberish

EXCEL

A CSV saved as plain UTF-8 opens in Excel as Ø§Ù„Ù…Ø´Ø±ÙˆØ¹ instead of المشروع. In our test, the same file with a UTF-8 signature (BOM) opened correctly.

FIX Export as "CSV UTF-8" from Excel. From code, write the file with a BOM (utf-8-sig in Python). A file that arrives without one is not damaged: open it with Data, From Text/CSV and pick UTF-8.



7.2 Arabic in a PDF may not search or copy correctly

GENERAL

Searching الإدارة المالية in a Chrome-exported PDF found nothing, and copied words lost letters. Across 36 fonts what survived varied, though every page looked right.

FIX Search an Arabic phrase and copy a paragraph of Arabic, English and numbers. Change the font or exporter and retest.



7.3 The PDF breaks what the screen showed

GENERAL

Some export tools break Arabic letters apart, drop a font or reverse a column order. The screen looked fine.

FIX Open every exported PDF before it goes out: letters connected, columns in order, numbers on the right side.

Open the PDF. Read one Arabic paragraph, one table and one negative number.

7.4 The right edge gets cut when printed

GENERAL

Anything outside the printable area is lost, on whichever edge it falls. In a right-to-left layout the right edge is where every line begins, so what goes missing there is the start of the sentence and not its tail.

FIX Check print preview and keep a safe margin on every side, with an eye on the right.

Print preview, all four edges, every page.

7.5 The phone shows the wrong card first

GENERAL

At 390 pixels wide the cards stack. Which one lands first follows the order of the elements and how the layout was built, not where the card sat on a laptop, and Arabic labels wrap more.

FIX Open the dashboard on a phone. The first card should be the most important one, and no label should wrap into three lines.

Phone, 390 px: first card = the key number.

7.6 Pasting into an e-mail loses the direction

GENERAL

A table copied from a sheet or page into an e-mail can arrive left-to-right, with Arabic columns in the wrong order.

FIX Paste into a test e-mail to yourself before the real one, and check column order and numbers.

One test e-mail to yourself, every time the layout changes.

8 Words people actually say

Literal translations are correct Arabic that nobody uses at work. These are the words Saudi project teams use. Check them with your own team.

> اكتب الكلمة التي يقولها الفريق، لا التي في القاموس.

Dashboard	داشبورد
KPI	مؤشر أداء رئيسي
Target	المستهدف
Actual	الفعلي
Baseline	خط الأساس
Variance	الانحراف
Milestone	محطة رئيسية
Deliverable	مُخرَج
Owner	المسؤول
Stakeholders	الجهات المعنية
Risk	خطر
Issue	مشكلة
Blocker	عائق
On track	حسب الخطة
At risk	معرّض للتأخر
Delayed	متأخر
Completed	مكتمل
Progress	نسبة الإنجاز
Budget	الميزانية
Spend	المصروف
Forecast	المتوقع
Scope	النطاق
Change request	طلب تغيير
Approval	اعتماد
Status report	تقرير الحالة
Weekly update	التحديث الأسبوعي
Workstream	مسار عمل
Portfolio	المحفظة
Phase	مرحلة
Lessons learned	الدروس المستفادة

9 The full checklist

Print this page and tick it before every handover.

بند واحد ناقص يكفي ليقرأ المدير رقما خطأ.

1 · Direction and layout

- [ ] 1.1 Checked what mirrors and what stays
- [ ] 1.2 Key number sits where reading starts
- [ ] 1.3 Number columns are right-aligned
- [ ] 1.4 Table direction and cell alignment are set
- [ ] 1.5 Progress bars fill from the right
- [ ] 1.6 Flipped the sheet, did not move columns

2 · Numbers

- [ ] 2.1 Checked where the minus sign sits
- [ ] 2.2 Phone numbers and codes are isolated
- [ ] 2.3 One digit system across the page
- [ ] 2.4 Digits and separators from one system
- [ ] 2.5 One percent format everywhere
- [ ] 2.6 Set the precision on short numbers
- [ ] 2.7 Same decimal places down each column
- [ ] 2.8 Currency in the header, not in the cells
- [ ] 2.9 Amounts stored as numbers, not text

3 · Dates and time

- [ ] 3.1 Picked month names for the readers
- [ ] 3.2 Named the main calendar
- [ ] 3.3 Reports carry the month name
- [ ] 3.4 Weekend days in the formula match the team
- [ ] 3.5 Time reads as ص م or a 24-hour clock
- [ ] 3.6 The formatter writes the time phrases
- [ ] 3.7 Day name comes from a formula

4 · Text and fonts

- [ ] 4.1 English phrases isolated with their marks
- [ ] 4.2 Direction set on anything that truncates
- [ ] 4.3 One font family covers both scripts
- [ ] 4.4 Checked Arabic size and row height
- [ ] 4.5 Arabic labels have their own size
- [ ] 4.6 Each amount is tied to its unit

5 · Names and data

- [ ] 5.1 Names come from a list, not free typing
- [ ] 5.2 Compared the formula with the pivot
- [ ] 5.3 Removed tatweel from matching fields
- [ ] 5.4 Cleaned the invisible direction marks
- [ ] 5.5 Kept the original column beside the clean
- [ ] 5.6 Matched people by ID, not by name
- [ ] 5.7 Sorted by a deliberate sort column
- [ ] 5.8 Told empty, zero and dash apart

6 · Charts

- [ ] 6.1 Time axis runs the same way in both
- [ ] 6.2 Title and legend at the top right
- [ ] 6.3 Long labels sit on horizontal bars
- [ ] 6.4 Value arrows were not flipped
- [ ] 6.5 Colors mean the same in both versions
- [ ] 6.6 Legend order matches the chart

7 · Export, print and phone

- [ ] 7.1 Exported CSV as UTF-8 with the signature
- [ ] 7.2 Tested search and copy in the PDF
- [ ] 7.3 Opened and read the PDF before sending
- [ ] 7.4 Checked print preview on all four edges
- [ ] 7.5 Opened the dashboard on a phone
- [ ] 7.6 Tried pasting into a test e-mail



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SCAN FOR THE FILES