

EY Insights:
Cannabis
valuations

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Building a better
working world

Introduction

When was the last time a regulatory change stood up an entirely new industry – one large enough to transform the Canadian business landscape, while giving Canadian companies the runway to become the global leaders?

When we look back at transformative shifts in the marketplace, the legalization of recreational cannabis will be a signature development of our era. This long-anticipated move will create an entirely new industry in the formal economy, and presents an enormous opportunity for Canadian producers and retailers to be at the forefront, as Canada becomes the first of the G20 countries to nationally legalize cannabis.

As a global leader in transaction advisory services, EY is well positioned to assist current and future clients navigate both the opportunities and uncertainties associated from this new industry.

Transparent and robust valuations will become increasingly important for companies looking to succeed in the cannabis industry (including entry and exit planning). EY's valuation professionals have significant experience assisting clients with their most difficult valuation requirements, particularly through phases of transition, turmoil, and transformation.

This valuation insights document contains information that will help steer conversations and analyses in the right direction.





Current state of the industry

Legalized cannabis for recreational purposes – truly transformational

As the first of the G20 countries to fully legalize cannabis for non-medical adult consumption, an unprecedented opportunity exists for Canada to be the global leader in the cannabis space, to shape the regulatory framework for cannabis around the world, and to spur innovation and economic productivity.

Ramping up

All levels of government and industry stakeholders in Canada are ramping up cultivation and processing capacity to address the anticipated demand for cannabis flower and oil. The first months and years post legalization will bring a flurry of activity and turmoil, such as the race for market share. Winners and losers will result.

Which provinces, cities and companies will win the race to commercial prominence and sustainable success? Outlooks and opinions will be plentiful over the early years when the industry is changing rapidly. It will be important to look at the quality of the analysis underlying these predictions. Provinces and Territories have adopted different retail and distribution models, which ultimately may limit the ability for cannabis companies to be fully vertically integrated. A by-product of federal legislation will be the critical focus on collecting and analyzing data (including social and economic impacts).

How much of an advantage do the incumbent public companies have? Approximately half of all licensed entities who have received production and sales licenses from Health Canada are either public companies, or have parent companies that are public companies. These licenses from Health Canada are under the *Access to Cannabis for Medical Purposes Regulations (ACMPR)* regime (predecessor to the *Cannabis Act*), which allow companies to cultivate, process, or sell cannabis for medical purposes.

A time for powerful valuation analysis

Businesses and investors will need to revisit valuation fundamentals to avoid overpaying for assets. Entrepreneurs who are founding members of cannabis businesses will need to do the same to avoid leaving money on the table (selling interests for proceeds below fair market value).



Valuation insights

1 Canadian public companies have generally experienced jaw-dropping growth over the past year. See the growth rates bolded in the table below.

The table below provides overview information for the 25 largest Canadian public companies in the cannabis industry at 30 September 2018 (ranked by market capitalization). (Source: Capital IQ)

