

what year transmission interchange chart

What Year Transmission Interchange Chart – A Comprehensive Guide to Understanding Compatibility and Ensuring Proper Repairs

When it comes to vehicle repairs, especially transmission replacements or upgrades, one of the most common questions car owners and mechanics alike ask is: what year transmission interchange chart? This vital resource helps determine whether a transmission from one vehicle year can be swapped into another without compatibility issues. Understanding this chart is essential for saving time, avoiding costly mistakes, and ensuring your vehicle operates smoothly after repairs or upgrades.

In this detailed article, we will explore what a transmission interchange chart is, why it is important, how to read and interpret it, and some practical tips for using it effectively. Whether you're a DIY enthusiast, a professional mechanic, or simply a curious vehicle owner, this guide aims to provide comprehensive insights into transmission compatibility.

What is a Transmission Interchange Chart?

A transmission interchange chart is a reference tool that lists various vehicle models, years, engine types, and other specifications alongside the compatible transmissions for each. It helps identify which transmissions can be swapped between different vehicles, years, or models, based on their compatibility.

Key components of a transmission interchange chart include:

- Vehicle Make and Model: Specifies the specific vehicle the transmission is designed for.
- Model Year Range: The production years for which the transmission is compatible.
- Transmission Type: Such as automatic, manual, CVT, or dual-clutch.
- Transmission Code: Unique identification codes used by manufacturers.
- Engine Compatibility: Ensures that the transmission matches the engine type and size.
- Additional Notes: Information about necessary modifications, upgrades, or limitations.

Why is a Transmission Interchange Chart Important?

Understanding and utilizing a transmission interchange chart offers numerous benefits:

1. Cost Savings

- Swapping a compatible transmission can save money compared to purchasing a brand-new or remanufactured unit.
- Helps avoid buying incompatible parts that won't fit or function properly.

2. Time Efficiency

- Speeds up the identification process for replacement parts.
- Reduces trial-and-error during repairs.

3. Ensuring Vehicle Reliability

- Properly matched transmissions maintain optimal performance.
- Prevents damage caused by incompatible parts.

4. Compatibility in Upgrades and Modifications

- Facilitates upgrades for better performance.
- Assists in fitting transmissions from different years or models.

5. Supporting Restoration Projects

- Critical for vintage or classic car restorations where original parts are scarce.

How to Read a Transmission Interchange Chart

Interpreting a transmission interchange chart correctly is essential for making informed decisions. Here's a step-by-step guide:

Step 1: Identify the Vehicle Details

- Gather accurate information about your vehicle: make, model, year, engine type, and transmission code if available.

Step 2: Locate Your Vehicle on the Chart

- Find your vehicle's details in the chart's listing.

Step 3: Find Compatible Transmissions

- Look for other models and years listed as interchangeable.
- Pay attention to notes regarding modifications or specific conditions.

Step 4: Check Additional Compatibility Factors

- Confirm engine compatibility.
- Note any required adapter plates, electronic control module (ECM) adjustments, or other modifications.

Step 5: Verify Part Numbers and Codes

- Cross-reference transmission codes and part numbers to ensure precise matching.

Factors Influencing Transmission Interchangeability

Not all transmissions are interchangeable across years or models, even within the same manufacturer. Several factors influence compatibility:

1. Transmission Type and Design

- Automatic transmissions are often more interchangeable within similar vehicle platforms.
- Manual transmissions may have different gear ratios and mounting points.

2. Engine Compatibility

- Transmissions are designed to work with specific engine types and sizes.
- Swapping an incompatible transmission can lead to performance issues.

3. Transmission Code and Part Number

- Manufacturers assign specific codes that denote design features and compatibility.
- Always verify these codes before attempting interchange.

4. Electronics and Control Modules

- Modern vehicles rely heavily on electronic controls.
- An incompatible transmission may require ECM reprogramming or additional components.

5. Physical Dimensions and Mounting Points

- Ensure the physical size and mounting points match.
- Transmission bell housing patterns are crucial for proper fit.

6. Drivetrain Layout

- FWD, RWD, AWD, and 4WD systems have different transmission requirements.