	Company	Ticker	Market Cap. 30-Sep-18	Market Cap. 30-Sep-17	Market Cap. Growth	Last 12 Months EBITDA 30-Sep-18
1	Tilray, Inc.	NasdaqGS:TLRY	17,292.4	-	N/A	(17.7)
2	Canopy Growth Corporation	TSX:WEED	14,438.7	1,833.4	688%	(83.2)
3	Aurora Cannabis Inc.	TSX:ACB	11,925.5	1,029.2	1,059%	(67.8)
4	Aphria Inc.	TSX:APH	4,490.2	988.9	354%	(.7)
5	Cronos Group Inc.	TSX:CRON	2,542.1	372.8	582%	-
6	The Green Organic Dutchman Holdings Ltd.	TSX:TGOD	1,820.6	-	N/A	(24.3)
7	HEXO Corp.	TSX:HEXO	1,700.2	137.1	1,140%	(6.1)
8	CannTrust Holdings Inc.	TSX:TRST	1,324.5	317.9	317%	24.6
9	Canopy Rivers Inc.	TSXV:RIV	1,087.5	-	N/A	-
10	FSD Pharma Inc.	CNSX:HUGE	940.9	-	N/A	-
11	OrganiGram Holdings Inc.	TSXV:OGI	874.6	295.4	196%	8.9
12	Namaste Technologies Inc.	TSXV:N	718.6	42.7	1,583%	(16.3)
13	Auxly Cannabis Group Inc.	TSXV:XLY	659.7	146.7	350%	-
14	Emerald Health Therapeutics, Inc.	TSXV:EMH	628.9	120.1	424%	(16.6)
15	TerrAscend Corp.	CNSX:TER	622.6	49.6	1,155%	-
16	The Flowr Corporation	TSXV:FLWR	604.0	-	N/A	(8.2)
17	The Supreme Cannabis Company, Inc.	TSXV:FIRE	580.4	279.8	107%	(5.8)
18	Liberty Health Sciences Inc.	CNSX:LHS	467.8	255.6	83%	(11.5)
19	VIVO Cannabis Inc.	TSXV:VIVO	448.1	104.6	328%	(22.3)
20	Aleafia Health Inc.	TSXV:ALEF	428.4	-	N/A	-
21	Newstrike Brands Ltd.	TSXV:HIP	400.5	124.7	221%	(18.0)
22	CannaRoyalty Corp.	CNSX:CRZ	390.7	105.7	270%	(14.6)
23	MPX Bioceutical Corporation	CNSX:MPX	381.0	88.8	329%	(11.8)
24	Maricann Group Inc.	CNSX:WAYL	269.9	111.5	142%	(31.6)
25	Australis Capital Inc.	CNSX:AUSA	261.4	-	N/A	-



2 So far, it's bleak on the earnings front.

Nearly all of the public companies have reported negative earnings (e.g., EBITDA) in the 12 months leading up to 30 September 2018 (see the last column in the preceding table). This is not unexpected. Revenue to date is only for the medical market, while operating expenses have been impacted by significant investments in operating structures (people, production facilities, marketing, distribution networks, research and technologies) to get these entities ready to do business in the legalized recreational market.

3 It's been a hot market, with lots of deals in 2017 and 2018, many at very pricey deal metrics.

During the twelve months leading up to 30 September 2018, the cannabis industry has experienced a high volume of high profile M&A activity. Calculating typical valuation multiples of completed transactions (such as EV/Revenue, EV/EBITDA, Price/Book) shows a wide range of multiples, some of which appear incredibly high. In the press releases for these deals, some factors regularly discussed as having impacts on transaction pricing are listed below. It's important to analyze the relative importance of these factors, along with the inputs and assumptions used. It's also important to consider the motivations of the buyers and sellers, and the impacts of so-called 'special purchasers'.

- ▶ Licenses
- ▶ Revenue generating availability of tangible assets for cultivation and processing (land, facilities, technologies, machinery and equipment)
- ▶ Skilled personnel
- ▶ Stage and nature of the distribution chains
- ▶ Market penetration
- ▶ International exposure, and
- ▶ Growth expectations for market share in Canada and globally.

4 Legalizing the recreational use of cannabis changes everything. The medical use of cannabis is not new, but the (legal) recreational use is transformational. Because the competitive landscape and cannabis companies are rapidly transforming, prior history of the industry for 2018 and earlier is not predictive. If the valuation looks absurdly high in light of the historical results, it may be (in part) because the historical results reflect only the medical use cannabis, but the future forecasts reflect anticipated future revenues from recreation use and the global medical market. A key valuation principle is that value is based on future cash flows (historical ones may be useful as a guide). The future for a cannabis business is likely going to be dramatically different from its past.



- 5 This cannabis ramp-up isn't without some precedents worth examining. When the Internet stocks that are stalwarts today were in their infancy, the valuation multiples being paid then may have appeared absurdly high on first blush. Analyst outsiders back then struggled to find creative ways to look at those early Internet stock valuations – using site metrics, even though there was much noise in the data in those early years. Valuations in an industry poised for explosive growth and disruption of other competitive alternatives may look absurd on the surface in comparison to other industries. However, the expected future cash flow (the growth story) is the key to rational analysis.
- 6 There may be cannabis operating statistics that can help explain the valuations. A prudent analysis will look at factors such as: how many licenses the business has and the type of license; how many retail locations and the quality of those locations; and how many key employees and their level of equity in the business. Operating metrics will not translate easily into valuation multiples until the industry matures, but it may be useful to start analyzing deals in terms of such metrics.
- 7 Valuations multiples throughout the value chain will likely differ. The legalization of cannabis in Canada creates a new, more robust licencing framework that segments the value chain by various activities: cultivation, processing, sale, import/export, analytical testing, and research. Ancillary businesses – companies that provide inputs, technologies, and services to cannabis companies – will also experience tremendous growth. It will be important to analyze each value chain segment for its particular risks and opportunities relative to the overall cannabis opportunities. Appropriate valuation multiples may be different at every value chain segment or level.
- 8 Valuation techniques from the Life Sciences sector can be useful. In a Life Sciences business, key milestones may include: scientific acceptance, regulatory approvals, commercialization, early customer acceptance, and market maturity. At key stages there may be 'haircuts' to the valuation for the probability of failure. The eventual mature opportunity may be huge (e.g., if a global market), but the probability discounts along the way may also be huge.



- 9 Growth opportunities in the Agriculture (Ag) sectors are highly relevant. Ignoring the supply-managed industries, it's worthwhile to look at Ag sectors with niche agricultural products (e.g., non-GMO, cage-free, organic, hand-mixed, farm identifiable, certified humane). Cannabis producers will be learning about factors that drive consumer buying decisions, and what attributes consumers will be willing to pay for, versus 'nice to have' but not sought after (or not changing the price point). Typically, higher valuations will go to businesses that develop the brands (e.g., buying experience) and products that result in customer loyalty and premium pricing.
- 10 The Ag sector can also teach us about possible risk factors. Consider Ag risks such as: pests, weather, freshness protection, contamination, and quality inconsistencies. Adding in risks of social license, and the developing nature of the legal and regulatory environment means we are looking at a significant risk profile in the cannabis industry for the early years. Capital providers will typically expect the risk premium for the Cannabis sector to be high in early years which have a range of significant development and management risks.
- 11 The alcohol (wine, beer, spirits) and tobacco industries are informative. Cannabis products, while legal in October 2018, will be heavily regulated as to advertising, legal age of consumption, location of use, etc. One might look at the size of the market for wine, beer, spirits and tobacco and recognize that cannabis products are expected to have some substitution effects on those markets. However, only time will tell to what extent. In modelling the size of the cannabis opportunity, some sanity checks of the value at maturity will be important. This can be done by comparing the expected cash flow and margins of a cannabis business at maturity to alcohol and tobacco companies. Even if customers would be agnostic to substitution, profit margins would be different between cannabis companies and so-called 'guideline companies' due to differing costs of production. Guidelines companies in the alcohol and tobacco industries may provide useful information, provided adjustments are made for key differences in stage of maturity, customers, costs of production, and risk profiles.
- 12 Value is at a point in time. With the recreational cannabis industry in its infancy, expect investors to require high returns on capital, and expect successful companies to reward key employees and investors with stock options and stock splits. Also expect continued rounds of capital raising, increased access to non-dilutive capital, consolidating business combinations, and returns via capital appreciation (with little or no dividends). This investment journey is not for the faint of heart. Required returns (and therefore valuation discount rates) will need to be high enough to reflect the risks investors face at the particular valuation date.

Transaction activity

The table below provides deal information for a selection of transactions in the Canadian cannabis industry from January 2017 to September 2018.