Using a Transmission Interchange Chart Effectively

To maximize the benefits of a transmission interchange chart, consider these practical tips:

- **Always verify with manufacturer documentation:** Cross-reference the chart with official OEM parts catalogs.
- **Consult experienced mechanics:** Their expertise can help identify subtle differences that impact compatibility.
- **Check for updates:** Transmission models and compatibility charts are periodically revised.
- **Consider the electronic components:** Modern transmissions often depend on ECM programming; ensure compatibility or plan for reprogramming.
- **Account for vehicle modifications:** Lift kits, engine swaps, or custom setups may affect transmission compatibility.
- **Use part numbers as confirmation:** When possible, verify transmission

part numbers before installation.

Examples of Transmission Interchangeability Across Vehicle Years

Understanding real-world examples can clarify how interchangeability works:

Example 1: Ford F-150 (2004-2008)

- The 4R70W automatic transmission is compatible across these years.
- Swapping from a 2004 to a 2008 model typically works with minimal modifications.

Example 2: Honda Civic (2006-2011)

- The 5-speed manual transmission is interchangeable within this range.
- However, auto transmissions may have different codes and require reprogramming.

Example 3: Chevrolet Silverado (2010-2014)

- The 6L80 transmission can often be interchanged within these years.
- Compatibility depends on engine type and electronic systems.

Limitations and Cautions When Using Transmission Interchange Charts

While interchange charts are invaluable resources, they have limitations:

- Not always comprehensive: Some charts may omit certain models or special editions.
- Manufacturers' updates: Changes in design or electronic systems can affect compatibility.
- Complex electronic controls: Modern transmissions may require reprogramming or additional parts.
- Physical differences: Even if compatible, physical differences might require modifications.

- Legal and safety considerations: Ensure that swaps comply with local regulations and safety standards.

Always verify with multiple sources and, when in doubt, consult with professional technicians.

Conclusion

Understanding what year transmission interchange chart entails is crucial for effective vehicle repair, restoration, or modification projects. By accurately interpreting these charts, vehicle owners and mechanics can make informed decisions that save money, time, and effort. Remember to consider all compatibility factors, verify part numbers, and consult professional resources when necessary.

Whether you're swapping a transmission for maintenance, upgrading for performance, or restoring a vintage vehicle, a reliable interchange chart is your best friend in ensuring a smooth and successful process. Keep it handy, stay informed, and prioritize safety and compatibility in every transmission swap.

Keywords: transmission interchange chart, vehicle compatibility, transmission codes, model year transmission compatibility, transmission swap, vehicle repair, transmission identification, OEM parts, transmission compatibility guide

Frequently Asked Questions

What is a 'What Year Transmission Interchange Chart' used for?

A 'What Year Transmission Interchange Chart' is used to determine compatible transmissions that can be swapped between different vehicle years and models, ensuring proper fit and operation.

How can I find the correct transmission interchange chart for my vehicle?

You can find the correct chart by consulting manufacturer manuals, automotive forums, or online databases that specialize in vehicle compatibility and transmission interchange information.

Why is the transmission year important when using an interchange chart?

The transmission year is crucial because design changes, mounting points, and electronic components vary between model years, affecting compatibility and functionality.

Are all transmissions interchangeable across different years and models?

No, not all transmissions are interchangeable; the interchange chart helps identify which years and models share compatible transmissions based on engineering specifications.

Can I use a transmission from a different model year without modifications?

It depends on the specific transmission and vehicle; using an interchange chart can help determine if modifications are necessary for a successful swap.

Is a 'What Year Transmission Interchange Chart' reliable for DIY transmission swaps?

Yes, it is a helpful resource for DIY enthusiasts, but always verify compatibility with professional consultation to avoid costly mistakes.

Additional Resources

What Year Transmission Interchange Chart: A Comprehensive Guide for Automotive Enthusiasts and Mechanics

Understanding the intricacies of vehicle transmission systems is vital for automotive repair professionals, restorers, and enthusiasts alike. One of the most valuable tools in this domain is the transmission interchange chart, a detailed reference that delineates which transmissions from different years, models, and manufacturers are compatible or interchangeable. In this article, we explore the concept of the "year transmission interchange chart," its significance, how to interpret it, and its practical applications in vehicle maintenance and restoration.

Defining the Year Transmission Interchange Chart

What Is a Transmission Interchange Chart?

A transmission interchange chart is a comprehensive reference table or diagram that lists various transmission units, often categorized by make, model, year, and transmission type, and indicates which units can be swapped or substituted with others. These charts are extensively used by mechanics, rebuilders, and restorers to identify compatible transmissions when replacements or upgrades are needed.

At its core, the chart helps answer critical questions:

- Can a transmission from a 2005 Ford Mustang be installed in a 2008 Ford F-150?
- Are transmissions from different manufacturers interchangeable?
- Which transmissions are compatible across different vehicle platforms or model years?

The Role of the Year in Interchange Charts

The “year” aspect is fundamental because automotive manufacturers often modify transmission designs, mounting points, gear ratios, and electronic controls over successive model years. As a result, a transmission compatible in 2005 may not fit or function correctly in a 2008 model, even if they are from the same vehicle line.

Therefore, a year transmission interchange chart explicitly incorporates the manufacturing year to:

- Highlight changes in transmission design over time
- Clarify which model years share components
- Assist in sourcing correct parts for restorations or repairs

The Significance of Transmission Interchange Charts

Enhancing Repair and Restoration Accuracy

For mechanics and restorers, precise identification of compatible

transmissions saves time and money. When replacing a faulty transmission, knowing which units are interchangeable prevents the purchase of incompatible parts, avoiding costly mistakes. These charts enable:

- Efficient troubleshooting
- Correct part sourcing
- Preservation of vehicle authenticity in restorations

Facilitating Upgrades and Performance Modifications

Performance enthusiasts often seek to upgrade their vehicle's transmission for better power handling or smoother shifting. The interchange chart allows enthusiasts to:

- Identify high-performance transmission options compatible with their vehicle's year
- Determine whether a transmission from a different model or year can be adapted
- Avoid extensive modifications by selecting directly compatible units

Supporting Aftermarket and Salvage Operations

Salvage yards and aftermarket parts suppliers rely heavily on interchange charts to:

- Verify compatibility across different vehicle makes and models
- Maximize inventory utility
- Offer accurate advice to customers seeking transmission replacements or upgrades

How to Read and Interpret a Year Transmission Interchange Chart

Key Components of the Chart

A typical transmission interchange chart includes:

- Manufacturer and Model: e.g., Ford, Chevrolet, Toyota
- Engine Type and Size: e.g., 5.0L V8, 2.4L I4
- Transmission Type: e.g., automatic, manual, CVT
- Model Year Range: e.g., 2000-2005, 2006-2010
- Part Numbers or Codes: specific identifiers that help confirm compatibility
- Interchangeability Indicators: symbols or notes indicating whether units are fully compatible, require modifications, or are incompatible

Deciphering Compatibility Indicators

Charts use various symbols to indicate interchangeability:

- Full Compatibility: The transmission can be swapped directly without modifications.
- Partial Compatibility: Some adjustments, such as mounting brackets or linkage modifications, are necessary.
- Incompatibility: The units cannot be interchanged due to design differences, mounting points, or electronic controls.

Practical Example

Suppose a chart shows:

Year Range	Model	Transmission	Interchangeability
2003-2006	Ford F-150	4R70W (automatic)	Fully interchangeable across these years
2007-2010	Ford F-150	4R75W	Not interchangeable with 4R70W
2003-2006	Ford Mustang	T45 manual	Compatible with some models; check specific codes

By understanding these details, a mechanic can determine whether a transmission from a 2004 F-150 with a 4R70W can be installed in a 2005 model or if a different transmission is required.

Factors Influencing Interchangeability

Design and Structural Changes

Manufacturers often update transmission designs to improve durability, efficiency, or electronic integration. Key structural changes that influence interchangeability include:

- Mounting bolt patterns
- Input shaft length and diameter
- Transmission case dimensions
- Gear ratios and internal components

Electronic Control Modules (ECMs) and Wiring

Modern vehicles heavily rely on electronic control units (ECUs) to manage

shift points and torque management. Changes in ECM programming, connectors, or sensors over the years can restrict interchangeability or necessitate reprogramming.

Compatibility of Drive Shafts, Linkages, and Converters

Even if the transmission case fits, the compatibility of drive shafts, shifters, and converters may vary. Some transmissions require specific adapters or modifications to connect properly.

Practical Applications of Year Transmission Interchange Charts

Vehicle Repairs and Replacements

When a transmission fails, mechanics consult interchange charts to identify suitable replacements. For vintage or discontinued models, these charts are invaluable for identifying compatible units from other years or models.