This table reflects larger transactions involving public cannabis companies (listed by magnitude of consideration to shareholders). (Source: Capital IQ)

	Date	Buyer	Target	% Acquired	Consideration to Shareholders (CAD \$M)	Implied Enter. Value (CAD \$M)	1-Day Prior Control Premium	LTM EBITDA of Target (CAD \$M)
1	14-Aug-18 Announced private placement	Constellation Brands, Inc. (NYSE:STZ)	Canopy Growth Corporation (TSX:WEED)	28%	5,078.7	N/A	39%	(87.3)
2	25-Jul-18 Closed	Aurora Cannabis Inc. (TSX:ACB)	MedReleaf Corp. (TSX:LEAF)	100%	3,107.5	3,049.3	16%	2.6
3	25-Mar-18 Closed	Aurora Cannabis Inc. (TSX:ACB)	CanniMed Therapeutics Inc. (TSX:CMED)	100%	1,248.8	1,320.7	234%	(1.1)
4	23-Mar-18 Closed	Aphria Inc. (TSX:APH)	Nuuvera Inc. (nka:Aphria International Inc.) (TSXV:NUU)	94%	403.0	425.5	(23%)	(14.5)
5	31-Jan-17 Closed	Canopy Growth Corporation (TSX:WEED)	Mettrum Health Corp. (TSXV:MT)	100%	400.5	404.8	42%	(4.4)
6	5-Sep-18 Closed	Canopy Growth Corporation (TSX:WEED)	Hiku Brands Company Ltd. (CNSX:HIKU)	100%	292.0	316.1	21%	(16.8)
7	8-Sep-18 Announced	Aurora Cannabis Inc. (TSX:ACB)	ICC Labs Inc. (TSXV:ICC)	100%	269.2	277.9	9%	6.0
8	02-Nov-17 Closed	Constellation Brands, Inc. (NYSE:STZ)	Canopy Growth Corporation (TSX:WEED)	10%	245.0	N/A	0%	1.1
9	13-Feb-18 Closed	Aphria Inc. (TSX:APH)	Broken Coast Cannabis Ltd.	100%	224.8	225.1	N/A	N/A
10	17-Sep-18 Closed	Aphria Inc. (TSX:APH)	LATAM Holdings Inc.	100%	170.9	172.2	N/A	N/A
11	27-Sep-18 Announced	Trichome Financial Corp./ CannaRoyalty Corp. (CNSX:CRZ)	180 Smoke LLC	100%	165.4	252.8	N/A	N/A
12	14-Feb-18 Closed	Aurora Cannabis Inc. (TSX:ACB)	Liquor Stores N.A. Ltd. (nka:Alcanna Inc.) (TSX:CLIQ)	Up to 40%	138.0	N/A	28%	29.6
13	08-Aug-18 Closed	Aurora Cannabis Inc. (TSX:ACB)	Anandia Laboratories Inc.	100%	113.4	113.4	N/A	N/A
14	07-Aug-18 Closed	Canopy Growth Corporation (TSX:WEED)	Canopy Health Innovations Inc.	56%	98.4	185.0	N/A	N/A
15	26-Feb-18 Closed	Captor Capital Corp. (OTCPK:NWUR.F)	I-5 Holdings Ltd.	79%	78.6	104.6	N/A	N/A
16	31-Aug-18 Closed	ABcann Global Corporation (nka:VIVO Cannabis Inc.) (TSXV:VIVO)	Canna Farms Limited	100%	45.9	128.0	N/A	4.3
17	02-May-18 Closed	Emerald Health Therapeutics, Inc. (TSXV:EMH)	8611165 Canada Inc. and 9353-8460 Québec Inc.	100%	45.0	90.0	N/A	N/A
18	11-Sep-18	National Access Clinic Corp. (TSXV:META)	The Green Company Ltd.	100%	38.8	38.8	N/A	N/A
19	31-Mar-18 Closed	Delavaco Group	Liberty Health Sciences Inc. (CNSX:LHS)	25%	33.4	133.6	(12%)	N/A
20	25-Sep-18 Closed	Marapharm Ventures Inc. DB:2MO	Full Spectrum Medicinal Inc.	100%	29.8	29.8	N/A	N/A