Restoration Projects

Restorers aim to maintain authenticity, often seeking original or period-correct transmissions. Interchange charts help verify whether a newer or different-year transmission can be used without compromising authenticity.

Performance and Custom Builds

Custom builders use interchange charts to upgrade stock transmissions with higher-performance units from different years or models, ensuring compatibility with the rest of the drivetrain.

Salvage and Resale

Salvage yards and resale shops leverage these charts to optimize inventory and advise customers accurately on parts compatibility.

Limitations and Cautions When Using Interchange Charts

While interchange charts are invaluable, they are not infallible. Users should be aware of their limitations:

- Model-specific Variations: Even within the same model year, different trims or engines may have different transmission options.
- Electronic Compatibility: Modern transmissions often require matching ECUs, and a simple physical swap may not suffice.
- Subtle Internal Differences: Gear ratios, internal components, or software updates can render seemingly compatible transmissions incompatible for specific applications.
- Vendor Accuracy: Not all charts are created equal; cross-referencing multiple sources or consulting manufacturer documentation is advisable.

Conclusion: Navigating the World of Transmission Interchanges

The year transmission interchange chart is an essential resource in the automotive world, serving as a bridge between different vehicle years, models, and manufacturers. Its proper use enhances repair precision, supports restorations, enables performance upgrades, and optimizes salvage operations. However, users must approach these charts carefully, understanding that physical compatibility does not always guarantee electronic or internal compatibility.

In the evolving landscape of automotive technology, especially with the increasing prevalence of electronic-controlled transmissions, the importance of detailed, accurate interchange charts continues to grow. Whether you're a seasoned mechanic, a restoration enthusiast, or a DIY vehicle owner, mastering the interpretation and application of these charts empowers you to make informed decisions, ensuring vehicle reliability, authenticity, and performance.

By combining these reference tools with manufacturer specifications and expert advice, you can confidently navigate the complex world of transmission interchangeability, ensuring your vehicle projects are successful and cost-effective.

[What Year Transmission Interchange Chart](#)

what year transmission interchange chart: Ford Parts Interchange Manual, 1959-1970

Paul A. Herd, 1995

what year transmission interchange chart: Chevy Big-Block Engine Parts Interchange John Baechtel, 2014-04-10 The venerable Chevy big-block engines have proven themselves for more than half a century as the power plant of choice for incredible performance on the street and strip. They were innovators and dominators of the muscle car wars of the 1960s and featured a versatile design architecture that made them perfect for both cars and trucks alike. Throughout their impressive production run, the Chevy big-block engines underwent many generations of updates and improvements. Understanding which parts are compatible and work best for your specific project is fundamental to a successful and satisfying Chevy big-block engine build. In Chevy Big-Block Engine Parts Interchange, hundreds of factory part numbers, RPOs, and detailed color photos covering all generations of the Chevy big-block engine are included. Every component is detailed, from crankshafts and rods to cylinder heads and intakes. You'll learn what works, what doesn't, and how to swap components among different engine displacements and generations. This handy and informative reference manual lets you create entirely unique Chevy big-block engines with strokes, bores, and power outputs never seen in factory configurations. Also included is real-world expert guidance on aftermarket performance parts and even turnkey crate motors. It's a comprehensive guide for your period-correct restoration or performance build. John Baechtel brings his accumulated knowledge and experience of more than 34 years of high-performance engine and vehicle testing to this book. He details Chevy big-block engines and their various components like never before with definitive answers to tough interchange questions and clear instructions for tracking down rare parts. You will constantly reference the Chevy Big-Block Parts Interchange on excursions to scrap yards and swap meets, and certainly while building your own Chevy big-block engine.

what year transmission interchange chart: The Electronic Chart Display and Information System (ECDIS): An Operational Handbook Adam Weinrit, 2009-08-13 Electronic navigation, although still relatively new, is becoming increasingly more common, particularly on commercial vessels. This handbook offers a wealth of detailed information about how different charting systems operate and answers the most commonly asked questions regarding electronic charts (ENC, RNC, DNC) and electronic chart systems (ECD)

what year transmission interchange chart: *Power Transmission Design*, 1997

what year transmission interchange chart: *Bulletin* Harvard University. Bureau of Business Research, 1928

what year transmission interchange chart: Bulletin of the Bureau of Business Research, Harvard University, 1928

what year transmission interchange chart: *Bulletin of the Bureau of Business Research, Harvard University, the Graduate School of Business Administration* Harvard University. Bureau of Business Research, 1927

what year transmission interchange chart: *Government Corporations Appropriation Bill for 1949* United States. Congress. Senate. Committee on Appropriations, 1948

what year transmission interchange chart: *Operating Expenses of Department Stores and Departmentized Specialty Stores in 1926* Harvard University. Bureau of Business Research, 1927

what year transmission interchange chart: *How to Restore Your Ford Pick-Up* Tom Brownell,

what year transmission interchange chart: Government Corporations Appropriation Bill, 1947-1949 United States. Congress. Senate. Committee on Appropriations, 1948

what year transmission interchange chart: *Network World*, 1989-04-24 For more than 20 years, Network World has been the premier provider of information, intelligence and insight for

network and IT executives responsible for the digital nervous systems of large organizations. Readers are responsible for designing, implementing and managing the voice, data and video systems their companies use to support everything from business critical applications to employee collaboration and electronic commerce.

what year transmission interchange chart: Spatial Database Transfer Standards H. Moellering, 2013-10-22 Since the 1960's individuals and organisations throughout the world have been building geographic databases used in conjunction with geographic hardware and software systems to collect, analyse, display and archive digital data. Through the years it was recognised that efficiencies could be gained if the geographic database built by one group could be used by multiple users across different computer systems and formats. Therefore, it was acknowledged that spatial database transfer standards were needed to facilitate the exchange and transfer of digital geographic data. Throughout the 1980's several organisations worldwide began working on the problem of producing spatial database transfer standards. As this work was initiated, research workers began to informally compare notes and developments. The International Cartographic Association [ICA], recognising the worldwide importance of standards, organised a Standards Working Group. The initial goal of this working group was to produce a monograph reporting on the present state of development in digital database transfer standards. This book is a unique collection of reports by individual nations and international organisations that describe existing geographic standards and summarize efforts to develop geographic database transfer standards worldwide.

what year transmission interchange chart: Locomotive Engineering , 1895

what year transmission interchange chart: Government Corporations Appropriation Bill for 1949 United States. Congress. Senate. Committee on Appropriations. Subcommittee on Government Corporations, 1948

what year transmission interchange chart: Hearings United States. Congress Senate, 1967

what year transmission interchange chart: Public Works Appropriations for 1966 United States. Congress. Senate. Committee on Appropriations, 1965

what year transmission interchange chart: Public Works Appropriations for 1966: Civil functions, Dept. of the Army United States. Congress. Senate. Committee on Appropriations, 1965

what year transmission interchange chart: Civil functions, Dept. of the Army United States. Congress. Senate. Committee on Appropriations, 1965

what year transmission interchange chart: Engineering , 1919

Related to what year transmission interchange chart

Which is correct — "a year" or "an year"? [duplicate] The word year when pronounced starts with a phonetic sound of e which is a vowel sound making it eligible for being preceded by an. Yet, we tend to write a year. Why?

What differences are there between "annually", "yearly", and "every 10 Either annually or yearly can and frequently does replace 'every year' as none of the phrases is limited by the number of occurrences, except to the extent that what happens twice a year is

If annual means one year, is there any word for two,three, four.. year From WordWeb: Annual: Occurring or payable every year What is the corresponding single word for occurring every two year, three year, four year etc. I understand

'Year' or 'Years'? - English Language & Usage Stack Exchange The second and final year gives the impression that you mean one specific year, which was at the same time your second, as well as your final year. For example: In the fifth and last year of the

What's the difference between 'a year' and 'the year'? 'A year' can be any year without any specification. But 'the year' means a particular/specified year or the one which is already mentioned and thereby known. E.g: In a

How do you show possession with the word "year" ("year's" Is this the correct spelling of year's in this context? I'm not a native English speaker/writer, but I do consider myself fluent, and this spelling tickled something in the back of my brain. If it matters,

grammar - Is it wrong when people say "from this year" instead of Is it wrong when people say "from this year" instead of "starting this year"? [closed] Ask Question Asked 3 years, 1 month ago Modified 3 years, 1 month ago

Difference between "across the year" and "throughout the year"? I'd say 'across the year' hints strongly at sporadic events etc, whereas 'throughout the year' speaks more of consistent results. But this is opinion, and I doubt I'll easily find

What does it mean when someone says he is from the "Class of Americans born this year will likely graduate from a university in the 'class of 2034', the seniors graduating this weekend are in the 'class of 2012', and at 25 anniversary class

grammar - Should we use year-end or end-year? - English I wonder that should we use mid-year and year-end or to use mid-year and end-year. What 's diffirent?