Valuation observations from recent transactions (Q1-2017 to Q3-2018)

- ▶ A high volume of deals, generally for controlling interests. Many transactions have occurred in public companies in the cannabis industry in the 2017 to 2018 time frame we examined – more than we can portray in a snapshot manner in the preceding table. Most of these transactions were for controlling interests (typically 100%) and most were purchased (at least in part) using shares of the buyer.
- ▶ A wide range of control premiums. The reported control premiums (i.e., for public companies, the percentage premium paid over and above the closing price for the target's shares on the day prior to the announcement) range from double-digit negative results to triple-digit positive results. Counter to the hype and the headlines about cannabis capital transactions, not every takeover transaction is happening at an unusual premium to trading price before the deal announcement. The outlier premiums (largely negative or largely positive) are particularly interesting, and may be interpreted as indicators that the information in the public domain isn't adequate to value a controlling interest in the enterprise.
- ▶ Valuation multiples on trailing earnings aren't very meaningful. Similar to our discussion earlier about trading values, M&A transaction prices (and implied enterprise values) appear high relative to reported trailing twelve-month EBITDA results (given that such EBITDA results are often low or negative). However, this lack of correlation between trailing EBITDA and transaction prices is not surprising given the future growth opportunities represented by legalization of recreational cannabis, in comparison to operating results of the ramp-up period.
- ▶ The race is on. When we look at the nature of the buyers and the targets in our data set, one gets a sense that industry participants are racing to secure alliances. These alliances are being locked up early to provide vertical integration opportunities for operations, and to provide better capacity to ramp up quickly. Businesses want to be part of the elite tier established in the early days of this cannabis gold rush – hoping to be tomorrow's incumbents.
- ▶ Managing substitution risk. Several transactions appear to reflect strategies of companies looking to diversify into cannabis sales to reduce their exposure to risks of substitution in their current product and service offerings.
- ▶ Capital providers will have their watch lists. There are several public companies in the cannabis industry which (at 30 September 2018) do not appear to be affiliated with licensed producers as identified by Health Canada. Such companies are an example of one type of watch list which could be followed over the coming months to see how these companies fare as a subset of the cannabis industry (in particular which ones, if any, become takeover targets).



EY's Transaction Advisory Services practice can help

The cannabis opportunities abound for Canadian businesses. Like the gold rush days, the stakes are high, and there's a sense of urgency. The uncertainties in this industry will challenge even the most savvy and experienced business leaders. Fortunes will be made and lost. Many of the rules that will govern the recreational cannabis industry have yet to be finalized, and consumer demand is unknown. It's a critical time for the cannabis industry, and an opportune moment to ask important questions about the future.

Based on a survey conducted by EY in its publication "*How do you define your future in an undefined market?*", 87% of industry participants expected consolidation of competition over the next three years. Some of this consolidation may be driven by the level of capacity building currently occurring, which could result in consolidations to take capacity out of the market. Additional consolidation is inevitable, likely resulting eventually in just a few large cannabis businesses in Canada post-legalization. Of the 120 medical marijuana licenses issued by Health Canada (September 2018), a significant number will likely be available for merger and acquisition activities in the future. In addition, established industries such as tobacco, pharmaceutical, and alcohol are increasingly entering this space and will try to leverage existing competencies.

EY's Transaction Advisory Services professionals, including valuation professionals such as Chartered Business Valuators, are available to guide companies through the expected turmoil around capital agendas, including consolidation in the industry. Transparent and robust valuations are part of the key knowledge required to support this transaction environment – empowering buyers and sellers.

Businesses, both private and public, and lenders and institutional investors often need external valuations or fairness opinions to support major corporate transactions and decision-making. Acquisitions, divestitures, restructuring and supporting financial statement assertions are just some of the areas where valuations are essential business requirements.

Our Valuation professionals apply a powerful combination of experience and technical skills to complex valuation situations, such as the valuations we are performing in the cannabis industry. Our valuation services include the following.

- ▶ Valuation analyses and estimates for strategic planning, transaction advice, and tax planning
- ▶ Formal valuation opinions for compliance, regulatory, and other purposes
- ▶ Financial reporting valuations, including purchase price allocations, valuation impairment studies, and venture investment valuations
- ▶ Fairness opinions to assist boards of directors in meeting their fiduciary duties to shareholders and other stakeholders related to capital transactions and non-arm's length transactions
- ▶ Capital equipment and real estate valuations for financial reporting, transaction, financing, taxation, and insurance purposes
- ▶ Business modelling and decision analytics for internal decision making and for transaction purposes such as M&A activities or financing
- ▶ Economic analysis, including impact studies, economic development strategies, and econometric modelling
- ▶ Intangible asset valuations for financial reporting, corporate tax planning and strategic purposes, and
- ▶ Litigation support services, including expert advice on valuation and damage quantification, and providing expert reports to assist in resolving financial disputes.

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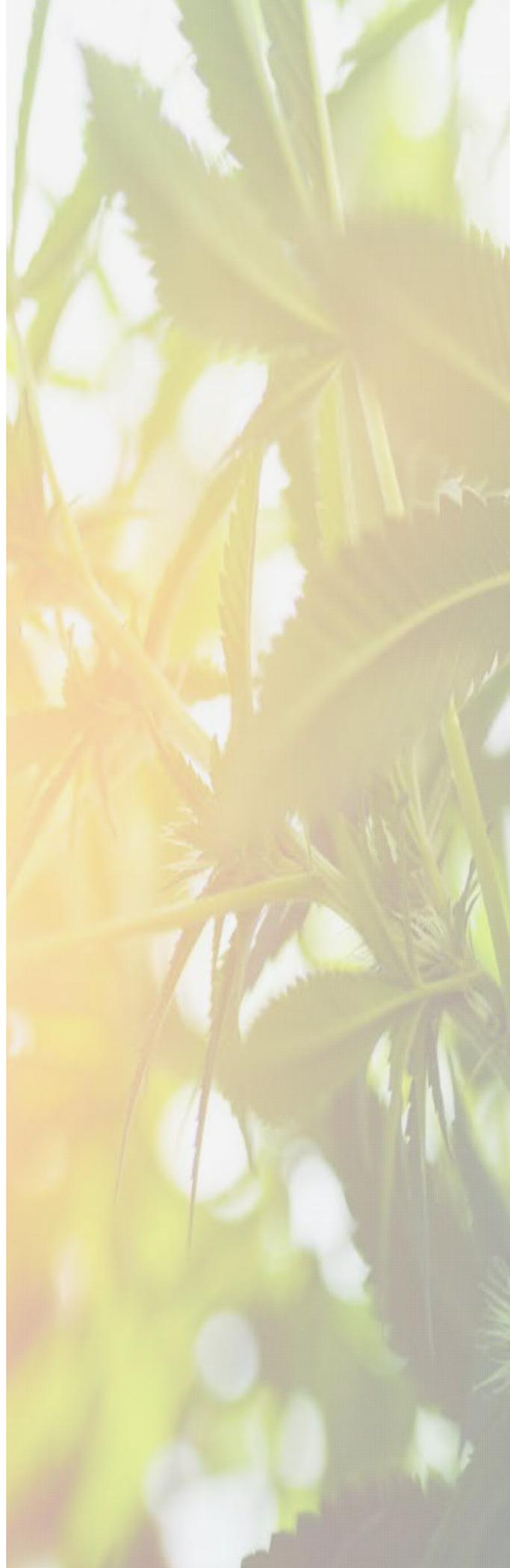
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