Which is correct — "a year" or "an year"? [duplicate] The word year when pronounced starts with a phonetic sound of e which is a vowel sound making it eligible for being preceded by an. Yet, we tend to write a year. Why?

What differences are there between "annually", "yearly", and "every 10 Either annually or yearly can and frequently does replace 'every year' as none of the phrases is limited by the number of occurrences, except to the extent that what happens twice a year is

If annual means one year, is there any word for two,three, four.. year From WordWeb: Annual: Occurring or payable every year What is the corresponding single word for occurring every two year, three year, four year etc. I understand

'Year' or 'Years'? - English Language & Usage Stack Exchange The second and final year gives the impression that you mean one specific year, which was at the same time your second, as well as your final year. For example: In the fifth and last year of the

What's the difference between 'a year' and 'the year'? 'A year' can be any year without any specification. But 'the year' means a particular/specified year or the one which is already mentioned and thereby known. E.g: In a

How do you show possession with the word "year" ("year's" Is this the correct spelling of year's in this context? I'm not a native English speaker/writer, but I do consider myself fluent, and this spelling tickled something in the back of my brain. If it matters,

grammar - Is it wrong when people say "from this year" instead of Is it wrong when people say "from this year" instead of "starting this year"? [closed] Ask Question Asked 3 years, 1 month ago Modified 3 years, 1 month ago

Difference between "across the year" and "throughout the year"? I'd say 'across the year' hints strongly at sporadic events etc, whereas 'throughout the year' speaks more of consistent results. But this is opinion, and I doubt I'll easily find

What does it mean when someone says he is from the "Class of Americans born this year will likely graduate from a university in the 'class of 2034', the seniors graduating this weekend are in the 'class of 2012', and at 25 anniversary class

grammar - Should we use year-end or end-year? - English I wonder that should we use mid-year and year-end or to use mid-year and end-year. What 's diffirent?

Which is correct — "a year" or "an year"? [duplicate] The word year when pronounced starts with a phonetic sound of e which is a vowel sound making it eligible for being preceded by an. Yet, we tend to write a year. Why?

What differences are there between "annually", "yearly", and "every 10 Either annually or yearly can and frequently does replace 'every year' as none of the phrases is limited by the number of occurrences, except to the extent that what happens twice a year is

If annual means one year, is there any word for two,three, four.. year From WordWeb: Annual: Occurring or payable every year What is the corresponding single word for occurring every two year, three year, four year etc. I understand

'Year' or 'Years'? - English Language & Usage Stack Exchange The second and final year gives the impression that you mean one specific year, which was at the same time your second, as well as

your final year. For example: In the fifth and last year of the

What's the difference between 'a year' and 'the year'? 'A year' can be any year without any specification. But 'the year' means a particular/specified year or the one which is already mentioned and thereby known. E.g: In a

How do you show possession with the word "year" ("year's") Is this the correct spelling of year's in this context? I'm not a native English speaker/writer, but I do consider myself fluent, and this spelling tickled something in the back of my brain. If it matters,

grammar - Is it wrong when people say "from this year" instead of Is it wrong when people say "from this year" instead of "starting this year"? [closed] Ask Question Asked 3 years, 1 month ago Modified 3 years, 1 month ago

Difference between "across the year" and "throughout the year"? I'd say 'across the year' hints strongly at sporadic events etc, whereas 'throughout the year' speaks more of consistent results. But this is opinion, and I doubt I'll easily find

What does it mean when someone says he is from the "Class of Americans born this year will likely graduate from a university in the 'class of 2034', the seniors graduating this weekend are in the 'class of 2012', and at 25 anniversary class

grammar - Should we use year-end or end-year? - English I wonder that should we use mid-year and year-end or to use mid-year and end-year. What 's diffirent?

Related Articles

- [talent management system pdf](#)
- [ernesto cortazar](#)
- [fms publicpartnerships](#)

[Back to Home](#)